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Public Version

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of: Determination of Royalty Rates and Terms for Transmission of Sound Recordings by Satellite Radio and "Preexisting" Subscription Services (SDARS III)	Docket No. 16-CRB-0001 SR/PSSR (2018-2022)

SOUNDEXCHANGE'S UNOPPOSED MOTION FOR LEAVE TO FILE CORRECTED VERSIONS OF RESTRICTED AND PUBLIC VERSIONS OF PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

SoundExchange, Inc., the Recording Industry Association of America ("RIAA"), Sony Music Entertainment ("Sony"), Universal Music Group ("UMG"), Warner Music Group ("WMG"), the American Association of Independent Music ("A2IM"), the American Federation of Musicians of the United States and Canada ("AFM"), and the Screen Actors Guild and American Federation of Television and Radio Artists ("SAG-AFTRA") (collectively, "SoundExchange"), through their undersigned counsel, respectfully move for leave to submit the attached corrected restricted and public versions of SoundExchange's Proposed Findings of Fact and Conclusions of Law, previously filed on June 19, 2017.

SoundExchange seeks leave to make a single, non-substantive, correction that does not affect the numbering of any paragraphs in SoundExchange's Proposed Findings of Fact and Conclusions of Law. The correction adds a restricted designation for content in just one paragraph – paragraph number 320. This content inadvertently was not marked restricted in the previous filing.

Counsel for SoundExchange identified this correction to counsel for Sirius XM and Music Choice (the "Services") via email correspondence on July 7, 2017. The Services have indicated, through their counsel, that they do not oppose this motion.

Corrected restricted and public versions of SoundExchange's Proposed Findings of Fact and Conclusions of Law are attached to the restricted and public versions of this motion, respectively. Additionally, a redline showing the change is attached to both versions of this motion. SoundExchange respectfully requests that the Judges grant the motion and replace the previously submitted filings with these corrected versions.

Respectfully submitted,

July 10, 2017

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CORRECTED PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW OF SOUNDEXCHANGE, INC. AND COPYRIGHT OWNER AND ARTIST PARTICIPANTS

July 10, 2017

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Appendix A

Executive Summary

Introduction

SoundExchange believes the evidence at trial makes three things unmistakably clear:

- First, virtually all of the license agreements in the record that were negotiated voluntarily in unregulated markets – for interactive streaming services, "mid-tier" services, and ad-supported services – contain percentage of revenue rates that are multiple times higher than the rate Sirius XM pays today.
- Second, there is no reason why Sirius XM would pay any less than its unregulated competitors on a percentage of revenue basis if it operated in an unregulated competitive market, given that Sirius XM has grown extremely profitable broadcasting the copyright owners' sound recordings to subscribers who have a high willingness to pay for access to a wide variety of digital-quality music in the car.
- Third, while in past proceedings Sirius XM has obtained downward adjustments of the rates under the Section 801(b)(1) objectives due largely to its claims of poverty, its satellite costs, and protestations that its future prospects were uncertain, Sirius XM's dramatic financial success over the past five years and rosy projections for the next five years refute any argument for a downward adjustment in this proceeding.

The economic analysis offered by SoundExchange confirms that the statutory rate applicable to Sirius XM should substantially increase to the greater of $2.48 per subscriber per month or 23 percent of Sirius XM gross revenues. At trial, SoundExchange offered two approaches to support this rate proposal. First, Mr. Orszag examined license agreements between interactive streaming services such as Spotify and Apple, on the one hand, and record labels and distributors, on the other hand, and used the effective rates paid under those agreements as a benchmark to calculate the rates that would be paid by Sirius XM in an unregulated, effectively

competitive market. *See* Section IV. Second, Professor Willig calculated the walk-away opportunity cost incurred by record labels as a result of licensing their catalogues to Sirius XM, and applied that opportunity cost calculation using public interest pricing principles. *See* Section V. Mr. Orszag's benchmark approach and Professor Willig's opportunity cost/public pricing analysis both confirm that Sirius XM's current royalty rate should rise significantly.

With respect to the PSS, SoundExchange has proposed as a benchmark the statutory royalty rates paid by CABSAT services pursuant to 37 C.F.R. Part 383. The two services that use the statutory PSS license (Music Choice and Muzak's DishCD service) are in all important respects functionally equivalent to the three services that use the statutory CABSAT license. For that reason, and because setting relatively lower rates for the PSS would distort the market in their favor, the CABSAT rates present an appropriate benchmark in the absence of any clearly-appropriate unregulated marketplace benchmark. *See* Section XIII.

SoundExchange's SDARS Evidence

Mr. Orszag's benchmark analysis

Mr. Orszag's use of interactive services as a benchmark from which to derive rates for Sirius XM follows a path trod in prior cases, including *Web II*, *SDARS I* and *Web IV*. *See* Section IV.D. Mr. Orszag explained that the interactive services market offers a good benchmark because the rates in that market are relatively unaffected by statutory rates, and the benchmark services are similar enough to the target market that reasonable adjustments are possible. *See* Section IV.C.

Mr. Orszag obtained agreements between the major record labels and nine interactive services, and he used the royalty statements sent by the services to the labels under those agreements to calculate that the weighted average effective per-subscriber rate paid by the services is [[redacted]]. *See* Section IV.E.1. Mr. Orszag considered whether this rate needed

to be adjusted to account for the rates paid to independent labels but found that no adjustment was necessary. To the extent that independent labels are distributed by Majors, they receive the same rates and their royalty payments are reflected in the same royalty statements that Mr. Orszag used to calculate the effective per-subscriber rate. For the remaining roughly 12% of the market, comprised of independent labels not distributed by a Major, Mr. Orszag obtained a number of independent label or distributor agreements and confirmed that [ ]. *See* Section IV.E.3.

Professor Shapiro criticized Mr. Orszag for using effective rates in his analysis, rather than headline contract per-play rates. Mr. Orszag responded that Professor Shapiro's argument is not supported by either economic theory or marketplace evidence, and is contrary to Professor Shapiro's analytic approach in *Web IV*. *See* Section IV.E.4. Economic theory favors using the actual economic value of a transaction (as Professor Shapiro appeared to concede), *see* Section IV.E.4.i; marketplace evidence demonstrates that per-play rates rarely are the governing metric in the current marketplace and often are not even included in such agreements (which Professor Shapiro did not contest), *see* Section IV.E.4.ii; and Professor Shapiro's analysis in the *Web IV* case used effective rates rather than headline rates (as Professor Shapiro agreed), *see* Section IV.E.4.iii. Professor Shapiro's lone argument in favor of headline per-play rates rather than effective rates was simply that he believes the Judges did not use effective rates in their *Web IV* analysis – a point that SoundExchange disputes (*see Web IV*, 81 FR 26325). *See* Section IV.E.4.iii.

Mr. Orszag adjusted the effective rates in the benchmark market to account for the absence of interactivity and any other functional differences between Sirius XM and the

benchmark interactive service. *See* Section IV.F. His adjustments relied on the concept of "ratio equivalency," which the Judges adopted in the *Web IV* case. *See* Section IV.F.1. Ratio equivalency assumes equality between two ratios: (1) subscription royalties to revenues in the interactive market, and (2) subscription revenues to royalties in the target market. *See* Section IV.F.1.i. Mr. Orszag pointed out that this theory has been confirmed by recent marketplace agreements for mid-tier services offered by Pandora and iHeart, which feature [[redacted]]. *See* Section IV.F.1.iii.

Mr. Orszag used two approaches to adjust for the differences in functionality between the benchmark market and the target market.

"Approach One" applied the royalty-to-subscription-price ratio from the interactive market to the subscription price of Sirius XM. *See* Section IV.F.2. To make this calculation, Mr. Orszag needed to back out of the Sirius XM subscription price the value that its subscribers attribute to non-music content. *See* Section IV.F.2.i. He did so using a survey conducted by Stefan Boedeker, which was corroborated by Sirius XM internal surveys, Sirius XM pricing date for its Mostly Music and Sports/News/Talk packages, and testimony by Sirius XM's expert in the *SDARS II* case about the relative values of music and non-music content. *See* Section IV.F.2.i.a. Based on this evidence, Mr. Orszag very conservatively assumed that music represented 50 percent of the value of content on Sirius XM. *See* Section IV.F.2.i. He therefore (1) calculated the percentage of revenue paid by interactive services by dividing the effective per-subscriber rate [[redacted]] into the subscription price of $9.99, and then (2) multiplied this percentage by the 50% figure that he assumed was commensurate with the value of music content on Sirius XM, to arrive at a percentage of revenue rate of [[redacted]] for Sirius XM.

See Section IV.F.2.iii. Last, Mr. Orszag calculated a per-subscriber rate for Sirius XM by multiplying the [[redacted]] rate by Sirius XM's "royalty ARPU" (that is, the average revenue per user that Sirius XM reports to SoundExchange pursuant to the Judges' regulations defining gross revenues) of [[redacted]], yielding a per-subscriber rate of [[redacted]]. *See* Section IV.F.2.iii.

"Approach Two" applied the royalty-to-subscription-price ratio from the interactive market to the subscription prices of noninteractive streaming services (as opposed to the adjusted subscription price for Sirius XM, as in Approach One). *See* Section IV.F.3. This methodology directly accounted for the absence of interactivity in the target satellite radio market (because the material difference between interactive and noninteractive streaming services is interactivity) and eliminated any need to adjust for non-music content (because noninteractive services do not offer non-music content). Mr. Orszag found that the ratio of average interactive retail subscription prices to average retail noninteractive subscription prices provided an interactivity adjustment factor of 0.49 ($4.91/$9.99). He used the .49 ratio to convert the interactive service effective per-subscriber rate to an equivalent per-subscriber rate for Sirius XM [[redacted]] yielding a rate of [[redacted]]. Dividing this per-subscriber rate by Sirius XM's royalty ARPU [[redacted]] resulted in a percentage of revenue rate of [[redacted]]. *See* Section IV.F.3.

Following these calculations, one potential adjustment remained for Mr. Orszag – he considered whether to adjust rates to account for the concern that the benchmark market is not effectively competitive. *See* Section IV.G. Mr. Orszag opined that no such adjustment was necessary, based on his own understanding of the interactive marketplace, and supported by the testimony of Dr. David Blackburn. *See* Section IV.G.1. Dr. Blackburn testified that Sirius XM and its expert, Dr. Shapiro, erred in considering only the alleged market power of the record companies in the interactive market, without considering the substantial market power of the

interactive services. *See* Section IV.G.1.i. The subscription interactive services currently provide the record companies with a substantial and increasing share of revenue, *see* Section IV.G.1.i.a, and those services are operated by huge companies such as Apple and Google that have tremendous market power, *see* Section IV.G.1.i.b. For these and other reasons described by Dr. Blackburn, there is good reason to believe that the rates negotiated in the interactive services market represent an outcome consistent with workable competition. This is confirmed by evidence (which was lacking in *Web IV*) that the record companies are not earning excessive returns. *See* Section IV.G.1.ii. Nevertheless, should a competition adjustment be deemed necessary by the Judges, Mr. Orszag offered three options:

- A [[redacted]], derived from the difference between the SDARS statutory rate and the average rate in the direct licenses between Sirius XM and various indies, adjusted to account for the fact that under the direct licenses Sirius XM bears the costs of administering the license, in contrast to the statutory scheme, in which the labels pay an administrative fee to SoundExchange, *see* Section IV.G.2.i;
- A 12 percent adjustment, derived from the *Web IV* determination, *see* Section IV.G.2.ii; and
- A [[redacted]] adjustment, derived from the difference between the rates paid by Pandora ([[redacted]]) and the rates paid by iHeart ([[redacted]]) for their respective mid-tier services, *see* Section IV.G.2.iii.

The rates resulting from Mr. Orszag's benchmark analysis are summarized in the table below, *see* Section IV.G.2.iv:

	Approach One		Approach Two	
Steering Adjustment	Pct. of Revenue	Per-Subscriber	Pct. of Revenue	Per-Subscriber
None	28.0%	$3.00	25.7%	$2.76
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
12%	24.6%	$2.64	22.7%	$2.43
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Professor Willig's opportunity cost and public interest pricing analysis

Professor Willig calculated opportunity costs incurred by the record labels as a result of licensing Sirius XM, and applied that opportunity cost analysis using public interest pricing principles. *See* Section V.

Record companies incur an opportunity cost when sales in one market (here, the satellite radio market) substitute for or diminish sales in other markets. All economists who testified on this subject agreed that sellers will not willingly license at a rate below their opportunity cost in an unregulated market. *See* Section V.B. Professor Willig determined that the opportunity cost incurred by licensing Sirius XM is $2.55 per subscriber per month. *See* Section V.D.1.

Professor Willig explained that the relevant opportunity cost for rate-setting purposes is the "walk-away" opportunity cost – that is, the profit that a label would realize elsewhere as a result of the movement of subscribers if it refused to provide a license for its catalog to Sirius XM. Despite Professor Shapiro's insistence on discussing a different concept – the per-play or marginal opportunity cost – even Sirius XM expert Professor Farrell agreed that a record label would not agree to license at less than its walk-away opportunity cost. *See* Section V.E.

Professor Willig's walk-away opportunity cost analysis is built up from two principal elements. The first is diversion ratios that show where Sirius XM subscribers would go if they left Sirius XM, and what other distribution modes they would patronize. *See* Section V.D.1. Professor Willig obtained this information from a survey conducted for SoundExchange by Dr.

Ravi Dhar (and later confirmed through a survey by Professor Itamar Simonson), who examined how Sirius XM subscribers would choose to acquire music if they left Sirius XM due to an elevated price. Among other things, Dr. Dhar's survey showed that 31 percent of Sirius XM Select subscribers said they would switch to an interactive streaming service subscription, and 15 percent would switch to a noninteractive streaming service subscription. *See* Section V.J.1. The second element of Professor Willig's opportunity cost analysis is what Professor Willig called creator compensation data; the amount of compensation that would flow to the copyright owners from the distribution platforms that Sirius XM subscribers would divert to if they no longer subscribed to Sirius XM. The percentage of subscribers who would divert to another mode of distribution, multiplied by the creator compensation per subscriber that would be received by the record companies from diversion to that alternative mode of distribution, equals the opportunity cost associated with the diversion of consumers to Sirius XM and away from that distribution mode. *See* Section V.D.2.

Sirius XM's economists attacked Professor Willig's analysis, principally on the ground that he calculated an industry-wide opportunity cost, and therefore allegedly a monopoly opportunity cost. *See* Section V.F. But Professor Willig's analysis of walk-away opportunity cost is consistent with the marketplace reality that certain record labels are must-haves. *See* Section V.F.1. And in order for a must-have label to recover its walk-away opportunity cost, the industry-wide royalty rate would have to be set at a level at least equal to the industry-wide opportunity cost, as both Professor Shapiro and Professor Farrell conceded. Given this reality, Professors Shapiro and Farrell fell back on the argument that the Judges must analyze the hypothetical target market as though no label is a must-have, even if that is contrary to reality, because otherwise the hypothetical market cannot be effectively competitive. As Professor

Willig pointed out, even if a label is a must-have, there is considerable room for there to be effective competition induced by the threat or actuality of steering. Professor Willig's observation is not only consistent with the decision in *Web IV*, *see* 81 FR 26368, but also consistent with Professor Shapiro's *Web IV* testimony, with which Professor Shapiro was impeached. *See* Section V.F.1.ii.

Sirius XM also challenged the Dhar survey, on which Professor Willig's opportunity cost analysis originally was based. Professor Dhar rebutted these challenges, *see* Section V.J.1.iv, but in any event his findings were strongly corroborated by a survey conducted as part of SoundExchange's rebuttal case by Professor Simonson. *See* Section V.J.2. Professor Simonson was asked to evaluate the survey conducted by Mr. Lenski on behalf of Sirius XM, and if Professor Simonson determined that the survey suffered from serious flaws, to conduct a survey that corrects those flaws and provides an estimate of consumers' music-source choices if the Sirius XM service were no longer available. *See* Section V.J.2.i. The results of the Simonson survey were consistent with those of the Dhar survey and, if anything, support a *higher* opportunity cost calculation. *See* Section V.J.2.ii.

Sirius XM also faulted Professor Willig for not considering the alleged promotional value of Sirius XM as part of his opportunity cost analysis. But apart from a deeply flawed regression analysis offered by Professor Shapiro, the results of which even Professor Shapiro found unreliable, Sirius XM offered no useful evidence of its alleged promotional value. Instead, Sirius XM offered only self-selected and self-serving anecdotes of the kind the Judges have consistently and correctly found not to be probative evidence in the past. *See* Section IV.H.2.iv.

Professor Willig's conclusion that the record labels incur an opportunity cost of $2.55 per subscriber per month establishes a floor for the royalty rates that Sirius XM would pay in an

unregulated competitive market. *See* Section V.F. Professor Willig went on to explore the implications of public interest (Ramsey) pricing, *see* Section V.J.4, the Nash bargaining solution, *see* Section V.J.3, and the Efficient Component Pricing Rule, *see* Section V.J.5. Each of these approaches to pricing, in Professor Willig's estimation, is consistent with and advances the objectives of Section 801(b)(1).

The Nash bargaining solution, as Professor Willig explained, provides a way to model the outcomes of bilateral bargaining. *See* Section V.J.3. The Nash bargaining solution accomplishes this by first assessing how much each party could make without an agreement, that is, the party's fallback value or threat point. If the parties reach an agreement, the joint profit created by that agreement, less the sum of the parties' fallback values, is the surplus or value of the agreement – which, under the standard Nash assumption, is divided equally between the parties. Contrary to the arguments of Professor Farrell that Professor Willig was modeling a negotiation between Sirius XM and a monopoly seller, the standard 50/50 split of the surplus assumed by the Nash solution is inconsistent with the exercise of monopoly power and is fair to both parties. In this case, the fallback value for the record companies is their opportunity cost of $2.55 per subscriber per month. Professor Willig calculated that the surplus created by an agreement between the record companies and Sirius XM is $2.78. Thus, under the Nash bargaining solution, the appropriate royalty equals the record company opportunity cost of $2.55 per subscriber per month, plus half of the $2.78 surplus created by the agreement, for a total of $3.94 per subscriber-month. *See* Section V.J.3.

Professor Willig also discussed Ramsey pricing, which addresses how to price products or services whose supply draws on common assets in a fashion that maximizes consumer welfare and provides enough net revenues to meet an overall financial target. *See* Section V.J.4. The

first and most basic implication of Ramsey pricing is that prices must exceed applicable costs, including opportunity costs. The second implication of Ramsey pricing is that, where the buyer's price elasticity of demand is relatively small, there should be a higher Ramsey markup. Professor Willig took as his Ramsey target the revenues lost by the recording industry as the growth of streaming cannibalized sales of digital downloads, a figure that he calculated through a regression analysis. Professor Willig calculated the downstream elasticities of demand for Sirius XM and interactive streaming services using data from the survey conducted by Professor Dhar, which he corroborated as to Sirius XM using an econometric study. Although Professor Willig did not put his Ramsey analysis forward as a rate proposal, the analysis indicates that Ramsey principles point to a substantial increase in the statutory royalty rate. *See* Section V.J.4.

Finally, Professor Willig addressed the "efficient component pricing rule" (ECPR). *See* Section V.J.5. ECPR was developed to guide pricing of access to assets necessary to the production of competing services or products, particularly where there are complaints of anticompetitive foreclosure of access by would-be competitors of the owner of the necessary assets. The lesson of ECPR is that the most confining pricing remedy for attempted monopolization through such foreclosure is prescribing that prices equal direct plus competitive opportunity costs. Thus, Professor Willig testified, while there is no need for such remedies in the marketplace at issue here, at a minimum royalties should be set to cover the record company opportunity costs – $2.55 per subscriber per month. *See* Section V.J.5.

The rates in recently-negotiated agreements for mid-tier services corroborate SoundExchange's rate proposal

Recently executed, voluntary, and market-determined direct licenses executed by various record companies and distributors – majors and indies alike – with [[redacted]] further support SoundExchange's rate proposal. *See* Section VI. Under these agreements, which

SoundExchange offered at trial, [ ] pay rates ranging from [ ], and percentage-of-revenue rates that, when halved to adjust for the presence of non-music content on Sirius XM, range from [ ]. These rates are a far cry from the $1.03 per subscriber per month that Professor Shapiro calculated based on his *Web IV* benchmark, or the 8.1 percent to 11 percent rates that he proposed. By contrast, the per-subscriber and percentage-of-revenue rates in the mid-tier deals [ ] to the rates proposed by SoundExchange. *See* Section VI.A.

Although the mid-tier services reasonably can be characterized as offering greater interactivity than Sirius XM, they do not offer on-demand functionality. Instead, these services merely offer unlimited skips and some limited replay or caching ability. *See* Section VI.B.2. There is little, if any, evidence that these differences in functionality would have a significant impact on consumer valuations. *See* Section VI.B.1. As Mr. Orszag testified, the best way to assess consumer value is to look at the subscription prices that consumers are willing to pay. Subscriptions to the mid-tier services are priced at $4.99 per month, while Mr. Orszag estimated that the value of music content on Sirius XM, even under a highly conservative assumption regarding the portion of service value accounted for by music content, is $5.61. Accordingly, any difference in functionality between Sirius XM and the mid-tier services does not appear to cause a substantial difference in the way consumers value the services, and therefore cannot account for the yawning gulf between Professor Shapiro's proposed rates and these marketplace agreements. *See* Section VI.B.1.

Nor is there any credible evidence that the record companies obtained these mid-tier rates through the exercise of monopoly or complementary oligopoly power. *See* Section VI.C. To begin with, [ ]

[redacted]]. And, because mid-tier services undeniably have the ability to steer, they have the ability to induce price competition. Consequently, the mid-tier agreements offer strong corroboration of the rates proposed by SoundExchange. *See* Section VI.C.

Application of the Section 801(b)(1) objectives

With respect to the first three 801(b)(1) objectives, Professor Willig and Mr. Orszag both testified that these objectives will be satisfied by the adoption of a rate consistent with those that would be negotiated in an unregulated, workably competitive market. *See* Section X.A. In addition, Professor Willig opined that the public interest pricing principles discussed in his testimony likewise offered a good fit with the Section 801(b)(1) objectives. There is, therefore, no reason to consider any reduction from the rates calculated by Mr. Orszag and Professor Willig. *See* Section X.A.

Although the Judges reduced the royalty rates in the *SDARS II* case because of Sirius XM's satellite costs, no such downward departure is justified here. *See* Section X.B.3.ii. As Professor Lys testified, Sirius XM's revenues and profits have grown by leaps and bounds over the past five years, and as Sirius XM's subscriber base has grown, its capital expenses (including its costs for satellites and terrestrial repeaters) have decreased as a percentage of revenue. Those expenses are now a very small percentage of Sirius XM's overall revenues, a percentage similar to the capital costs incurred by internet-based services such as Pandora. *See* Section X.B.2.ii. Indeed, in light of the fact that Sirius XM has spent billions of dollars in recent years to re-purchase its own stock and pay dividends to its shareholders (much more than it has spent on satellites), it is reasonable to view any downward departure in rates as a subsidy for the benefit of Sirius XM's stock repurchase program. *See* Sections X.B.3.ii & X.C.

The testimony of Professor Lys demonstrates that there is even less reason to consider any downward departure in the rates based on the 801(b)(1) objectives. *See* Section X.B.2.ii. Sirius XM is immensely profitable and is projected to remain so during the upcoming rate period. It will remain highly profitable not only at the current rates but, as Professor Lys testified, at the rates proposed by SoundExchange as well. *See* Section X.B.2.ii. Rates set at marketplace levels will not disrupt Sirius XM's business, and rates set below marketplace levels will disrupt the industry and prevailing industry practices by giving Sirius XM an unfair competitive advantage over its competitors. *See* Section X.B.4.ii.

If any departure from the rates indicated by marketplace benchmarks is to be made, it should be a departure upward. Professor Lys pointed out that the copyright owners have for years received below-market rates because of the downward departures pursuant to Section 801(b)(1)(d) (in *SDARS I*) and Section 801(b)(1)(c) (in *SDARS II*). Those lower rates may fairly be viewed as a subsidy paid by the copyright owners to support Sirius XM in its lean years, and now that Sirius XM is highly profitable, the Section 801(b)(1) objectives suggest that the copyright owners should share in that success. *See* Section X.C.

Free trials

SoundExchange proposes modifications to the statutory rate structure to require Sirius XM to pay royalties on the promotional trials it offers to consumers when such trials extend beyond 30 days. *See* Section XI. Sirius XM offers trials to [[redacted]] and proposes to [[redacted]] in the coming years. Sirius XM pays reduced royalties on the trials for which Sirius XM receives compensation from OEMs, and no royalties on the trials for which neither the user nor the OEM pays. But as Mr. Orszag testified, in the benchmark marketplace agreements, the standard approach toward free trials is for [[redacted]

[redacted] *See* Section XI.A. [redacted], Sirius XM should be required to pay royalties for free trials that exceed 30 days in length. *See* Section XI.B. Sirius XM should pay a standard per-subscriber rate on these trials, except that for months two and three of the trials the rate should be adjusted to reflect the lower average willingness to pay of trial subscribers versus self-pay subscribers.

Sirius XM argued that most Sirius XM subscribers do not convert until the end of a lengthy free trial period, and therefore it is in the copyright owners' interests to allow longer royalty-free trials. *See* Section XI.B. There is, however, a simple explanation for why Sirius XM subscribers do not convert until the end of a free trial period: It would be irrational for them to do so and start paying money to Sirius XM before the end of their free trial, given that they could stay on the trial and pay nothing. Sirius XM also contends that the nature of its free trial program is such that it needs more time to woo its trial subscribers than do the benchmark interactive services, but this argument is pure conjecture, unsupported by any business research assessing how Sirius XM's conversion rates would change were its trials to become shorter. In the end, as Mr. Orszag testified, there is simply no reason why Sirius XM [[redacted]]. *See* Section XI.B.

SoundExchange's proposed SDARS rate structure

SoundExchange has proposed a two-prong "greater-of" rate structure for the SDARS royalty, incorporating per-subscriber and percentage of revenue metrics. *See* Section XII.A. Each of these metrics has advantages and disadvantages. Relying on a percentage of revenue metric alone creates a fertile ground for disputes concerning the proper accounting for Sirius

XM's revenues under the definition of gross revenues. A per-subscriber rate is easier to apply and so offers hope of avoiding disputes that have persistently arisen in past years. *See* Section XII.A.2. On the other hand, as Mr. Orszag testified, a percentage of revenue metric has the advantage of being linked to consumers' willingness to pay for a service. *See* Section XII.A.4.

The testimony of Mr. Orszag confirms – and agreements in the record document – that a greater-of structure would be most consistent with marketplace agreements, which generally provide a royalty based on both a percent of revenue and payment per subscriber, and require the licensee to pay under the metric that yields the highest royalties. *See* Section XII.A.

Sirius XM's Benchmarks

Perhaps not surprisingly in light of the marketplace realities, Sirius XM's evidence is short on current marketplace evidence and long on arguments that the Judges should simply adopt rates from prior cases – either *SDARS II* or *Web IV*. Sirius XM ignores on various pretexts rates from current, voluntary agreements in unregulated markets, and, apart from some illustrative models unsupported by any actual data, Sirius XM makes no effort to calculate opportunity costs. The only evidence of current agreements offered by Sirius XM is direct licenses between Sirius XM and independent labels that represent a very small percentage of the overall market, were heavily influenced by the statutory rate (as even Sirius XM's expert agrees), and prove only that certain indies will trade a rate discount for offsetting non-statutory monetary benefits such as advances, receipt of the artist's share of royalties, avoidance of SoundExchange administrative fees, and "indexing."

Direct licenses

The first of three benchmarks offered on behalf of Sirius XM by Professor Shapiro is based on direct licenses that Sirius XM entered into with various indie record labels. As benchmarks, these agreements are deeply flawed for a variety of reasons.

Importantly, Professor Shapiro agreed at trial that if the direct licenses were not motivated by a desire on the part of the licensors to obtain steering benefits, then they are not informative for purposes of this case. *See* Section VII.E. But steering was the one thing Sirius XM did *not* offer. [ ] Sirius XM produced no empirical evidence that it engages in steering. Sirius XM's witnesses admitted over and over again that [ ] *See* Section VII.F.

Although Sirius XM made every effort to keep out of evidence the contemporaneous emails that document its negotiations with direct licensors, *see* Sirius XM Letter Brief dated May 24, 2017 (opposing the admission of numerous emails documenting direct license negotiations), Professor Lys reviewed the negotiating documents and relevant data, and interviewed certain of the direct licensees. *See* Sections VII.G. & VII.I. His testimony, as well as the testimony of Glen Barros and the admissions of George White and Steven Blatter, establish that steering was not a material motivation for the direct licenses. *See* Section VII.I. There are a variety of reasons other than steering why labels would (and did) sign direct licenses. Sirius XM offered non-statutory benefits that offset the rate discount, including the opportunity to receive payment for performances of pre-'72 sound recordings, the opportunity to be paid based on the label's share of performances on Sirius XM's webcasting reference channels, the opportunity to receive

an advance, and the opportunity to be paid 100% of the royalties (as opposed to the 50% share that the label would receive under the statutory rate structure). *See* Section VII.I.

Indeed, Sirius XM's George White admitted that most of the difference between the statutory rate and the average direct license rate can be accounted for by just two non-steering benefits that were uniformly offered to all labels. First, [ ]. Second, [ ]. *See* Section VII.I.1.

Further diminishing the value of direct licenses as a benchmark, the percentage of the market represented by the direct licenses is very small and in no sense representative of the market as a whole. *See* Section VII.C. In terms of economic activity, the direct licenses are dominated by just thirty labels. Moreover, even Professor Shapiro admitted that [ ] because at least half of the direct licenses can be explained, not by steering, but by [ ]. *See* Section VII.I.3. With the already-small market share represented by direct licenses cut in half, the direct licenses become unrepresentative indeed. *See* Section VII.C. As Professor Lys testified, for these and other reasons, the direct licenses provide no evidence on the willing buyer/willing seller rate that would occur absent the shadow of the statutory license. *See generally* Section VII.

Web IV rates

Professor Shapiro proposed using the per-performance rate set for noninteractive subscription services in the *Web IV* proceeding as a benchmark in this proceeding. *See* Section

VIII. Taking the *Web IV* per-performance rate as a baseline, Professor Shapiro manufactured a proposed percentage of revenue rate for this proceeding as follows: he used listener survey results to estimate the average number of performances per Sirius XM subscription as 469 performances per month; he multiplied 469 by the *Web IV* per-performance rate ($0.0022) to arrive at a monthly royalty payment of $1.032 per Sirius XM subscription; he then relied on "a Sirius XM financial document" that forecasted $12.80 in average monthly revenue per user; and he divided $1.032 by $12.80 to generate a proposed 8.1% percentage of revenue rate for Sirius XM. *See* Section VIII.

Professor Shapiro's analysis is flawed from start to finish. To begin with, market conditions have changed since the *Web IV* decision, rendering reliance on it problematic. In particular, the Pandora/Merlin agreement that provided one of the two pillars for the *Web IV* determination has been superseded by a new agreement with entirely different terms. *See* Section VIII.A.

Second, Professor Shapiro's approach assumes that in the unregulated marketplace, royalties for subscription services are determined by the average number of performances per subscriber. That assumption is simply not correct. In fact, [ ], as Mr. Orszag's testimony establishes beyond question. This is hardly surprising, because the evidence shows that [ ]. *See* Section VIII.B. Indeed, Professor Shapiro testified in *Web IV* that he viewed per-play rates as "transitional" and opined that "mature" webcasters would pay percentage of revenue rates.

Similarly, Professor Shapiro's analysis assumes that consumers place the same value on all plays. However, as Mr. Orszag pointed out, it is likely that consumers value plays in the car (where entertainment options are limited) more highly than plays elsewhere, and are willing to pay more as a result. *See* Section VIII.C.

In addition, Professor Shapiro's conclusion that the Sirius XM subscribers on average listen to 469 plays per month is suspect. It rests on a survey that is not in evidence, and is contrary to Professor's Willig's calculations that yielded a higher number. *See* Section VIII.E.

Professor Shapiro also used an incorrect ARPU number when he converted his effective per-subscriber rate into a percentage of revenue rate. *See* Section VIII.E.

In any event, if the Judges were inclined to give any credence to the idea that the *Web IV* rates provide an informative benchmark, the effective per-subscriber or percentage of revenue rates should be used (consistent with the marketplace evidence described above demonstrating that per-play rates are rarely-used metrics), not per play rates. Professor Shapiro agreed that the effective per-subscriber rate for Pandora under the *Web IV* rates is [redacted]] per subscriber per month. *See* Section VIII.D.

The SDARS II rates

Professor Shapiro proposes that the Judges start with the 11% rate set five years ago in the *SDARS II* proceedings and consider whether there have been marketplace changes that warrant adjusting the rate for the upcoming rate period. The evidence at trial demonstrates why Professor Shapiro's proposal is ill-advised. *See* Section IX.

As an initial matter, SoundExchange submits that Congress required statutory rates to be determined anew for each licensing period. The statutory text, and historical practice, are

inconsistent with Sirius XM's request that the Judges consider only whether to adjust the rate determined five years ago, in *SDARS II*. *See* Section IX.A.

Second, Mr. Orszag explained that it makes little conceptual sense to push forward rates that were calculated using marketplace data that are now many years out of date, rather than starting afresh with current, similar marketplace data. That is particularly true here because the rates set in *SDARS II* were based to a material degree on the rates set in *SDARS I*, which, in turn, were predicated on royalty rates and consumer prices that are now a decade old. *See* Section IX.B.

Third, contrary to Professor Shapiro's contentions, relevant marketplace conditions have changed dramatically in the decade since the *SDARS I* proceeding, and even in the five years since the *SDARS II* proceeding. *See* Section IX.C.1. In particular, consumers' rapid and widespread acceptance of subscription interactive services has increased the record companies' opportunity costs of licensing Sirius XM. The surveys conducted by Dr. Dhar and Dr. Simonson demonstrate the degree to which Sirius XM substitutes for subscription streaming services that pay substantially higher royalties than Sirius XM, and Sirius XM's own SEC filings document how these services have become increasingly available in the car with each passing year. Higher opportunity costs translate into higher royalties, as Professor Shapiro acknowledges. *See* Section IX.C.1.

Fourth, the other undeniable change in marketplace conditions since the *SDARS II* trial is Sirius XM's dramatically improved profitability. Professor Lys documented that improvement, and explained why Sirius XM's heightened profitability would lead to higher royalties, were Sirius XM negotiating royalties in an unregulated marketplace. *See* Section IX.C.2.

Fifth, the marketplace and the evidence have changed since the *SDARS II* trial in ways that, SoundExchange submits, should alter the Judges' analysis. *See* Section IX.C.4. In *SDARS II,* the Judges expressed concerns with the interactive services benchmark, noting that the market for interactive services was in flux, and also expressing concern that SoundExchange's analysis did not consider the rates paid to independent record companies. *See* Section IX.C.4.i. Five years later, it no longer can be said that the interactive services market is in flux, because it is now dominated by large, established companies such as Apple and Spotify. And, as noted above, Mr. Orszag's benchmark analysis in this case gave careful consideration to indie rates. *See* Section IX.C.4.ii.

Finally, if the Judges were to consider pushing forward the *SDARS II* rates, both Professor Lys and Mr. Orszag testified that the appropriate starting point is the estimated marketplace per-subscriber rate identified by the Judges in *SDARS I* – $1.40 – rather than the percentage of revenue rates that were adjusted downward based on Sirius XM's financial condition at the time. When adjusted to 2016 dollars, that $1.40 per-subscriber rate converts into a per-subscriber rate of $1.74 to $1.92 during the coming rate period, or a 15.7% percentage of revenue rate in 2016. *See* Section IX.D.

The PSS Case

While the marketplace for digital music services has changed dramatically over the past twenty years, the statutory PSS rate has remained stuck near the low level where it was originally set to favor the PSS when they were startups. But Music Choice is no longer a fledgling company offering consumers one of the only ways to stream digital sound recordings. It is now a well-established and profitable company in a crowded market of digital music services. The PSS currently pay a rate of 8.5% of revenue, which is far below the rates paid by digital music

services in the free market, and lower than the rates paid by other statutory services, including Music Choice's direct competitors.

The Judges and the parties have previously recognized the difficulty of setting PSS rates in the absence of comparable marketplace benchmarks. SoundExchange has proposed as a benchmark the statutory royalty rates paid by CABSAT services pursuant to 37 C.F.R. Part 383. *See* Section XIII.A. The two services that use the statutory PSS license (Music Choice and Muzak's DishCD service) are in all material respects functionally equivalent to the three services that use the statutory CABSAT license (Stingray, Sirius XM, and Muzak's legacy DMX business). Like the PSS, the CABSAT services offer residential audio services delivered through cable and satellite television providers to consumers. In fact, Music Choice's Mr. Del Beccaro considers Stingray to be Music Choice's primary competitor. The only meaningful difference between them is that the PSS were in operation before 1998. *See* Section XIII.B.2.

Notwithstanding that the CABSAT rates were set in a proceeding before the Judges, they represent the best available benchmark for the PSS rates. They were set in a proceeding subject to the willing buyer/willing seller standard, and Music Choice's main competitor, Stingray, has opted into the rates, as has Sirius XM. As discussed in greater detail in Section XIII.B.2.viii, and as SoundExchange's expert witness Dr. Wazzan testified, the benchmark does not require any adjustments under Section 801(b)(1).

For its part, Music Choice has proposed a benchmark based on the Asymmetric Nash Bargaining Framework calculated by its expert witness, Dr. Crawford. *See* Section XIII.D. This is the same benchmark that Dr. Crawford proposed on Music Choice's behalf – and that the Judges rejected – in the *SDARS II* proceeding. While Dr. Crawford has tinkered with his model, it remains fundamentally flawed. As discussed below, record evidence demonstrates that the

model rests on faulty assumptions and on cost and revenue allocations that Dr. Crawford was unqualified to make. Given the benchmark's many flaws, the Judges should once again dismiss it. However, if the Judges try to fix those problems and use the model as a benchmark, Dr. Wazzan's testimony showed that once the model is corrected, it yields results that are substantially higher than the rates proposed by Music Choice. *See* Section XIII.D.

SoundExchange's Terms Proposal

Sections 112(e)(3) and 114(f)(1)(A) require the Judges to adopt "terms" for the Section 112 and 114 statutory licenses as well as "rates." *See* Section XIV. Terms include "such details as how payments are to be made, when, and other accounting matters."

In *Web IV*, the Judges undertook a major rewrite of the webcasting regulations. *See* Section XIV.A. The "plain language" format they adopted is clearer in many respects than the predecessor regulations. *See* Section XIV.A.2. SoundExchange has proposed adopting both the structure of the *Web IV* regulations and much of their language, and in so doing, harmonizing the regulations for the SDARS and PSS with each other and with the webcasting regulations to the extent practicable and appropriate. This would further the Judges' interest in creating consistency across licenses to promote efficiency and minimize costs in administering the licenses. *See* Section XIV.A.1.

The participants dispute many issues concerning terms. Among the numerous issues discussed in detail below, the Judges should not adopt in this proceeding the changes they made to the unclaimed-funds provision of the *Web IV* regulations, because those changes introduced a lack of clarity that is not desirable. *See* Section XIV.B. The Judges likewise should reject Sirius XM's proposal to slash the 1.5% per month fee that currently applies to late royalties paid by licensees (including webcasters under *Web IV*), because that proposal would not only eliminate

any deterrent value of the late fee, but also create affirmative incentives for licensees to underpay. *See* Section XIV.C.1. In its harmonization of the SDARS and PSS regulations, SoundExchange proposes departing from the *Web IV* regulations and adopting for both SDARS and PSS the current PSS term providing for audit fee-shifting when an audit discovers an underpayment of 5% or more. Given the size of payments at issue for the SDARS and PSS, a 10% underpayment standard is simply too large to countenance.

II. Background

A. The Parties

1. SoundExchange And Copyright Owner And Artist Participants

SEPFF1. SoundExchange, Inc. and seven other parties submitted a Joint Petition to Participate. *See* Joint Petition to Participate (Feb. 4, 2016). These eight copyright owner and artist participants participated in this proceeding collectively.

SEPFF2. *SoundExchange.* SoundExchange is a 501(c)(6) nonprofit performance rights organization established to ensure the prompt, fair, and efficient collection and distribution of royalties payable to performers and sound recording copyright owners for the use of their recordings under the statutory licenses in Sections 112(3) and 114 of the Copyright Act. Trial Ex. 29 at ¶ 2 (Bender WDT). The Court has consistently designated SoundExchange as the sole collective to receive payments of account and royalty payments from licensees and to distribute such royalty payments to copyright owners and performers. SoundExchange was so designated for the services at issue in this proceeding in both *SDARS I* and *SDARS II*. *In re Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, 78 FR 23054, 23074 (2013) (hereinafter "*SDARS II*"); *In re Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, 73 FR 4080, 4099 (2008) (hereinafter "*SDARS I*").

SEPFF3. SoundExchange has approximately 79,000 artist members and approximately 41,000 rights owner members. Trial Ex. 29 at 3 (Bender WDT). In total, SoundExchange maintains approximately 125,000 payee accounts for recording artists and copyright owners. Trial Ex. 29 at 3 (Bender WDT). SoundExchange has processed trillions of sound recording performances and distributed billions of dollars in statutory royalties. Trial Ex.

29 at 12-13 (Bender WDT). In 2015 alone, SoundExchange distributed over $800 million in royalties from services subject to statutory licensing. Trial Ex. 29 at 3 (Bender WDT).

SEPFF4. SoundExchange has unparalleled experience and expertise in administering the statutory licenses, and providing a high degree of service to artists and copyright owners. SoundExchange pays out approximately 90% of its royalties to artists and copyright owners within 45 days of receiving payment from licensees. 5/10/17 Tr. 3167:18-24 (Bender). Because of its extensive experience in distributing royalties, SoundExchange also operates at high efficiency and low cost. In 2015, SoundExchange's administrative rate was 4.6%. Trial Ex. 29 at 3 (Bender WDT).

SEPFF5. SoundExchange possesses sophisticated systems, extensive databases, and business processes designed to aid in the efficient collection and distribution of statutory royalties. Trial Ex. 29 at 4 (Bender WDT). In just the last few years, SoundExchange has embarked on several major technology initiatives incorporating sophisticated, next generation technology. Trial Ex. 29 at 4 (Bender WDT). SoundExchange also undertakes compliance and enforcement efforts to protect the interests of artists and copyright owners under the statutory licenses, Trial Ex. 29 at 12 (Bender WDT), and engages in extensive outreach to artists and copyright owners to educate them about statutory royalties, Trial Ex. 29 at 11 (Bender WDT).

SEPFF6. SoundExchange is a nonprofit organization operated on a breakeven basis. It does not retain profits from its administration of statutory royalties, and it has no stockholders to which profits could be distributed. Trial Ex. 29 at 35 (Bender WDT). SoundExchange is governed by an 18-member Board of Directors that is made up of equal numbers of artist representatives and sound recording copyright owner representatives. Trial Ex. 29 at 2-3 (Bender WDT). Its board includes representatives from all major record companies,

independent record companies, the RIAA, A2IM, AFM, and SAG-AFTRA. Trial Ex. 29 at 2 (Bender WDT).

SEPFF7. *The Recording Industry Association of America (RIAA).* The RIAA is a trade association representing producers of recorded music. Its members include WMG, Sony, UMG, and many other independent record companies and labels. Nearly 85% of all legitimate recorded music produced and sold in the United States is created, manufactured, or distributed by RIAA members. The RIAA is represented on SoundExchange's Board of Directors. Trial Ex. 29 at 2 (Bender WDT).

SEPFF8. *Sony Music Entertainment.* Sony is a recorded music company home to many best-selling artists and renowned record labels. Trial Ex. 38 at 1 (Walker WDT). Artists who record music for Sony labels include Adele, Beyoncé, Justin Timberlake, Billy Joel, and Bruce Springsteen. Trial Ex. 38 at 1 (Walker WDT). Sony's catalog contains some of the most important sound recordings ever made, including recordings by Michael Jackson, Louis Armstrong, Frank Sinatra, Whitney Houston, and Miles Davis. Trial Ex. 38 at 1-2 (Walker WDT). Sony's labels create and distribute music across every genre. Trial Ex. 38 at 1 (Walker WDT). Its labels include Epic Records, RCA Records, Columbia Records, and many others. Trial Ex. 38 at 1 (Walker WDT).

SEPFF9. *Universal Music Group.* UMG comprises a group of music-related companies owned by Vivendi S.A. Trial Ex. 32 at ¶ 1 (Harrison WDT). It is the world's largest recorded music company. Trial Ex. 32 at ¶ 1 (Harrison WDT). The artists who record for UMG labels include some of the world's best known and most popular recording artists, including U2, Maroon 5, Katy Perry, Lady Gaga, and Ariana Grande, among many others. Trial Ex. 32 at ¶ 6 (Harrison WDT). UMG's catalog of sound recordings includes music by some of the most

influential and legendary artists in the history of music, including The Beatles, the Beach Boys, and The Rolling Stones. Trial Ex. 32 at ¶ 6 (Harrison WDT). UMG record labels include Capitol Records, Def Jam Recordings, Geffen Records, and Interscope Records. Trial Ex. 32 at ¶ 6 (Harrison WDT). In 2015, UMG's share of the U.S. recorded music market, measured by ownership volume, was approximately 26.7%. Trial Ex. 32 at ¶ 5 (Harrison WDT).

SEPFF10. *Warner Music Group.* WMG is a recorded music company. Trial Ex. 34 at ¶ 5 (Kushner WDT). Its artists and record labels represent a broad array of musical genres. WMG's record labels include Atlantic Records, Parlophone, Warner Music Nashville, and Warner Classics. Trial Ex. 34 at ¶ 5 (Kushner WDT). Top-selling WMG artists include Bruno Mars, Wiz Khalifa, and Twenty One Pilots. Trial Ex. 34 at ¶ 6 (Kushner WDT). WMG's catalog includes legendary artists such as Ray Charles and Led Zeppelin. Trial Ex. 34 at ¶ 5 (Kushner WDT). In 2016, WMG had an overall U.S. music market share of about 18% for albums. Trial Ex. 34 at ¶ 6 (Kushner WDT).

SEPFF11. *The American Association of Independent Music (A2IM).* A2IM is a not-for-profit organization representing a diverse group of over 400 independent record labels. A2IM is dedicated to protecting the value of independent music and sound recordings. A2IM currently holds a seat on the Board of Directors of SoundExchange. Trial Ex. 29 at 2 (Bender WDT).

SEPFF12. *The American Federation of Musicians of the United States and Canada (AFM).* The AFM is an international labor organization representing over 80,000 professional musician members in the United States and Canada through a network of more than 200 local unions. Trial Ex. 31 at 3 (Hair WDT). The AFM is the oldest and largest union of musicians in the world. Trial Ex. 31 at 1 (Hair WDT). AFM members span the full range of

professional musicians, and they record and perform music of every genre. Trial Ex. 31 at 1 (Hair WDT). AFM engages in collective bargaining, and also advocates for musicians' interests in various contexts, including by serving as a proponent of performers' rights and copyright protection for performers. Trial Ex. 31 at 3-4 (Hair WDT). AFM is represented on SoundExchange's Board of Directors. Trial Ex. 29 at 2 (Bender WDT); Petition to Participate at 2.

SEPFF13. *Screen Actors Guild and American Federation of Television and Radio Artists (SAG-AFTRA).* SAG-AFTRA is a labor organization representing approximately 160,000 recording artists, actors, broadcast journalists, and other media professionals. SAG-AFTRA engages in collective bargaining on behalf of its members and seeks the strongest protections for media artists around the world. SAG-AFTRA is represented on SoundExchange's Board of Directors. Trial Ex. 29 at 2 (Bender WDT).

2. The Services

SEPFF14. *Sirius XM.* Sirius XM operates satellite digital radio services. It produces and offers to its subscribers numerous channels broadcasting commercial-free music, as well as sports, talk radio, and other non-music content. Trial Ex. 1 at 10 (Meyer WDT). Presently, Sirius XM offers over 175 channels of satellite radio, including 72 channels of commercial-free music. Trial Ex. 25 at ¶ 39 (Lys Corr. WDT). As of July 2016, Sirius XM had approximately 30.6 million paying customers. Trial Ex. 1 at 7 (Meyer WDT).

SEPFF15. At the time of the *SDARS I* proceeding, Sirius and XM were two separate companies. Trial Ex. 25 at ¶ 43 (Lys Corr. WDT). However, in July 2008, Sirius and XM merged to form Sirius XM. Trial Ex. 25 at ¶ 43 (Lys Corr. WDT). Through this merger, Sirius XM became the sole provider of satellite radio in the United States. Trial Ex. 25 at ¶ 43 (Lys Corr. WDT).

SEPFF16. Sirius XM broadcasts satellite radio on a subscription basis primarily to car-based satellite receivers. It offers different packages of channels that range in price from $7.99 to $19.99 per month. Trial Ex. 25 at ¶ 41 (Lys Corr. WDT). Sirius XM has previously stated that satellite radios are available as a factory or dealer-installed option in substantially all vehicle makes sold in the United States. Trial Ex. 25 at ¶ 38 (Lys Corr. WDT).

SEPFF17. Sirius XM has become extremely profitable. Indeed, profitability has increased significantly in every period since the post-merger Sirius XM obtained sufficient revenue to cover its fixed costs. Trial Ex. 25 at ¶ 48 (Lys Corr. WDT). In 2015, Sirius XM achieved a contribution margin of 71%, meaning that each additional dollar revenue increases pre-tax net income and cash flows by $0.71. Trial Ex. 25 at ¶ 47 (Lys Corr. WDT). Since the merger, Sirius XM also has generated over $7 billion in adjusted EBITDA, which increased from a negative $690 million in 2006 to positive 1.66 billion in 2015. Trial Ex. 25 at ¶ 54 (Lys Corr. WDT).

SEPFF18. Sirius XM is a publicly traded company. Trial Ex. 1 at 6 (Meyer WDT). Its largest shareholder is Liberty Media Corporation, which owns approximately 40% of Sirius XM's equity. Trial Ex. 1 at 6 (Meyer WDT). As of April 25, 2017, the total value of Sirius XM's assets was approximately $7.93 billion. Trial Ex. 371 at 3.

SEPFF19. *Music Choice.* Music Choice relies on the statutory PSS license to offer a residential audio service. Trial Ex. 55 at 4-5 (Del Beccaro WDT). The service, which consists of 50 channels of audio programming, is delivered to consumers by cable operators as part of cable operators' home television packages. Trial Ex. 55 at 4 (Del Beccaro WDT). Customers listen to and view Music Choice's audio channels on their televisions. *See* Trial Ex.

55 at 4 (Del Beccaro WDT). Music Choice also webcasts through a family of apps and a web portal. Trial Ex. 29 at 15 (Bender WDT).

SEPFF20. *Muzak*. Muzak provides a music service to businesses. Trial Ex. 29 at 16 (Bender WDT). In 1996, it launched a consumer music service called DishCD that is distributed through the Dish satellite network. Trial Ex. 29 at 16 (Bender WDT). Muzak initially filed a petition to participate in this proceeding, but withdrew before the submission of written direct statements. Muzak may nonetheless rely on the PSS rates determined in this proceeding to the extent that it provides a PSS through DishCD. Trial Ex. 29 at 16 (Bender WDT). It is a disputed issue whether Muzak provides a PSS. Trial Ex. 29 at 16 (Bender WDT).

B. History Of This Proceeding

SEPFF21. On October 19, 2016, SoundExchange, Sirius XM, and Music Choice filed their written direct statements.

SEPFF22. On February 17, 2017, SoundExchange, Sirius XM, and Music Choice filed their written rebuttal statements.

SEPFF23. From April 12, 2017 through May 18, 2017, the Judges heard oral testimony from witnesses presented by SoundExchange, Sirius XM, Music Choice, and *pro se* party Mr. George Johnson.

1. SoundExchange's Witnesses

SEPFF24. SoundExchange presented written testimony from nine expert witnesses and eleven fact witnesses. All of the witnesses testified in person at the hearing, except for five fact witnesses whose written testimony was admitted into evidence without their live testimony (Hair, Iglauer, Pascal, Sirota and Van Arman). SoundExchange also submitted designated testimony from prior proceedings.

i. Expert Witnesses

SEPFF25. *Jonathan Orszag*. Jonathan Orszag is a Senior Managing Director and member of the Executive Committee of Compass Lexecon, LLC, an economic consulting firm.

Trial Ex. 26 at ¶ 1 (Orszag Am. WDT). He has been retained by numerous public-sector entities and private-sector firms on a wide variety of matters, with a particular emphasis on telecommunications and the distribution of content, and music content. Trial Ex. 26 at ¶¶ 1, 4 (Orszag Am. WDT). Previously, he served as the Assistant to the U.S. Secretary of Commerce and Director of the Office of Policy and Strategic Planning and as an Economic Policy Advisor on President Clinton's National Economic Council. Trial Ex. 26 at ¶ 2 (Orszag Am. WDT). He has served as a consultant for numerous music and video content distributors, including Comcast, Cablevision, Verizon, and DIRECTV, and has worked on numerous mergers and acquisitions in the radio and music space, including the Comcast-Time Warner-Adelphia transaction; the Charter-Time Warner transaction, and the News Corp-DIRECTV merger. Trial Ex. 26 at ¶ 4 (Orszag Am. WDT). Mr. Orszag received an MSc from Oxford University, which he attended as a Marshall Scholar, and he graduated *summa cum laude* in economics from Princeton University. Trial Ex. 26 at ¶ 3 (Orszag Am. WDT). Mr. Orszag submitted written direct and rebuttal testimony, and testified before the Judges on April 25 and 26, 2017. 4/25/17 Tr. 941:10-1083:12 (Orszag); 4/26/17 Tr. 1092:24-1275:25 (Orszag).

SEPFF26. The Judges qualified Mr. Orszag as an expert in applied microeconomics, industrial organization, and econometrics. 4/25/17 Tr. 950:8-13 (Orszag).

SEPFF27. *Professor Thomas Z. Lys.* Professor Thomas Z. Lys is the Eric L. Kohler Professor Emeritus at the Kellogg School of Management, Northwestern University.

Trial Ex. 25 at ¶ 20 (Lys Corr. WDT). He has been a faculty member at Kellogg since 1981. Trial Ex. 25 at ¶ 21 (Lys Corr. WDT). Professor Lys also has held visiting academic positions at the Graduate School of Business at the University of Chicago and the Graduate School of Business at Stanford University. Trial Ex. 25 at ¶ 22 (Lys Corr. WDT). His research has been published in many peer-reviewed academic journals, including the Journal of Accounting and Economics, the Journal of Financial Economics, the Journal of Monetary Economics, The Journal of Business, The Accounting Review, and the Journal of Accounting Research. Trial Ex. 25 at ¶ 27 (Lys Corr. WDT). Professor Lys also has consulted for numerous companies, including IBM, General Electric, and Cox Communications. Trial Ex. 25 at ¶ 29 (Lys Corr. WDT). He also has extensive expertise in negotiation, and has taught negotiation classes around the world. 4/27/17 Tr. 1279:19, 1280:9, 1282:19-1283:12 (Lys). Professor Lys holds a PhD in accounting and finance from the University of Rochester, an MS in accounting from the University of Rochester, and a BS in economics (*summa cum laude*) from the University of Berne, Switzerland. Trial Ex. 25 at ¶ 23 (Lys Corr. WDT). Professor Lys submitted written direct and rebuttal testimony, and testified before the Judges on April 26 and 27, and May 1, 2017. 4/26/17 Tr. 1276:16-1364:13 (Lys); 4/27/17 Tr. 1376:24-1634:14 (Lys); 5/1/17 Tr. 1643:17-1685:7 (Lys).

SEPFF28. The Judges qualified Professor Lys as an expert in financial economics, behavioral economics, and negotiations. 4/26/17 Tr. 1302:8-1303:6 (Lys).

SEPFF29. *David Blackburn.* David Blackburn is an applied microeconomist and Director for NERA Economic Consulting. Trial Ex. 39 at ¶ 2 (Blackburn WRT). His work

focuses on the use and valuation of intellectual property, on antitrust-related matters, and on the calculation of economic damages in commercial disputes. Trial Ex. 39 at ¶ 3 (Blackburn WRT). Mr. Blackburn has published numerous articles related to economics and intellectual property in journals including the Journal of Monetary Economics and Corporate Disputes. Trial Ex. 39, App. 1 at 9-10 (Blackburn WRT). He has also testified in dozens of proceedings before courts throughout the country. Trial Ex. 39, App. 1 at 1-9 (Blackburn WRT). Mr. Blackburn serves as a referee for the American Economic Review, the Economic Journal, and the Review of Network Economics, Trial Ex. 39, App. 1 at 12 (Blackburn WRT), and has taught economics courses at the undergraduate and graduate levels at numerous institutions, Trial Ex. 39 at ¶ 2 (Blackburn WRT). Mr. Blackburn earned a PhD and MA in Economics from Harvard University, and holds a BSc in Applied Mathematics and Economics from Brown University. Trial Ex. 39 at ¶ 2 (Blackburn WRT). Mr. Blackburn submitted written rebuttal testimony and testified before the Judges on May 1, 2017. 5/1/17 Tr. 1686:10-1815:11 (Blackburn).

SEPFF30. The Court qualified Mr. Blackburn as an expert in applied microeconomics. 5/1/17 Tr. 1691:16-22 (Blackburn).

SEPFF31. *Dr. George S. Ford.* Dr. George S. Ford is the President of Applied Economic Studies, a private consulting firm specializing in economic and econometric analysis.

Trial Ex. 23 at 1 (Ford WDT). He is also the Chief Economist of the Phoenix Center for Advanced Legal & Economic Policy Studies, a research organization specialized in the legal and economic analysis of public policy issues involving the communications and technology industries, and an Adjunct Professor at Samford University and Auburn University. Trial Ex. 23 at 1 (Ford WDT). Previously, Dr. Ford was an economist in the Competition Division of the Federal Communications Commission, an economist at MCI Communications, and the Chief Economist of Z-Tel Communications. Trial Ex. 23 at 1 (Ford WDT). Dr. Ford has been involved in numerous proceedings before the Copyright Royalty Board, and before the Copyright Board of Canada, and he has consulted for multiple stakeholders in the music industry, including the RIAA. 5/1/17 Tr. 1819:7-1820:2 (Ford). Dr. Ford has published many papers in journals such as the Journal of Law & Economics, Empirical Economics, the Journal of Business, and the Yale Journal on Regulation. Trial Ex. 23 at 1 (Ford WDT). Dr. Ford holds a PhD in Economics from Auburn University. Dr. Ford submitted written direct and rebuttal testimony, and testified before the Judges on May 1, 2001. 5/1/17 Tr. 1817:8-1939:5 (Ford).

SEPFF32. The Judges qualified Dr. Ford as an expert in industrial economics. 5/1/17 Tr. 1823:21-1824:5 (Ford).

SEPFF33. *Professor Robert D. Willig*. Professor Robert D. Willig is Professor Emeritus of Economics and Public Affairs at Princeton University, where he has held a joint

appointment in the Economics Department and at the Woodrow Wilson School of Public and International Affairs since 1978. Trial Ex. 28 at ¶ 1 (Willig WDT). Previously, he was a Supervisor in the Economics Research Department of Bell Laboratories. Trial Ex. 28 at ¶ 1 (Willig WDT). He served as Deputy Assistant Attorney General for Economics in the Antitrust Division of the U.S. Department of Justice from 1989 to 1991, and in that capacity served as the Division's Chief Economist. Trial Ex. 28 at ¶ 1 (Willig WDT). Professor Willig has authored approximately 80 articles and two books, and is the co-editor of The Handbook of Industrial Organization. Trial Ex. 28 at ¶ 1 (Willig WDT). He has served on the editorial boards of the American Economic Review, the Journal of Industrial Economics, and the MIT Press Series on Regulation, Trial Ex. 28 at ¶ 1 (Willig WDT), and as a consultant to the Federal Trade Commission, the U.S. Department of Justice, and many leading corporations on antitrust, regulation, intellectual property, and policy issues. Trial Ex. 28 at ¶ 2 (Willig WDT). Professor Willig holds a PhD in Economics from Stanford University, an MS in Operations Research from Stanford University, and an AB in Mathematics from Harvard University. Trial Ex. 28 at A-1 (Willig WDT). Professor Willig submitted written direct and rebuttal testimony, and testified before the Judges on May 2 and 4, 2017. 5/2/17 Tr. 1947:14-2192:3 (Willig); 5/4/17 Tr. 2612:1-2625:14 (Willig).

SEPFF34. The Judges qualified Professor Willig as an expert in microeconomics and industrial organization. 5/2/17 Tr. 1953:6-11 (Willig).

SEPFF35. *Dr. Paul Wazzan.* Dr. Paul Wazzan is a Managing Director with Berkeley Research Group, a firm that provides analyses and consulting in matters involving

economics, finance, and statistics. Trial Ex. 501 at ¶ 1 (Wazzan Corr. WDT). Dr. Wazzan has provided financial and statistical expertise in the areas of intellectual property, antitrust and competition policy, predatory pricing, price discrimination, and many other areas. Trial Ex. 501 at ¶ 6 (Wazzan Corr. WDT). His research has been published in peer-reviewed economics journals and law reviews. Trial Ex. 501 at ¶ 4 (Wazzan Corr. WDT). He has served as an Adjunct Assistant Professor of Business and Economics at California State University, Los Angeles, and has taught option pricing classes at the University of Southern California, Marshall School of Business. Trial Ex. 501 at ¶ 2 (Wazzan Corr. WDT). He also serves as President and CEO of Wazzan & Co. Investment, LLC, a venture capital firm specialized in the technology sector. Trial Ex. 501 at ¶ 3 (Wazzan Corr. WDT). Dr. Wazzan holds a PhD in Finance from the Anderson Graduate School of Management at the University of California, Los Angeles, and a BA in Economics from the University of California, Berkeley. Trial Ex. 501 at ¶ 1 (Wazzan Corr. WDT). He submitted written direct and rebuttal testimony, and testified before the Judges on May 3, 2017. 5/3/17 Tr. 2290:1-2476:2 (Wazzan).

SEPFF36. The Judges qualified Dr. Wazzan as an expert in economics, including finance and valuation. 5/3/17 Tr. 2293:20-25 (Wazzan).

SEPFF37. *Professor Ravi Dhar.* Professor Ravi Dhar is the George Rogers Clark Professor of Management and Marketing at the Yale School of Management, and the Director of the Yale Center for Customer Insights at the School of Management at Yale University. Trial Ex. 22 at ¶ 1 (Dhar Corr. WDT). He also holds an affiliated appointment as a Professor of Psychology at the Department of Psychology at Yale University. Trial Ex. 22 at ¶ 1 (Dhar Corr. WDT). Professor Dhar has published more than 60 papers in journals, proceedings, and as book chapters, including in the Harvard Business Review, the Journal of Behavioral Decision Making, and the Journal of Business. Trial Ex. 22 at ¶ 2 (Dhar Corr. WDT). Professor Dhar also serves on the editorial boards of numerous leading consumer research journals, including the Journal of Consumer Research, the Journal of Marketing, and the Journal of Consumer Psychology. Trial Ex. 22 at ¶ 1 (Dhar Corr. WDT). In his work as a professor and as a consultant to major corporations, he has conducted, supervised, and evaluated more than 250 surveys. Trial Ex. 22 at ¶ 4 (Dhar Corr. WDT). Professor Dhar holds a PhD and an MS in Business Administration from the University of California, Berkeley. Trial Ex. 22 at ¶ 2 (Dhar Corr. WDT). He submitted written direct and rebuttal testimony in this proceeding, and testified before the Judges on May 8, 2017. 5/8/17 Tr. 2724:7-2929:5 (Dhar).

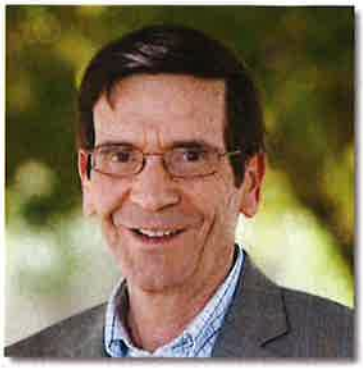
SEPFF38. The Judges qualified Professor Dhar as an expert in marketing, marketing research, consumer psychology, surveys, and survey methodology. 5/8/17 Tr. 2727:24-2728:6 (Dhar).

SEPFF39. *Stefan Boedeker*. Stefan Boedeker is a statistician and economist, and is a Managing Director at the Berkeley Research Group. Trial Ex. 21 at ¶ 1, 2 (Boedeker WDT).

He previously was a partner at Resolution Economics, and held Managing Director positions at Alvarez & Marsal, Navigant Consulting, and LECG. Trial Ex. 21 at ¶ 2 (Boedeker WDT). Mr. Boedeker has also held partner-level positions at Deloitte & Touche LLP, PricewaterhouseCoopers LLP, and Arthur Andersen LLP, and served as a statistician for the German government. Trial Ex. 21 at ¶ 2 (Boedeker WDT). Mr. Boedeker has extensive experience designing and conducting surveys, as well as statistically analyzing survey results. Trial Ex. 21 at ¶ 4 (Boedeker WDT). He has submitted numerous expert reports in matters dealing with surveys and statistical sampling issues. Trial Ex. 21 at ¶ 5 (Boedeker WDT). Mr. Boedeker holds a BA in Business Administration and an MS in Statistics from the University of Dortmund, Germany, and an MA degree in Economics from the University of California, San Diego. Trial Ex. 21 at ¶ 1 (Boedeker WDT). He also completed PhD requirements (except dissertation) in Economics from the University of California, San Diego. Mr. Boedeker submitted written direct testimony, and testified before the Judges on May 8, 2017. 5/8/2017 Tr. 2930:1-3011:3 (Boedeker).

SEPFF40. The Judges qualified Mr. Boedeker as an expert in survey design and analysis, sampling, and statistical methodology. 5/8/17 Tr. 2932:16-23 (Boedeker).

SEPFF41. *Professor Itamar Simonson.* Professor Itamar Simonson is the Sebastian S. Kresge Professor of Marketing at the Graduate School of Business, Stanford University. Trial Ex. 44 at ¶ 1 (Simonson WRT). He has published numerous articles in the fields of consumer behavior, marketing management, and survey methods, and has won awards for articles in the Journal of Consumer Research, the Journal of Marketing Research, and the Journal of Public Policy & Marketing. Trial Ex. 44 at ¶¶ 3-4 (Simonson WRT).



Professor Simonson has conducted, supervised, or evaluated over 1,000 marketing research studies. Trial Ex. 44 at ¶ 8 (Simonson WRT). He serves on eight editorial boards, including leading journals such as the Journal of Consumer Research, the Journal of Marketing Research, and the Journal of Consumer Psychology, and has testified as an expert in prior litigation involving marketing and buyer behavior issues, branding, and other areas. Trial Ex. 20 at ¶ 8 (Simonson WRT). Professor Simonson holds a PhD in Marketing from Duke University, Fuqua School of Business, an MBA from the University of California, Los Angeles Graduate School of Management, and a Bachelor's degree from The Hebrew University with majors in Economics and Political Science. Trial Ex. 44 at ¶ 2 (Simonson WRT). Professor Simonson submitted written rebuttal testimony and testified before the Judges on May 11, 2017. 5/11/17 Tr. 3420:13-3521:11 (Simonson).

SEPFF42. The Judges qualified Professor Simonson as an expert in consumer decision-making and survey methodology. 5/11/17 Tr. 3425:1-6 (Simonson).

ii. Fact Witnesses

SEPFF43. *Jonathan Bender.* Jonathan Bender is the Chief Operating Officer of SoundExchange. Trial Ex. 29 at 1 (Bender WDT). He oversees the collection, processing, and distribution of royalties for all types of services eligible for statutory licensing, including the SDARS and the PSS. Trial Ex. 29 at 1 (Bender WDT). He additionally oversees SoundExchange's technical involvement with licensees, and assists with coordination of its system requirements, development, testing, and operations. Trial Ex. 29 at 1 (Bender WDT). The SoundExchange employees who handle repertoire management, licensee management, data management, account services, and distribution services report to Mr. Bender. Trial Ex. 29 at 1 (Bender WDT). Mr. Bender has over 25 years of experience in the music industry. He has held senior roles at Concord Music Group, UMG, and EMI Music. Trial Ex. 29 at 1 (Bender WDT). He holds an MBA from Harvard Business School and a Bachelor's degree from the University of North Carolina, Chapel Hill. Trial Ex. 29 at 1 (Bender WDT). Mr. Bender submitted written direct and rebuttal testimony and testified before the Judges on May 10, 2017. 5/10/17 Tr. 3164:3-3339:22 (Bender).

SEPFF44. *Jeff Walker*. Jeff Walker is the Executive Vice President & Head of Business & Legal Affairs for Global Digital Business at Sony. Trial Ex. 38 at 1 (Walker WDT).

His job responsibilities include negotiating agreements with digital music services that use Sony's sound recordings. Trial Ex. 38 at 1 (Walker WDT). He is deeply familiar with how digital music services perform in the marketplace and with Sony's strategy for monetizing content, including on streaming and subscription services. Trial Ex. 38 at 1 (Walker WDT). Previously, he was Executive Vice President of Business & Legal Affairs for the Columbia/Epic Label Group at Sony Music. Trial Ex. 38 at 1 (Walker WDT). He has also held other positions in the music industry, including a position at RCA Records. He received a JD from Harvard Law School and a Bachelor's degree from Dartmouth College. Trial Ex. 38 at 1 (Walker WDT). Mr. Walker submitted written direct and rebuttal testimony and testified before the Judges on May 15, 2017. 5/15/17 Tr. 3808:6-3901:11 (Walker).

SEPFF45. *Aaron Harrison.* Aaron Harrison is Senior Vice President, Digital Business & Legal Affairs at UMG. Trial Ex. 32 at ¶ 1 (Harrison WDT). Mr. Harrison negotiates

deals with various digital music service providers that use the sound recording repertoire of UMG and the independent record labels that UMG distributes. Trial Ex. 32 at ¶ 1 (Harrison WDT). Such services include on-demand and customized streaming services, download and ringtone stores, and locker services. Trial Ex. 32 at ¶ 1 (Harrison WDT). Mr. Harrison has negotiated deals on UMG's behalf for the past eleven years and during that time has negotiated more than 100

significant agreements with digital music services. Trial Ex. 32 at ¶ 1 (Harrison WDT). Previously, Mr. Harrison served as Director, Business & Legal Affairs, eLabs, at UMG. Trial Ex. 32 at ¶ 2 (Harrison WDT). Prior to joining UMG, Mr. Harrison was an attorney at the law firm of Manatt, Phelps & Phillips, LLP, and at Munger, Tolles & Olson LLP. Trial Ex. 32 at ¶ 2 (Harrison WDT). He received a JD from Yale Law School and a BA in Economics from Pomona College. Trial Ex. 32 at ¶ 2 (Harrison WDT). Mr. Harrison submitted written direct and rebuttal testimony and testified before the Judges on May 16, 2017. 5/16/17 Tr. 3913:5-4089:2 (Harrison).

SEPFF46. *Glen Barros*. Glen Barros is President and CEO of Concord Music Group. Trial Ex. 47 at ¶ 1 (Barros WRT). He has been with Concord in that role for 22 years.

Trial Ex. 47 at ¶ 1 (Barros WRT). Mr. Barros has worked in the music industry for his entire professional career. Trial Ex. 47 at ¶ 2 (Barros WRT). Before joining Concord, Mr. Barros was Chief Operating Officer of AEC Music Group, a division of Alliance Entertainment Corporation, and before that held various positions in record distribution, record production, and music publishing. Trial Ex. 47 at ¶ 2 (Barros WRT). He holds a BS degree *summa cum laude* in Music and Business from NYU. Trial Ex. 47 at ¶ 2 (Barros WRT). Mr. Barros submitted written rebuttal testimony and testified before the Judges on May 16, 2017. 5/16/17 Tr. 4089:21-4161:24.

SEPFF47. *Jason Gallien.* Jason Gallien is Senior Vice President, Finance at UMG, a position he has held since May 2012. Trial Ex. 30 at 1 (Gallien WDT). Mr. Gallien

oversees all of UMG's financial reporting and accounting matters for UMG's recorded music operations in the United States. Trial Ex. 30 at 1 (Gallien WDT). The departments under his direct supervision include: Central Accounting Services, Financial Services, North American Finance, and other administrative and operational departments. Trial Ex. 30 at 1 (Gallien WDT). These departments cover the full range of financial activities in the United States, including strategic planning, budgeting and financial reporting, internal and external audit compliance, accounts payable, and cash management. Trial Ex. 30 at 1 (Gallien WDT). Mr. Gallien has personal knowledge of UMG's finances, including its revenues, costs, investments, and profitability. Trial Ex. 30 at 1 (Gallien WDT). He has worked for UMG for more than 19 years, in numerous capacities. He previously has served as the Senior Vice President of Finance for North America, the Vice President and Group Controller for UMG in the United States, Vice President of Finance in Universal's Music Publishing Group, and Senior Director of Finance for UMG. Trial Ex. 30 at 1 (Gallien WDT). Mr. Gallien received a Bachelor's degree in Business Economics from the University of California, Los Angeles and is a Certified Public Accountant in the State of California (currently inactive). Trial Ex. 30 at 1 (Gallien WDT). Mr. Gallien submitted written direct testimony and testified before the Judges on May 16, 2017. 5/16/17 Tr. 4162:11-4205:25 (Gallien).

SEPFF48. *Michael Kushner*. Michael Kushner is Executive Vice President, Business & Legal Affairs Atlantic Recording Corporation, which is part of WMG. Trial Ex. 34 at ¶ 1 (Kushner WDT). Mr. Kushner is primarily responsible for running the Business & Legal Affairs Department of Atlantic. Trial Ex. 34 at ¶ 2 (Kushner WDT). He works closely with Atlantic's Co-Chairmen, Chief Financial Officer, and the Artist & Repertoire and Marketing departments. Trial Ex. 34 at ¶ 2 (Kushner WDT). He is also responsible for Artist & Repertoire Administration, which is the department within Atlantic that administers recording projects. Trial Ex. 34 at ¶ 2 (Kushner WDT). Before joining Atlantic in 2001 in his current role, Mr. Kushner held various positions in the record business. Trial Ex. 34 at ¶ 1 (Kushner WDT). Just prior to joining Atlantic, he was Senior Vice President, Legal & Business Affairs for The Island Def Jam Music Group, a division of UMG. Trial Ex. 34 at ¶ 1 (Kushner WDT). Mr. Kushner submitted written direct testimony and testified before the Judges on May 11, 2017. 5/11/17 Tr. 3523:6-3612:21 (Kushner).

SEPFF49. *Bruce Iglauer*. Bruce Iglauer is the founder and President of Alligator Records, the world's largest contemporary blues label. Trial Ex. 33 at 1 (Iglauer WDT). Mr. Iglauer started Alligator Records in 1971, at the age of 23, and has run it ever since. Trial Ex. 33 at 1 (Iglauer WDT). Under Mr. Iglauer's stewardship, Alligator grew into one of the top blues and roots rock record labels in the world, with a catalog containing almost 300 albums. Trial Ex. 33 at 1 (Iglauer WDT). Three Alligator recordings have won Grammy Awards, and forty-one titles have been nominated. Trial Ex. 33 at 1 (Iglauer WDT). In addition to his work with Alligator, Mr. Iglauer is a founder and board

member of the Community Blues Foundation, and previously served on the board of the National Association of Independent Record Distributors and Manufacturers, and on the Board of Directors of A2IM. Trial Ex. 33 at 4 (Iglauer WDT). He has previously received the A2IM Lifetime Achievement Award and Chicago Magazine's Chicagoan of the Year award, and was inducted into the Blues Foundation's Hall of Fame in 1997. Trial Ex. 33 at 4 (Iglauer WDT). Mr. Iglauer submitted written direct testimony. He did not testify in person before the Judges.

SEPFF50. *Jason Pascal.* Jason Pascal is Vice President, Catalog Development and Associate General Counsel at The Orchard, a distributor of independent record labels now owned by Sony. Trial Ex. 35 at 1 (Pascal WDT). Mr. Pascal manages relationships with record labels, artists, and other parties that bring content to The Orchard. Trial Ex. 35 at 1 (Pascal WDT). He is deeply familiar with The Orchard's operations. Trial Ex. 35 at 1 (Pascal WDT). Prior to joining The Orchard, Mr. Pascal held other positions in the music industry, including positions at EverAd and at BMG Entertainment. Trial Ex. 35 at 1 (Pascal WDT). He received a Bachelor's degree in History from the University of Michigan and a JD from Brooklyn Law School. Trial Ex. 35 at 1 (Pascal WDT). Mr. Pascal submitted written direct testimony. He did not testify in person before the Judges.

SEPFF51. *Jeremy Sirota.* Jeremy Sirota is Senior Vice President and Head of Business and Legal Affairs at the Alternative Distribution Alliance ("ADA"), a WMG-owned distributor of independent music, and Warner-Elektra-Atlantic Corporation ("WEA"), which is the shared services division of WMG's recorded music business. Trial Ex. 36 at 1 (Sirota WDT). Mr. Sirota provides business and legal advice to various departments within ADA and WEA. Trial Ex. 36 at 1 (Sirota WDT). He regularly negotiates and helps to administer vendor technology deals that facilitate the services that WEA provides, including services related to digital supply chain, artist websites, and e-commerce. Trial Ex. 36 at 1 (Sirota WDT). Mr. Sirota also negotiates ADA's distribution deals with independent record labels, artists, and management companies. Trial Ex. 36 at 1 (Sirota WDT). Prior to joining WMG, Mr. Sirota worked for five years at a private law firm. Trial Ex. 36 at 1 (Sirota WDT). Mr. Sirota submitted written direct testimony. He did not testify in person before the Judges.

SEPFF52. *Darius Van Arman.* Darius Van Arman is a co-founder and co-owner of Secretly Group, a group of independent record labels. Trial Ex. 37 at 1 (Van Arman WDT). He is also the co-owner of a distribution company, Secretly Distribution, which distributes the four Secretly Group labels, as well as about 57 other independent record labels. Trial Ex. 37 at 1 (Van Arman WDT). Secretly Group record labels are home to numerous prominent artists such as Bon Iver, a recording artist who won Grammy Awards for Best New Artist and Best

Alternative Album, and Tig Notaro, a 2014 Grammy nominee for Best Comedy Album. Trial Ex. 37 at 1-2 (Van Arman WDT). In addition to his work with Secretly Group, Mr. Van Arman serves as the chairman of the Board of Directors of A2IM, is a member of the Board of the Music and Entertainment Rights Licensing Independent Network, also known as "Merlin," and is a council member of the Worldwide Independent Network. Trial Ex. 37 at 1 (Van Arman WDT). He also is a member of the Board of Directors of SoundExchange. Trial Ex. 37 at 1 (Van Arman WDT). Mr. Van Arman submitted written direct testimony. He did not testify in person before the Judges.

SEPFF53. *Raymond M. Hair, Jr.* Raymond M. Hair, Jr. is the International President of AFM, a role he has held since 2010. Trial Ex. 31 at 2 (Hair WDT). Mr. Hair has

been involved in the representation of artists and musicians for over 30 years. Trial Ex. 31 at 2 (Hair WDT). As an AFM officer, Mr. Hair has represented every kind of professional musician. Trial Ex. 31 at 2 (Hair WDT). He has led or participated in negotiations in the commercial announcements, television, motion picture, and sound recording industries. Trial Ex. 31 at 2 (Hair WDT). Mr. Hair currently serves as Co-Chair of the AFM & SAG-AFTRA Intellectual Property Rights Distribution Fund and the AFM and Employers' Pension Fund, as a member of the Board of Directors of SoundExchange and of the Alliance of Artists and Recording Companies. Trial Ex. 31 at 2 (Hair WDT). In addition to his work representing artists, Mr. Hair is a practicing musician, who has performed continually since the early 1970s. Trial Ex. 31 at 1 (Hair WDT). Mr. Hair holds a graduate degree in Jazz Studies from North Texas State University (now the University of North Texas), and an undergraduate

degree in Music from the University of Southern Mississippi. Trial Ex. 31 at 1 (Hair WDT). Mr. Hair submitted written direct testimony. He did not testify in person before the Judges.

iii. Designated Testimony

SEPFF54. SoundExchange also submitted the designated testimony of the following witnesses from prior proceedings.

SEPFF55. *Dr. George S. Ford.* SoundExchange designated Dr. George S. Ford's testimony from *Webcasting III.* Trial Ex. 51 (Des. Testimony of Ford).

SEPFF56. *Professor Yoram Wind.* SoundExchange designated Professor Yoram (Jerry) Wind's testimony from *SDARS I.* Trial Ex. 52 (Des. Testimony of Wind).

SEPFF57. *Michael Powers.* SoundExchange designated Mr. Michael Powers's testimony from *SDARS II.* Trial Ex. 53 (Des. Testimony of Powers).

2. Services' Witnesses

SEPFF58. Sirius XM presented testimony from four expert witnesses and seven fact witnesses, one of whom did not testify live at the hearing. Music Choice presented testimony from one expert witness and two fact witnesses.

i. Expert Witnesses

SEPFF59. *Professor Carl Shapiro.* 4/19/17 Tr. 157:19-256:9 (Shapiro); 4/20/17 Tr. 269:8-528:17 (Shapiro); 4/24/17 Tr. 534:11-585:9 (Shapiro); 5/4/17 Tr. 2501:1-2611:8 (Shapiro).

SEPFF60. *Professor Joseph Farrell.* 4/24/17 Tr. 587:4-684:22 (Farrell).

SEPFF61. *Professor Gregory S. Crawford.* 4/24/17 Tr. 684:25-809:11 (Crawford); 4/25/17 Tr. 815:16-940:17 (Crawford).

SEPFF62. *Joe Lenski.* 5/4/17 Tr. 2626:11-2715:19 (Lenski).

SEPFF63. *Professor John Hauser.* 5/9/17 Tr. 3020:9-3156:6 (Hauser).

ii. Fact Witnesses

SEPFF64. *Bridget Neville*. 5/11/2017 Tr. 3613:16-3692:4 (Neville).

SEPFF65. *James Meyer*. 5/15/2017 Tr. 3702:1-3807:23 (Meyer).

SEPFF66. *George White*. 5/17/2017 Tr. 4215:1-4331:9 (White).

SEPFF67. *Thomas Barry*. 5/17/2017 Tr. 4333:15-4432:22 (Barry).

SEPFF68. *David Frear*. 5/17/2017 Tr. 4434:10-4497:13 (Frear).

SEPFF69. *Terrence Smith*. Submitted written direct testimony. Did not testify in person before the Court.

SEPFF70. *David J. Del Becarro*. 5/18/2017 Tr. 4508:9-4674:15 (Beccaro).

SEPFF71. *Damon Williams*. 5/18/2017 Tr. 4675:8-4763:19 (Williams).

III. SoundExchange's Rate Proposal

SEPFF72. SoundExchange's rate proposals for Sirius XM's SDARS service and for the PSS services were originally set forth in the Proposed Rates and Terms of SoundExchange, Inc. and Copyright Owner and Artist Participants ("Original Rate Proposal"), which SoundExchange submitted as part of its written direct statement on October 19, 2016.

SEPFF73. SoundExchange is submitting the Amended Proposed Rates and Terms of SoundExchange, Inc. and Copyright Owner and Artist Participants ("Amended Rate Proposal") on the same day it is submitting its Findings of Fact and Conclusions of Law, June 14, 2017. *See* 37 C.F.R. 351.4(b)(3) (allowing parties to revise rate proposals "at any time during the proceeding up to, and including, the filing of proposed findings of fact and conclusions of law").

SEPFF74. As explained in the Amended Rate Proposal, the Amended Rate Proposal differs from the Original Rate Proposal in three ways: (i) for the SDARS, SoundExchange has added a lower rate for free trial subscribers for the two months after the first month of a free trial (that is, there would be no royalty due for the first month of a free trial; a reduced royalty due for the second and third months; and the full royalty due for all subsequent months); (ii) for the PSS, SoundExchange has added to the definition of "Subscriber" a proviso that sets forth alternatives for calculating the per-subscriber rate if a PSS provider is unable to track subscribers on a per-day basis; and (iii) for the PSS, SoundExchange has added an option for a PSS to pay for its webcasting on an Aggregate Tuning Hours basis.

SEPFF75. SoundExchange's rate proposal is set forth in complete detail in the Amended Rate Proposal. It is summarized in the following paragraphs.

A. Proposal for SDARS

SEPFF76. *Royalty rate*. For all licensed transmissions and related ephemeral recordings by an SDARS, SoundExchange proposes a royalty fee that is the *greater of* a per-subscriber rate and a percentage of revenue, as follows.

SEPFF77. The proposed per-subscriber rates are the following amounts, per-subscriber, per-month:

Year	Free Trial Subscribers (Months Two and Three)	All Other Subscribers
2018	$1.45	$2.48
2019	$1.49	$2.55
2020	$1.54	$2.63
2021	$1.58	$2.71
2022	$1.63	$2.79

SEPFF78. The percentage of revenue rate is 23% of "Gross Revenues," which is defined in a manner based on the current definition in 37 C.F.R. § 382.11 with clarifying adjustments. The adjustments are set forth in the Amended Rate Proposal.

SEPFF79. *Direct license and pre-1972 adjustments*. Regardless whether the basic royalty pool is determined by the per-subscriber rate or the percentage of revenue rate in any accounting period, SoundExchange proposes continuing essentially the current payment adjustments for use of recordings pursuant to a direct license (37 C.F.R. § 382.12(d)) and the use of pre-1972 recordings (37 C.F.R. § 382.12(e)), with certain changes in detail, which are set forth in the Amended Rate Proposal.

SEPFF80. *Minimum fee*. SoundExchange does not propose any substantive change to the current ephemeral royalty minimum fee of $100,000 per year, which is creditable to ephemeral royalty payments for the relevant year (37 C.F.R. § 382.12(c)).

SEPFF81. *Allocation between section 112 and section 114.* SoundExchange does not propose any substantive change to the current 5%/95% allocation of the combined Section 112/114 royalty between Section 112 and Section 114 (37 C.F.R. § 382.12(b)).

B. Proposal For PSS

SEPFF82. *Royalty rate.* For all licensed transmissions and related ephemeral recordings through a television-based service qualifying as a PSS, SoundExchange proposes the following per-Subscriber, per-month royalties:

2018 – $0.0190

2019 – $0.0196

2020 – $0.0202

2021 – $0.0208

2022 – $0.0214

SEPFF83. For purposes of this proposal, "Subscriber" means every residential subscriber to the underlying MVPD service who receives the PSS in the United States for all or any part of a month; provided, however, that for any PSS provider that is not able to track the number of subscribers on a per-day basis, "Subscribers" shall be calculated based on the average of the number of subscribers on the last day of the preceding month and the last day of the applicable month, unless the PSS provider is paid by the MVPD based on end-of-month numbers, in which event "Subscribers" shall be counted based on end-of-month data.

SEPFF84. For all licensed transmissions and related ephemeral recordings through an Internet streaming service qualifying as a PSS (or any similar service capable of tracking the individual sound recordings received by any particular consumer and qualifying as a PSS), SoundExchange requests that the per-performance royalty fee for a commercial webcaster providing a subscription service (as set forth in 37 C.F.R. § 380.10) apply. If a PSS does not

have the technological capability to track individual performances, it may estimate its performances by multiplying its Aggregate Tuning Hours by the average number of recordings played per hour across its service.

SEPFF85. *Minimum fee*. SoundExchange does not propose any substantive change to the current ephemeral royalty minimum fee of $100,000 per year, which is creditable to ephemeral royalty payments for the relevant year (37 C.F.R. § 382.3(b)).

SEPFF86. *Allocation between section 112 and section 114*. SoundExchange does not propose any substantive change to the current 5%/95% allocation of the combined Section 112/114 royalty between Section 112 and Section 114 (37 C.F.R. § 382.3(c)).

C. Terms And Other Regulatory Language

SEPFF87. SoundExchange proposes that the regulations currently set forth in 37 C.F.R. Part 382 be restructured, and the PSS and SDARS regulations be harmonized, generally along the lines of the Copyright Royalty Judges' rewrite in *Web IV* of the regulations in Part 380. SoundExchange's proposed terms are set forth in detail in its Amended Rate Proposal, and the proposed regulations are set forth as Appendix A to the Amended Rate Proposal. The evidence in support of SoundExchange's proposed terms is discussed in Section XIV of these Findings of Fact.

IV. SoundExchange's Interactive Services Benchmark Analysis Offers A Reliable Method To Determine Rates For Sirius XM

A. Introduction

SEPFF88. SoundExchange has proposed rates in this case for the use of sound recordings by Sirius XM in the range of $2.48 to $2.79 per subscriber, and 23 percent of Sirius XM's revenue as that revenue is defined by the applicable regulations. Trial Ex. 26 at ¶ 10 (Orszag Am. WDT). Those rates are based on a benchmarking analysis performed by SoundExchange economic expert Jonathan Orszag, and corroborated by the opportunity cost analysis and public interest pricing principles discussed by Professor Robert Willig.

SEPFF89. As we describe in this section of SoundExchange's Proposed Findings of Fact, Mr. Orszag's benchmark analysis uses license agreements and effective rates paid by subscription interactive services as the benchmark, making appropriate adjustments to account for any differences between the benchmark services and the target Sirius XM service. Mr. Orszag's analysis follows the guidance of the Judges in the past cases that have accepted this benchmark as a basis to determine statutory rates.

B. Benchmarking Is A Well-Accepted Approach To Rate Setting

SEPFF90. A standard way in which economists estimate a reasonable royalty rate for the blanket license under consideration in this proceeding is by examining comparable rates generated through arm's length negotiations outside the purview of the compulsory license regime for which satellite radio qualifies. Trial Ex. 26 at ¶ 12 (Orszag Am. WDT).

SEPFF91. Benchmarking is a suitable way to determine the rates that would result from voluntary negotiations in the satellite radio market if it were unregulated. The rates of compensation that would arise from voluntary negotiations between record companies and Sirius XM can be determined from the rates observed in other channels of digital music

distribution, after accounting for any relevant and material differences between satellite radio and the benchmark services under consideration. Fortunately, and as will be explained in detail below, such differences manifest themselves through actual market prices, which reflect consumers' willingness-to-pay for any given service and hence the value consumers place on the attributes and functionality offered by a particular service. Trial Ex. 26 at ¶ 24 (Orszag Am. WDT).

SEPFF92. That is, the same dynamics that would be expected to shape negotiations in unregulated distribution channels, *i.e.*, in benchmark markets, likewise would be expected to exert the same influence in hypothetical arm's length dealings between Sirius XM and individual record labels. For present purposes, what this means is that rates voluntarily negotiated in unregulated channels are highly probative of the rate that would emerge from hypothetical voluntary negotiations between individual record labels and Sirius XM. Trial Ex. 26 at ¶ 25 (Orszag Am. WDT).

SEPFF93. Rates yielded through such unfettered negotiations, *i.e.*, benchmark rates, may then require adjustments in order to satisfy the four policy objectives enumerated in 17 U.S.C. § 801(b)(1):

a. To maximize the availability of creative works to the public[;]

b. To afford the copyright owner a fair return for his or her creative work and the copyright user a fair income under existing economic conditions[;]

c. To reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication[; and]

d. To minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices.

17 U.S.C. § 801(b)(1).

SEPFF94. As explained at greater length later, *see infra* Section V.K, X, rates of compensation arising from voluntary negotiations in a competitive marketplace optimally promote both the 801(b)(1) policy goals and the economic welfare of all interested parties – record companies, artists, distributors of music content, and consumers. Consequently, such rates should feature prominently in the determination of appropriate rates payable by Sirius XM for the right to transmit digital sound recordings to its subscribers. Trial Ex. 26 at ¶ 23 (Orszag Am. WDT).

SEPFF95. In short, the first step in the analysis is to identify comparable benchmark rates and adjust them in order to determine the rates that would apply in the target market if it were unregulated, and the second step is to ascertain whether these rates warrant adjustments in order to achieve compliance with the governing statutory criteria set forth in 17 U.S.C. § 801(b)(1). Trial Ex. 26 at ¶ 13 (Orszag Am. WDT).

C. The Interactives Service Agreements Provide An Excellent Benchmark Because The Rates In That Market Are Relatively Unaffected By Statutory Rates, And The Services Are Similar Enough To The Target Market Service That Reasonable Adjustments Are Possible

SEPFF96. The process of selecting a benchmark service should be driven in large measure by the degree to which the benchmark services are comparable to satellite radio across pertinent dimensions. An additional important consideration is whether the ability exists to account for material differences, if any, that are present. Trial Ex. 26 at ¶ 28 (Orszag Am. WDT).

SEPFF97. Given these considerations, Mr. Orszag found the "interactive subscription services to be the best available benchmark for satellite radio, due to the comparability of the two types of service along key dimensions and the availability of reasonable methodologies with which to adjust for pertinent differences." Trial Ex. 26 at ¶ 29 (Orszag Am.

WDT). Mr. Orszag elaborated on this point by explaining the many similarities between Sirius XM and the interactive subscription services: both "offer music and a full repertoire of music. They are subscription-based models. They face positive willingness to pay by definition, with the subscription model. There is positive willingness to pay for both Sirius and for the interactive services market. And they are facing similar competitive conditions in the sense that the elasticity of demand from the perspective of consumers is similar, and there is also competition between the products." 4/25/17 Tr. 968:13-22 (Orszag).

SEPFF98. To expand on these points: First, there is no difference between interactive streaming services and satellite radio in terms of the music content they deliver to subscribers. Both types of service depend on access to the same sound recordings controlled by the same copyright owners. While the two types of services differ with respect to the technological platforms they employ to transmit music content to subscribers, that fact on its own does not suggest that a hypothetical unfettered transaction between Sirius XM and a record label would yield terms of compensation that diverged significantly from the rates voluntarily negotiated between record labels and interactive streaming services. Trial Ex. 26 at ¶ 30 (Orszag Am. WDT). Sound recording rights are an indispensable input for both interactive streaming services and Sirius XM, which means that their demand for sound recording rights is derived from downstream consumer demand for their services. As such, sound recording copyright holders should receive a material portion of the overall value of satellite radio service, as reflected in the prices paid by subscribers, just as they do for interactive music services. Trial Ex. 26 at ¶ 31 (Orszag Am. WDT).

SEPFF99. The benchmark and target services are also similar in other key respects. Consumers of each type of service receive music content via digital transmission, and

pay for that content on a subscription basis that provides unlimited usage. Moreover, both types of service offer mobile functionality, Sirius XM principally through in-vehicle receivers and interactive streaming through smartphones and other mobile devices. Finally, the services have increasingly converged, with interactive services offering so-called 'lean-back' functionality, including playlists generated by the services, by third parties, and by the subscribers themselves, as well as algorithmic streams, all akin to the passive listening experience that characterizes Sirius XM. Trial Ex. 26 at ¶ 32 (Orszag Am. WDT). Sirius XM itself has recognized that it competes with the interactive subscription services along these lines. *See infra* Section IV.F.1.ii.

D. The Interactive Services Benchmark Has Been Accepted By The Judges In Prior Cases Including *SDARS I, Web II* and *Web IV*

SEPFF100. The Judges previously considered the interactive services benchmark in prior rate proceedings for both satellite radio and noninteractive webcasting.

SEPFF101. In *SDARS I*, the Judges determined that the interactive subscription service market had characteristics similar to those the SDARS market and adopted the interactive services benchmark proposed by SoundExchange. *See SDARS I*, 73 FR at 4093 ("[T]he interactive subscription market is a benchmark with characteristics reasonably comparable to the non-interactive SDARS, particularly after . . . reasonable adjustment for the difference in interactivity.").

SEPFF102. Similarly, in *Web II* and *Web IV*, the Judges accepted the interactive services benchmark in connection with determining rates for noninteractive webcasting. *See In re Digital Performance Right in Sound Recordings and Ephemeral Recordings*, 72 FR 24084 (2007) (hereinafter "*Web II*") ("We find, based on the available evidence before us, that the most appropriate benchmark agreements are those reviewed by Dr. Pelcovits in the market for interactive webcasting covering the digital performance of sound recordings."); *In re*

Determination of Royalty Rates and Terms for Ephemeral Recording and digital Performance of Sound Recordings (Web IV), 81 FR 26316 (2016) (hereinafter "*Web IV*") (accepting the benchmark with adjustments).

SEPFF103. More specifically, the Judges in *Web IV* found the subscription interactive services benchmark to be probative of market rates in the target market where three conditions are met:

a. revenues in both markets are derived from subscription revenues and are thus reflective of buyers with a positive WTP for streamed music;

b. functional convergence and downstream competition for potential listeners indicate a sufficiently high cross-elasticity of demand as between interactive and noninteractive services, provided the noninteractive subscription rate is reduced to reflect the absence of the added value of interactivity; and

c. [A] steering adjustment is made to eliminate the complementary oligopoly effect and thereby provide for an effectively competitive market price.

See Web IV, 81 FR at 26353.

SEPFF104. Each of those conditions is satisfied here. First, in both markets, revenues are derived from subscribers with a positive willingness to pay. Second, survey evidence, marketplace evidence and Sirius XM's own admissions (in its court filings, SEC filings and testimony in this proceeding) show that it competes in the downstream market with subscription interactive streaming services, demonstrating the requisite cross-elasticity of demand. And finally, although SoundExchange maintains that no steering adjustment is necessary, it has proposed three different methods by which a steering adjustment may be implemented (*see* Section IV.G.2, *infra*) if deemed necessary by the Judges. Trial Ex. 26 at ¶ 42 (Orszag Am. WDT).

SEPFF105. In *SDARS II*, the Judges rejected subscription interactive services as a possible benchmark for three reasons, none of which is applicable today. First, the Judges stated

that "the rights licensed by interactive subscription services are not the same as those by non-interactive services" – specifically, functionality and interactivity. Second, the Judges stated that material differences existed between Sirius XM and the buyers in the proposed benchmark market because the "interactive subscription service market . . . is in a constant state of flux." *SDARS II*, 78 FR at 23065. Finally, the Judges held that the proposed benchmark did not incorporate license agreements between interactive services and independent labels. *SDARS II*, 78 FR at 23065-66.

SEPFF106. As to the first point, the evidence throughout this proceeding has shown that interactive services now offer lean-back functionality akin to Sirius XM's service offering. As Mr. Orszag explained, Sirius XM and the interactive services "appear to be converging" in the sense that the interactive services are increasingly being used with "lean-back functionality," as well as in the sense that "more and more newer cars are connected cars." 4/25/17 Trial Tr. 972:13-25 (Orszag). *See also* Section IV.F.1, *infra*.

SEPFF107. As to the second point, the subscription interactive services market is now well-established. Indeed, as Aaron Harrison testified: "Some of the companies that offer interactive services are among the largest and most powerful companies in the history of commercial enterprise. The interactive subscription deals are far more important to UMG than they are to these companies." Trial Ex. 49 at ¶ 4 (Harrison WRT). It is no longer correct to say that the market is so "in flux" as to be an unreliable benchmark.

SEPFF108. As to the third point, and as discussed in more detail below, Mr. Orszag reviewed agreements between interactive services and indie record labels (or their distributors) and confirmed that no adjustment to the proposed rates was necessary to account for

indie agreements. *See* Section IV.E.3, *infra*. Thus, the reasons given for not relying on the interactive services benchmark in the *SDARS II* decision do not pertain to that benchmark today.

SEPFF109. Finally, the Judges also considered the interactive services benchmark in the *Web III* proceeding. *Digital Performance Right in Sound Recordings and Ephemeral Recordings*, 76 FR 13026 (2011) (hereinafter "*Web III*"). The Judges acknowledged that "the interactive webcasting market has characteristics reasonably similar to non-interactive webcasting," particularly after adjusting for the difference in interactivity. *Web III*, 76 FR at 13031. They elaborated:

> Both markets have similar buyers and sellers and a similar set of rights to be licensed (a blanket license in sound recordings). Both markets are input markets and demand for these inputs is driven by or derived from the ultimate consumer markets in which these inputs are put to use. In these ultimate consumer markets, music is delivered to consumers in a similar fashion, except that in the interactive case the choice of music that is delivered is usually influenced by the ultimate consumer, while in the non-interactive case the consumer usually plays a more passive role.

Web III, 76 FR at 13031.

SEPFF110. The last difference, the Judges concluded, could be accounted for by identifying the "value associated with the interactivity characteristic." *Web III*, 76 FR at 13031. Accordingly, "the interactive webcasting benchmark [is] of the comparable type that the Copyright Act invites us to consider." *Web III*, 76 FR at 13031.

SEPFF111. At the same time, the *Web III* Judges recognized that the interactive benchmark was "not without [its] warts." *Web III*, at 13031. Specifically, they noted that focusing on subscription-based services alone was likely to cause some unquantifiable "upward bias" in the benchmark rates because subscription-based services can better afford to pay higher royalties than ad-based services. *Web III*, 76 FR at 13031. Second, they indicated there was some evidence that this benchmarking exercise "ignor[ed] the downward trend in the effective

play rates paid by interactive services by utilizing the average rate," and that this criticism "erode[d] the weight to be accorded to the [benchmark rate]." *Web III*, 76 FR at 13032. Third and finally, they noted that one of the alternative measures of the value of interactivity relied on a hedonic analysis, which used problematic dummy variables; this fact, too, eroded the weight accorded to the benchmark. *Web III*, 76 FR at 13032.

SEPFF112. None of these problems pertain to the present interactive benchmark analysis. As to the first, both the target and the benchmark services are subscription services. *See* Trial Ex. 26 at ¶ 29 (Orszag Am. WDT). As to the second, there is no overall downward trend in the benchmark market during the time period covered by Mr. Orszag's analysis. *See* Trial Ex. 9 at 25 and Table 1 (Shapiro Corr. WRT).

SEPFF113. In short, the interactive services benchmark has been repeatedly accepted by the Judges in the past, and to the extent there were objections to its use in prior cases, such objections no longer apply. The conditions for use of the interactive services benchmark outlined by the Judges in *Web IV* have been met, and the interactive services benchmark methodology provides a reliable basis to calculate rates here.

E. Mr. Orszag's Calculation Of The Effective Rates In The Benchmark Market

1. Mr. Orszag's Benchmark Market Analysis Was Based On 27 Agreements Between The Major Record Labels and Nine Interactive Services, And Effective Rates Were Calculated Using Royalty Statements Showing The Actual Royalty Payments Made Under Those Agreements

SEPFF114. To determine the effective rates paid by subscription interactive services, Mr. Orszag obtained the current license agreements – 27 in all – between the major labels (UMG, Sony and WGM) and nine interactive streaming services. Those agreements establish the royalty rates paid by the services. The agreements contain [

[redacted]. Trial Ex. 26 at ¶ 45 (Orszag Am. WDT). A label's pro rata share of the royalty is based on the [redacted]. Trial Ex. 26 at ¶ 45 (Orszag Am. WDT).

SEPFF115. Given that different services might be paying under different metrics (per-subscriber versus percentage of revenue or possibly per-play), or the same service might pay under different metrics at different times depending on which yielded the highest result, Mr. Orszag calculated the effective rates paid by the services using royalty payment data from each of the three Majors. 4/25/17 Tr. 985:11:16 (Orszag) ("So I got the royalty statements from each of the contracts for – each of the Services for each of the labels by month, and I went to what they actually were being paid, which prong was governing."). These data covered, on a monthly basis from January 2014 through June 2016, the actual licensing fees paid by nine interactive subscription services. Trial Ex. 26 at ¶ 45 (Orszag Am. WDT).

SEPFF116. The table below presents actual effectively monthly per-subscriber royalty payments made by the subscription interactive services to each of the three major record labels. These data produce a weighted average monthly per-subscriber payment of [redacted]. Trial Ex. 26 at ¶ 46 (Orszag Am. WDT).

Actual Licensing Fees Per-Subscriber [RESTRICTED]

	Sony			UMG			WMG		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Apple Music	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Beats	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Google Play	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Microsoft	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Rdio	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Rhapsody	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Slacker	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Spotify	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
TIDAL	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Source: Royalty payment data from Sony, UMG, and WMG.

Trial Ex. 26, Table One at 19 (Orszag Am. WDT).

SEPFF117. For all of the subscription interactive services in the above table, over the entire period covered, individual subscriptions have been offered to consumers at a monthly price of $9.99. Using this price, the weighted average monthly per-subscriber payment of $[[redacted]] translates to a percentage-of-revenue equal to approximately [[redacted]]%. Trial Ex. 26 at ¶ 47 (Orszag Am. WDT).

2. In Calculating The Effective Royalty Rates Paid By Interactive Services, Mr. Orszag Did Not Include Non-Rate Consideration, Which Renders His Calculations Conservative

SEPFF118. The agreements between the benchmark interactive services and major record companies provide to the record companies benefits in addition to royalty compensation. These benefits are not available under the statutory license, and include:

a. Interactive services provide to the record companies the services' user data, which provides the record companies with important information they use to decide how to market and promote their artists;

b. The negotiated agreements with interactive services require the services to provide various forms of marketing and promotional support;

c. Under the statutory license, record companies arguably do not have the ability to withhold any content, while under the agreements negotiated with some of the interactive services, the record companies retain the right to provide certain content exclusively to services and to "window" their new releases; and

d. In addition to the marketing and promotional benefits, some negotiated agreements give record companies access to the email addresses of users or subscribers, which the record companies use to send promotional material.

Trial Ex. 26 at ¶ 106 (Orszag Am. WDT).

SEPFF119. UMG's Aaron Harrison explained these benefits in more detail. [ ]. Trial Ex. 32 at ¶ 31 (Harrison WDT).

SEPFF120. [ ]. Trial Ex. 32 at ¶ 31 (Harrison WDT).

SEPFF121. In addition, [ ]

[redacted]]. Trial Ex. 32 at ¶ 31 (Harrison WDT).

SEPFF122. [redacted]]. Trial Ex. 32 at ¶ 31 (Harrison WDT).

SEPFF123. Based on this evidence of non-rate consideration that is contained in the subscription interactive service agreements, an upward adjustment to benchmark rates was justified. Because quantification of the appropriate amount was not susceptible to accurate measurement, however, Mr. Orszag took the conservative course and did not adjust the effective benchmark rates upward. Trial Ex. 26 at ¶ 107 (Orszag Am. WDT).

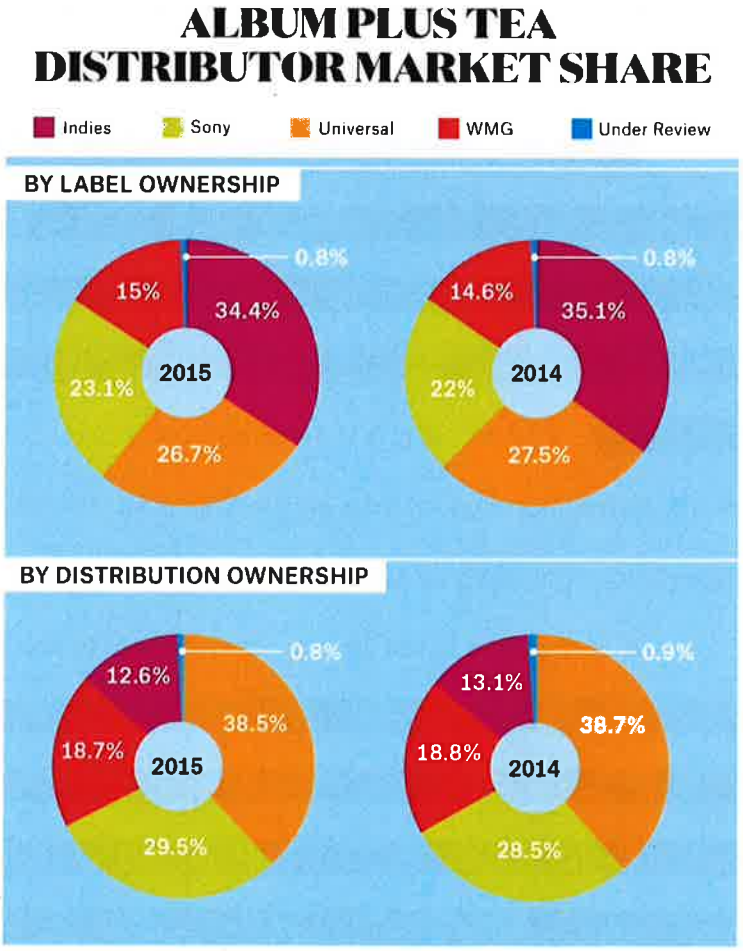
3. Mr. Orszag Considered Whether Any Adjustment To The Benchmark Rates Was Necessary To Account For The Rates Paid By Subscription Interactive Services To Independent Labels, But Found That No Adjustment Was Necessary

SEPFF124. Mr. Orszag considered whether any adjustment to the benchmark rates was necessary to account for the royalty rates paid to independent labels, and determined that it

was not: [redacted].

Trial Ex. 26 at ¶ 101 (Orszag Am. WDT). Mr. Orszag's review of this issue took into consideration both indie labels that are distributed by the Majors, and indie labels that direct license their catalogues to interactive services or obtain distribution services from distributors that are not affiliated with the Majors.

SEPFF125. A significant majority – 63.4% – of independent record labels distribute their sound recordings via the major record companies. Trial Ex. 26 at ¶ 102 and Figure One (Orszag Am. WDT).



Trial Ex. 26, Figure One at 46 (Orszag Am. WDT).

SEPFF126. [redacted]. Trial Ex. 26 at ¶ 103 (Orszag Am. WDT). This is confirmed by the testimony of Jeremy Sirota, who is a Senior Vice President of the Alternative Distribution Alliance ("ADA") – the WMG-owned entity that distributes sound recordings for independent record labels. Mr. Sirota testified that an independent record label or artist that uses ADA as its distributor is distributed under the same streaming agreements, and according to the same terms, as a record label wholly owned by WMG. Trial Ex. 36 at 3 (Sirota WDT).

SEPFF127. [redacted]. Trial Ex. 26 at ¶ 104 (Orszag Am. WDT). In other words, Mr. Orszag's benchmark was derived based on royalties paid to Majors and the great majority of royalties paid to independent record labels as well. Trial Ex. 26 at ¶ 104 (Orszag Am. WDT).

SEPFF128. With respect to indies that are not distributed by the Majors, Mr. Orszag [redacted]. Trial

Ex. 26 at ¶ 105 (Orszag Am. WDT). Across the agreements reviewed, Mr. Orszag found [ ]. Trial Ex. 26 at ¶ 105 (Orszag Am. WDT).

SEPFF129. [ ]. Trial Ex. 26 at ¶ 105 (Orszag Am. WDT).

4. Mr. Orszag's Benchmark Analysis Uses The Actual Effective Rates Paid By Interactive Services, Rather Than The Rarely-Used (And Often Non-Existent) Headline Per-Play Rates From The Interactive Services Agreements

SEPFF130. As described above, Mr. Orszag calculated the actual effective rates paid by the benchmark interactive services, rather than simply using one prong of the "greater-of" rate calculation metrics (*i.e.*, per-subscriber, percentage of revenue, or per-play) regardless of whether it actually was applicable and actually used to calculate royalty payments. As Mr. Orszag explained during the trial, using effective rates – not headline contract rates – is the correct approach when undertaking such benchmarking. 4/25/17 Tr. 1028:15-19 (Orszag). That is because "[o]ne wants to look at what is actually – what is actually governing the transaction at issue, not just what is embodied in the contract as a potential rate. One wants to look at how – what is the value that is actually conveyed as part of the contract. It is the same reason why we look at ARPU, for example, Average Revenue Per User, instead of the list price, because the ARPU will reflect discounts and what is actually happening in terms of the transaction price, rather than the list price." 4/25/17 Tr. 1028:20-1029:6 (Orszag).

SEPFF131. Professor Shapiro criticizes Mr. Orszag for using effective rates, and claims that Mr. Orszag should have relied on the headline contract per play rates. *See* Trial Ex. 9 at 18 (Shapiro Corr. WRT).

SEPFF132. Mr. Orszag and Professor Shapiro both agree that the outcome of a benchmarking analysis based on rates in the subscription interactive services market will be very different depending on whether one uses effective rates or headline per play rates. Mr. Orszag's benchmark analysis produces proposed per-subscriber rates of $2.37 to $2.58. Trial Ex. 26 at ¶ 117 (Orszag Am. WDT). Professor Shapiro's re-invention of Mr. Orszag's analysis, using headline per play rates, produces a proposed per-subscriber rate of $1.06. Trial Ex. 9 at 17-18 (Shapiro Corr. WRT). As Mr. Orszag points out, "[a]lmost the entire difference here between Professor Shapiro and myself is whether one uses per-play rates or the effective per-subscriber or effective percentage-of-revenue rate." 4/25/17 Tr. 1064:23-1065:4 (Orszag).

SEPFF133. Professor Shapiro's approach finds no support in economic theory, marketplace evidence, or the Judge's *Web IV* decision. We consider each below.

i. Economic Theory Does Not Support Professor Shapiro's Claim That Benchmarking Must Be Conducted Using Contract Per-Play Rates

SEPFF134. As noted earlier, Mr. Orszag explained that as a theoretical matter using effective rates is "economically appropriate" because an economist will want to look at "what is actually governing the transaction." 4/25/17 Tr. 1028:19-23 (Orszag). In short, one wants took at the economic reality – "the value that is actually conveyed." 4/25/17 Tr. 1028:24-1029:1 (Orszag).

SEPFF135. During the proceeding, Judge Strickler asked Professor Shapiro why, as a general matter, one would want to use the headline contract rates rather than effective rates. Professor Shapiro conceded that "in general, I think just starting off afresh, the first thing to look

at would be the effective rate. That makes sense." 4/20/17 Tr. 390:8-10 (Shapiro). He continued: "But I'm not suggesting some general methodology where one uses – uses non-binding prongs."[1] 4/20/17 Tr. 390:18-19 (Shapiro).

SEPFF136. Indeed, Professor Shapiro's current insistence on using unadjusted headline rates flies in the face of his *Web IV* testimony, in which Professor Shapiro went to considerable lengths to calculate the "effective" rate under the Pandora/Merlin agreement rather than simply using the headline rates. *See* Trial Ex. 669 at D-10 to D-19 (Shapiro *Web IV* WDT); 4/20/17 Tr. 511:10-16 (Shapiro) ("Q. And you adjusted the headline rates to turn them into effective rates, didn't you? A. I did.").

ii. Marketplace Evidence Confirms The Wisdom Of Using Effective Rates And Demonstrates That Contract Per-Play Rates Are Particularly Inappropriate

SEPFF137. Professor Shapiro insists not only on using headline contract rates rather than effective rates – he argues that the interactive services benchmark analysis must be based on headline per-play rates, rather than the headline percentage of revenue or headline per subscriber rates. Trial Ex. 9 at 16-17 (Shapiro Corr. WRT).

SEPFF138. Professor Shapiro's argument is inconsistent with marketplace evidence. The headline per-play rates rarely govern the calculation of royalty payments by subscription services.

SEPFF139. Fewer than half of the benchmark agreements Mr. Orszag considered contain per-play rates. 4/25/17 Tr. 981:2-7 (Orszag). Specifically, [[redacted]]. Trial Ex. 43 at ¶ 51 & n. 63

[1] Professor Shapiro attempted to tie his argument in favor of using headline contract rates to the alleged fact that the interactive services market is not effectively competitive. 4/20/17 Tr. 390:11-25 (Shapiro). But whether that market is effectively competitive, and what adjustment should be made if it is not, is a separate issue that we address elsewhere. See Section IV.G, infra.

(Orszag WRT). With respect to agreements entered into after January 2014, no new interactive subscription services agreement contains a per-play provision. 4/25/17 Tr. 980:13-18 (Orszag). And mid-tier agreements rarely contain per-play rates. *See* 4/25/17 Tr. 1033:5-10 (Orszag). The new agreements between [ ]. Trial Ex. 43 at ¶ 51 (Orszag WRT).

SEPFF140. In the minority of cases where subscription services agreements [ ].[2] Trial Ex. 43 at ¶ 52 (Orszag WRT).

SEPFF141. It should come as no surprise that [ ]. Trial Ex. 43 at ¶ 53 (Orszag WRT).

SEPFF142. In short, Professor Shapiro's proposed use of headline per play rates is both unsupported by economic theory and contrary to marketplace reality.

iii. Professor Shapiro's Principle Reason For Suggesting The Use Of Contract Per-Play Rates Is His Claim That The Judges Did

[2] The average is weighted by actual royalty payments made by the services.

Not Use Effective Rates For Their Interactive Services Benchmark Analysis In *Web IV*, But The Decision Suggests Otherwise

SEPFF143. At trial, Professor Shapiro grounded his criticism of Mr. Orszag's use of effective rates on the fact that Professor Shapiro did not believe the Judges had used them in *Web IV:*

> Q. So your criticism of him comes down to the fact that you don't think that that's the way the rates were calculated in Web IV?
>
> A. It is not.
>
> Q. And that's the basis for your criticism on this issue?
>
> A. It is a big difference. Yes, that is my criticism on this particular issue.

4/20/2017 Trial Tr. 512:11-18 (Shapiro).

SEPFF144. Contrary to Professor Shapiro's argument, the *Web IV* decision suggests the Judges understood that the per-play rates used for the interactive services benchmark analysis in that case were in fact the effective rates.[3] First, the *Web IV* decision recites that SoundExchange's expert did not simply use headline per-play rates. Rather, he adjusted those rates to account for "various forms of non per-play consideration," which he "added . . . to the stated (*i.e.* headline) per-play rate." *Web IV*, 81 FR at 26338. In his *Web IV* analysis, Professor Shapiro likewise adjusted his headline rates in order to calculate effective rates. *See* Trial Ex. 669, Appendix D (Shapiro *Web IV* WDT). Second, it appears from the *Web IV* decision that those adjusted rates were understood by the Judges to be the controlling metric in the "greater-of" formula:

[3] The *Web IV* decision suggests, in general, a desire by the Judges to understand and apply the actual economic value of agreements, rather than relying simply on headline rates. For example, while considering certain agreements betweern iHeart and indie labels, the Judges observed: "Moreover, there is insufficient evidence and economic analysis in the record for the Judges to determine whether the headline rate for simulcasting in the iHeart-Indie agreements fully accounts for the economic value of the licenses to the parties." *Web IV*, 81 FR at 26320.

> The Judges first note that none of the percentage-of-revenue prongs in the greater-of agreements in the record has been triggered, which may suggest that the parties to those agreements viewed the per-play rates as the rate term that would most likely apply for the length of the agreement.

Web IV, 81 FR at 26325.

SEPFF145. In short, Professor Shapiro offered no persuasive reason for relying on headline per play rates in this proceeding, nor is there any such reason to be found in economic theory or marketplace data. Rather, those data points both support using effective rates, as Mr. Orszag did.

F. Mr. Orszag Adjusted The Effective Rates In The Benchmark Market To Account For The Lack Of Interactivity And Other Functional Differences Between The Benchmark Market And The Target (Satellite Radio) Market

1. Mr. Orszag's Adjustments Rely On The Concept Of "Ratio Equivalency," Which The Judges Accepted In The *Web IV* Decision

SEPFF146. One difference between the benchmark interactive services and the target satellite service is the absence of interactive functionality in the latter. In order to adjust for this difference between the two markets, as well as other potential differences that might affect consumer valuation of the services, Mr. Orszag relies on the concept of ratio equivalency. Trial Ex. 26 at ¶ 37 (Orszag Am. WDT).

i. The Theory Of Ratio Equivalency

SEPFF147. As the Judges described it in *Web IV*, the ratio equivalency concept "assume[s] equality between two ratios: (1) subscription revenues to royalties in the interactive market; and (2) subscription revenues to royalties in the noninteractive market."

SEPFF148. In *Web IV*, the Judges found the ratio equivalency approach to be warranted as a matter of economic theory, at least for subscription services. *Web IV*, 81 FR at 26344, 26349-50.

SEPFF149. During the trial, Mr. Orszag explained the concept of ratio equivalency and why it holds true for Sirius XM and the interactive subscription services: "[T]he underlying theory behind ratio equivalency . . . is consistent with sound economics dating back for more than a century, [and that is] that there will be a relationship between a valuable input and the price charged to consumers." 4/25/17 Tr. 974:25-975:4 (Orszag). In other words, "two firms facing similar competitive conditions will have a similar markup over cost" and "should be charged or contributing similar amounts to the creation of a product." 4/25/17 Tr. 975:11-15 (Orszag).

SEPFF150. Ratio equivalency, Mr. Orszag explained, is appropriately applied to the analysis of potential rates for Sirius XM. "There is positive willingness to pay for both Sirius and for the interactive services market. And they are facing similar competitive conditions in the sense that the elasticity of demand from the perspective of consumers is similar, and there is also competition between the products." 4/25/17 Trial Tr. 968:17-22 (Orszag). Moreover, Sirius XM and the interactive services "appear to be converging in the sense that the interactive services" are increasingly being used with "lean-back functionality" and in the sense that "more and more newer cars are connected cars. That is, they are offering streaming options side-by-side with satellite and terrestrial radio options; bringing the products closer together so that to many people it is a seamless choice now between switching between a streaming service, a terrestrial service, and a satellite service inside the car making those products more competitive with each other." 4/25/17 Trial Tr. 972:13-25 (Orszag).

ii. The Conditions For Applying Ratio Equivalency Are Present In This Case

SEPFF151. The Judges in *Web IV* concluded that ratio equivalency holds true where the following conditions are met:

a. Revenues in both markets are derived from subscription revenues and are thus reflective of buyers with a positive WTP for streamed music;

b. [F]unctional convergence and downstream competition for potential listeners indicate a sufficiently high cross-elasticity of demand as between interactive and noninteractive services, provided the noninteractive subscription rate is reduced to reflect the absence of the added value of interactivity; and

c. [A] steering adjustment is made to eliminate the complementary oligopoly effect and therefore provide for an effectively competitive market price.

Web IV, 81 FR at 26353. Each of those conditions is satisfied here.

SEPFF152. As to the first condition, in both markets the services' revenues are derived from subscribers with a positive willingness to pay. Subscribers to interactive services typically pay $9.99 per month, Trial Ex. 26 at ¶ 36 (Orszag Am. WDT), while subscribers to the Sirius XM service typically pay that or more. *See* Trial Ex. 26 at ¶ 49 and n.40 (Orszag Am. WDT (noting that Sirius XM charges $10.99 per month for its Mostly Music package, plus the Music Royalty Fee of $1.53). As to the third condition (the second condition is addressed below), Mr. Orszag's analysis offers three potential steering adjustments. *See* Section IV.G.2, *infra*.

SEPFF153. With respect to the second condition, the record is replete with evidence of functional convergence and downstream competition. As Professor Farrell put it, "I think it is pretty plain, without having done a study of it, that there's competition among the – among the services." 4/24/17 Tr. 605:2-4 (Farrell). Abundant evidence shows that interactive services increasingly are offering, and subscribers increasing are using, "lean'back" functionality – playlists in particular – similar to the curated Sirius XM channels. As Mr. Harrison stated in his written direct testimony, it is no longer the case that on-demand services are simply passive recipients of subscriber requests for on-demand plays of music the subscribers have discovered elsewhere. Trial Ex. 32 at ¶ 43 (Harrison WDT). When on-demand services first were offered,

they were focused on simply allowing a subscriber to request a song on-demand. Trial Ex. 32 at ¶ 43 (Harrison WDT). [ ]. 5/16/17 Tr. 3991:24-3992:12 (Harrison).

SEPFF154. More and more, subscribers to on-demand services are listening to playlists. Rather than search for a particular recording or artist to play (although subscribers certainly continue to do that), subscribers listen to playlists that they or others (including the service) have created. Trial Ex. 32 at ¶ 28 (Harrison WDT). [ ]. Trial Ex. 26 at ¶ 39 (Orszag Am. WDT). Data that the services provided to UMG [ ]; they indicate that [ ] percent of plays on Spotify and [ ] percent of the plays on Apple are playlist plays from user-created playlists, service created playlists, third-party created playlists, or other pre-programmed streams. Trial Ex. 32 at ¶ 28 (Harrison WDT).

SEPFF155. Because playlists are so well suited to in-car listening, *see* Trial Ex. 32 at ¶ 28 (Harrison WDT), these trends have translated into growing use of streaming services,

including interactive streaming services, in the car. The [ ]. Similarly, [ ]. And a [ ]. Trial Ex. 26 at ¶ 39 (Orszag Am. WDT).

SEPFF156. The growth of in-car listening has occurred not just because streaming services are offering playlists and algorithmic programming, but also because streaming has become more mobile generally. As Mr. Harrison testified at trial, ["].[4] 5/16/17 Tr. 3989:1-6 (Harrison). [ ] 5/16/17 Tr. 3994:15-18 (Harrison). [ ] 5/16/17 Tr. 3994:3-5 (Harrison).

SEPFF157. These trends are not lost on Sirius XM, which admits that due to functional convergence, subscription interactive services are now important competitors for

[4] There is more record evidence to support Mr. Harrison's conclusion. "A [']. According to [ ]. *See* Trial Ex. 118. And [ ]. Trial Ex. 26 at ¶ 39 (Orszag WDT) (footnotes omitted).

subscribers in the downstream market. James Meyer, Sirius XM's CEO, acknowledged that "the auto companies [have] implemented software in the vehicle" such as "Android Auto and Carplay," that makes pairing with smart phones and their interactive services "seamless." 5/15/17 Trial Tr. 3724:5-7, 19 (Meyer). And when Judge Strickler asked whether Mr. Meyer was "concerned about the future competition from interactive services, paid services that have prepackaged playlists that also have that sort of ease so people don't have to fumble in the car to try to select the songs but they will have playlists that are either playlists that they have packaged for themselves or a record label has packaged or has been packaged by some third party," Mr. Meyer answered "yes." 5/15/17 Trial Tr. 3735:2-10 (Meyer).

SEPFF158. Sirius XM's SEC 10-K filings confirm its competition with subscription interactive services – and its acknowledgement that such competition has grown over the past four years.

a. In 2013, in a section on competition, Sirius XM's 10-K stated: "Smartphones, most of which have the capability of interfacing with vehicles, can play recorded or cached content and access Internet radio via dedicated applications or browsers. These applications are often free to the user and offer music and talk content as long as the user is subscribed to a sufficiently large mobile data plan. Leading audio smartphone radio applications include Pandora, Spotify, iTunes Radio and iheartradio. Certain of these applications also include advanced functionality, such as personalization, and allow the user to access large libraries of content. These services may become integrated into connected cars in the future." Trial Ex. 353 at 6.

b. In 2014, the same section in Sirius XM's 10-K stated: "These services are increasingly becoming integrated into vehicles." Trial Ex. 354, at 5.

c. In 2015, that section in Sirius XM's 10-K stated: "These services are easily integrated into vehicles." Trial Ex. 356 at 5.

d. Most recently, in 2016, Sirius XM's 10-K stated: "Internet radio services often have no geographic limitations and provide listeners with radio programming from across the country and around the world. Major online providers, including Amazon, Apple, Google Play, Pandora, Spotify and iHeartRadio, make high fidelity digital streams available through the Internet for free or, in some cases, for less than the cost of a satellite radio subscription. Certain of these services

> include advanced functionality, such as personalization, and allow the user to access large libraries of content. These services compete directly with our services at home, in vehicles, and wherever audio entertainment is consumed." Trial Ex. 357 at 6.

SEPFF159. The fact that interactive services such as Spotify compete directly with Sirius XM is also highlighted by Sirius XM's assertions in a lawsuit it filed against one of its former programmers who left Sirius XM for a programming job at Spotify. In the complaint, Sirius XM represented to the court that Spotify is a "Direct Competitor of Sirius XM." Trial Ex. 282 at 3. In a subsequent letter brief to the court, Sirius XM again explained that the former programmer had breached his non-competition clause by departing Sirius XM to work for Spotify, which it called "one of Sirius XM's key direct competitors." Trial Ex. 283 at 1.

SEPFF160. All of this evidence corroborates the results of survey research performed by Professor Ravi Dhar and Professor Itamar Simonson, which concludes that Sirius XM materially substitutes for subscription interactive services. *See* Section V.J, *infra.*

SEPFF161. Such evidence confirms that the conclusions drawn by the Judges in *Web IV* apply here as well: The benchmark services and the target service are sufficient substitutes from a functional perspective to warrant analysis based on ratio equivalency. Trial Ex. 26 at ¶ 40 (Orszag Am. WDT).

iii. The Theory Of Ratio Equivalency Is Confirmed By Agreements With Mid-Tier Services, Which Demonstrate That Record Companies Receive The Same Percentage Of The Consumer Subscription Price From Both Interactive Services And Mid-Tier Services

SEPFF162. Mr. Orszag testified that agreements entered into between record labels – Majors and indies alike – and "mid-tier" services that do not offer on-demand functionality confirm the theory of ratio equivalency. "If one looks at the most recent agreements that have been agreed to in the marketplace, they are consistent with both the *Web IV*

decision and sound economics, and they show a consistency in terms of the relationship between the price received by the labels and the price charged to consumers, both across fully interactive services and then more limited interactive services, what's called the mid-tier." 4/25/17 Tr. 975:21-976:4 (Orszag). As Mr. Orszag stated in his written testimony: [ ].[5] Trial Ex. 26 at ¶ 38 (Orszag Am. WDT) (citing Trial Exs. 112, 113, 114).

SEPFF163. The fact that [ ]. As Aaron Harrison testified, [ ]. Trial Ex. 32 at ¶ 20 (Harrison WDT); *see also* 5/16/17 Tr. 3960:10-25 (Harrison).

SEPFF164. Having demonstrated that ratio equivalency is theoretically sound and supported by marketplace evidence, we now turn to its application by Mr. Orszag.

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[5] The mid-tier agreements are discussed in greater length in Section VI, *infra*.

2. Mr. Orszag's "Approach One" Rate Calculation: Applying The Royalty-To-Subscription-Price Ratio From The Interactive Market To The Subscription Price Of Sirius XM

SEPFF165. Having established that the interactive services are an appropriate benchmark for the services at issue in this proceeding, and having calculated the effective per-subscriber rates in that market, Mr. Orszag used two approaches to generate an appropriate sound recording licensing rate for Sirius XM. Under the first (sometimes referred to in the record as "Approach One"), Mr. Orszag calculated the royalty payments of interactive subscription services as a percentage of their revenues by dividing the effective monthly per-subscriber royalty payment by the monthly consumer subscription price of the benchmark services. Trial Ex. 26 at ¶ 43 (Orszag Am. WDT). Under the theory of ratio equivalency, Mr. Orszag then assumes that the record companies would receive the same share or percentage of Sirius XM's subscription revenue as they receive from the interactive services. *See* 4/25/17 Tr. 985:23-986:1 (Orszag) ("I first apply the effective rates from the interactive services that we just talked about to adjusted Sirius XM revenue.").

SEPFF166. The advantage of using a percentage-of-revenue rate in this fashion is that it obviates the need to separately account for the interactivity of the benchmark service, because the value of interactivity (as well as all other features and functions of the service) is incorporated into the consumer subscription price. In other words, while the features and functionality of the target market service will impact the subscription revenues on which the service's royalty obligation is measured, these features and functionality need not be accounted for separately in order to develop a percentage-of-revenue rate. If Sirius XM is less valuable to its subscribers because it does not offer interactivity (or for other reasons relating to functionality), that lower value will be reflected in a lower subscription price to consumers. Applying the same percentage of revenue rate to a lower subscription price will result in a lower

royalty obligation owed to the record companies in absolute dollar terms, thus effectively adjusting the royalty amount to account of the different functionalities of the benchmark and target services. Trial Ex. 26 at ¶¶ 44, 55 (Orszag Am. WDT).

SEPFF167. As noted earlier, Mr. Orszag analyzed royalty payment data from Sony, UMG and WMG. These data produce a weighted average monthly per-subscriber payment of [[redacted]]. All of the interactive services were offered to subscribers at a uniform price of $9.99 per month during the time period covered by Mr. Orszag's data. Thus, the effective per-subscriber rate translates to a percentage-of-revenue of approximately [[redacted]]%. Trial Ex. 26 at ¶¶ 46, 47 (Orszag Am. WDT).

i. Before Applying The Effective Percentage-Of-Revenue Rate From the Interactive Market To Sirius XM's Subscription Price, Mr. Orszag Backed Out Of The Subscription Price The Value Consumers Attribute To Non-Music Content

SEPFF168. As Mr. Orszag noted in his testimony, any benchmark rate derived from the interactive services cannot be assigned to Sirius XM without first accounting for the fact that unlike interactive streaming services, which transmit only music content to subscribers, Sirius XM earns subscription revenues from the distribution of both music and non-music content. Consequently, it is necessary to estimate the portion of the value of Sirius XM's service that reasonably can be attributed to the distribution of sound recordings. Trial Ex. 26 at ¶ 48 (Orszag Am. WDT).

SEPFF169. The value to consumers of non-music content was determined using data from surveys conducted by SoundExchange expert witnesses Stefan Boedeker and Itamar Simonson, Sirius XM's own internal surveys, and several other data points. Based on this information, and as described more fully below, Mr. Orszag conservatively estimated that non-music content represented 50 percent of Sirius XM's consumer subscription price. He therefore

reduced the effective percentage of revenue royalty rate derived from the interactive services benchmark by 50 percent, and likewise adjusted the proposed per-subscriber rate to account for the value of non-music content on Sirius XM. Trial Ex. 26 at ¶ 54 (Orszag Am. WDT).

SEPFF170. The surveys and market information that Mr. Orszag used to determine the value of non-music content on Sirius XM are described in the paragraphs that follow.

a. The Boedeker Survey

SEPFF171. Stefan Boedeker designed, implemented, and statistically analyzed a survey of Sirius XM users who subscribe to paid satellite radio packages that contain both music and non-music programming. Mr. Boedeker's survey measured the degree to which these subscribers value the music versus non-music content in Sirius XM's programming. Mr. Boedeker's survey also examined subscribers' willingness to accept a hypothetical Sirius XM package that contains only music programming or only non-music programming, and the extent to which they would require discounts for such a hypothetical product. Trial Ex. 21 at ¶¶ 7, 19 (Boedeker WDT); 5/8/17 Tr. 2933:12-17, 2947:1-2949:8 (Boedeker).

SEPFF172. Based on the results of his survey and his statistical analysis of the survey results, Mr. Boedeker concluded with a high degree of scientific certainty, based on six different measures, that Sirius XM subscribers value music content significantly more than non-music content. Trial Ex. 21 at ¶¶ 14, 97 (Boedeker WDT); 5/8/17 Tr. 2933:18-2934:3, 2963:14-24 (Boedeker). For example, 70.1% of all survey respondents said they would no longer subscribe to Sirius XM satellite radio at their current subscription rates if music programming was no longer offered, while only 32.4% of respondents said they would no longer subscribe to Sirius XM satellite radio at their current subscription rates if non-music programming was no longer offered. Trial Ex. 21 at ¶ 77 (Boedeker WDT); 5/8/17 Tr. 2951:1-10 (Boedeker). If discounts were offered, 42.7% of respondents still would no longer subscribe to their Sirius XM

package if music programming was no longer offered (even with a discount), while only 10.0% of respondents would no longer subscribe to their current package if non-music programming was no longer offered (even with a discount). Trial Ex. 21 at ¶¶ 83-84 (Boedeker WDT); *see also* 5/8/17 Tr. 2952:24-2953:12 (Boedeker).

(1) Methodology

SEPFF173. Mr. Boedeker's survey was administered on October 7-11, 2016. Trial Ex. 21 at ¶ 12 (Boedeker WDT); 5/8/17 Tr. 2968:18-23 (Boedeker).

SEPFF174. In total, 1,101 respondents completed Mr. Boedeker's survey (101 in the pilot study and 1000 in the main study). Trial Ex. 21 at ¶¶ 12, 23, 62, 64 (Boedeker WDT); 5/8/17 Tr. 2934:8-11 (Boedeker).

SEPFF175. This was an appropriate sample size. Trial Ex. 21 at ¶¶ 31-33, n.13 (Boedeker WDT) (noting that in the environment of simple random sampling, a sample size of approximately 1,068 allows for the estimation of a multinomial attribute with a 95% confidence interval and a plus or minus 3% margin of error, and that it was appropriate to use a similar sample size here).

SEPFF176. Surveys that are properly designed, implemented, and statistically analyzed allow reliable and valid conclusions to be drawn and applied to a broader universe. Trial Ex. 21 at ¶ 15 (Boedeker WDT) (*citing, e.g.*, *Handbook of Survey Research* (Peter V. Marsden & James D. Wright eds., 2d ed., 2010); Survey Methodology (Wiley Series in Survey Methodology), Robert M. Groves et al., *Survey Methodology* (Wiley Series in Survey Methodology) (2d ed., Wiley 2009); American Association for Public Opinion Research ("AAPOR") – www.aapor.org; American Statistical Association ("ASA") – www.amstat.org); *see also* Trial Ex. 279 (SXM_DIR_00114886); Trial Ex. 280 (SoundX_000150466); Trial Ex. 21

(Boedeker WDT) at ¶¶ 18-53 (providing detailed description of steps in Mr. Boedeker's survey design).

SEPFF177. Mr. Boedeker used an internet panel to conduct his survey. Trial Ex. 21 at ¶ 24 (Boedeker WDT); 5/8/17 Tr. 2934:7 (Boedeker).

SEPFF178. Properly designed and well-executed internet surveys can be used to draw valid statistical inferences about the target population. Trial Ex. 21 at ¶¶ 24-30 (Boedeker WDT); Trial Ex. 22 at ¶ 34 (. Dhar Corr. WDT); 5/8/17 Tr. 2729:24-2730:5, 2732:11-23 (Dhar) (through a survey of a well-designed, national internet panel "you can get information that is very generalizable and representative of the population"); 5/11/17 Tr. 3518:14-22 (Simonson) (no serious debate in the past five years about whether internet survey respondents can properly represent the population as a whole).

SEPFF179. Internet surveys have increasingly gained popularity and acceptance. Trial Ex. 21 at ¶¶ 24-30 (Boedeker WDT); *see also* 5/9/17 Tr. 3116:1-20 (Hauser) (Sirius XM's survey expert Professor Hauser, testifying that none of the approximately 150 surveys he has conducted in the past five years has been via telephone); 5/9/17 Tr. 3138:19-3139:1 (Hauser) (Sirius XM's survey expert testifying that he has conducted internet surveys in many cases, including *SDARS II*); 5/4/17 Tr. 2680:14-2682:4 (Lenski) (Sirius XM's expert testifying that his firm, Edison Research, routinely conducts online surveys for paying clients and that, as a proportion of all surveys that Edison conducts, the percentage of online surveys has increased in recent years); 5/8/17 Tr. 2729:15-2733:7 (Dhar) (noting that internet surveys have gained acceptance and popularity over the last 10-15 years as internet penetration has increased, and that over 80% of the surveys he conducts use this methodology); 5/11/17 Tr. 3518:14-22 (Simonson);

Tr. 5/8/17 2934:12-20 (Boedeker) ("Internet surveys over the last five to ten years, are the most frequently conducted surveys.").

SEPFF180. Well-executed internet survey research is regularly accepted by courts. Trial Ex. 21 at ¶ 25 (Boedeker WDT) (citing Bruce Isaacson et al., *Why Online Surveys Can Be a Smart Choice in Intellectual Property Litigation*, 26 IPL Newsletter (2008) (ABA Section of Intellectual Property Law)); Trial Ex. 22 at ¶ 33 & App. B at 55 (Dhar Corr. WDT); *In re NJOY, Inc. Consumer Class Action Litig.*, 120 F. Supp. 3d 1050, 1080-81 (C.D. Cal. 2015) (accepting expert contention that Internet panel surveys are a "well-accepted approach in the field of consumer advertising and consumer research" (quotation marks omitted)).[6] In fact, *no* expert in this case testified that he aware of a court *ever* having rejected a survey or discounting its results on the ground that online surveys as a methodology are not reliable. *See, e.g.*, 5/8/17 Tr. 2731:2-2732:10 (Dhar) (not aware of any case in which a court has done so).

SEPFF181. Internet surveys have also become a fixture in the corporate world. According to the Global Research Business Network, internet surveys now account for more than a quarter of global market and social research revenues. At an estimated $10 billion, that is more than telephone and face-to-face surveys combined. In many of the world's top research markets, internet surveys are now the primary means of research. Trial Ex. 21 at ¶ 26 (Boedeker WDT) (citing *The Next Frontier for Online Survey Companies: Law Firms*, Fortune, http://fortune.com/2015/09/16/online-survey-companies-law-firms/ (last visited Oct. 18, 2016)); *see also* Trial Ex. 21 at ¶ 27 (Boedeker WDT) (noting personal experience with businesses that

[6] For cases in which courts have accepted the results of Internet surveys, see also, e.g., PMB Prodsuct, L.L.C. v. Mead Johnson & Co., 639 F.3d 111 (4th Cir. 2011); Fortune Dynamic, Inc. v. Victoria's Secret Stores Brand Management, Inc., 618 F.3d 1025 (9th Cir. 2010); United States v. H & R Block, Inc., 831 F. Supp. 2d 27 (D.D.C. 2011); GoSMiLE, Inc. v. Dr. Jonathan Levine, DM.D. P.C., 769 F. Supp. 2d 630 (S.D.N.Y. 2011).

use internet surveys as a main data collection tool for corporate decision-making on critical issues).

SEPFF182. Internet-based surveys can have advantages over other methodologies. Trial Ex. 21 at ¶¶ 24-30 (Boedeker WDT); Trial Ex. 44 at ¶ 19 (Simonson WRT) (for many types of surveys, online data collection is more reliable than data collection by telephone); 5/8/17 Tr. 2729:15-2733:17 (Dhar); 5/11/17 Tr. 3420:17-3431:12 (Simonson). For instance, applying statistical techniques to large online panels makes it possible to balance populations against the U.S. Census and other available data. 5/8/17 Tr. 2934:21-2935:1 (Boedeker).

SEPFF183. Studies have found that computer data collection yields higher concurrent validity, less chances of participants framing answers to attempt to please the questioner, and less random measurement error when compared to other types of surveys such as mall intercept studies and telephone surveys. Trial Ex. 21 at ¶ 25 (Boedeker WDT); *see* Trial Ex. 279 at 406 (SXM_DIR_00114936); *see also* 5/8/17 Tr. 2936:10-2937:8 (Boedeker) (in telephone surveys, interviewer may impact how the question is asked); 5/8/17 Tr. 2729:15-2733:7 (Dhar).

SEPFF184. Additionally, questions that involve calculations or multiple answer choices are easier for respondents to answer online as opposed to orally. 5/8/17 Tr. 2936:10-22 (Boedeker) (based on past experience with telephone surveys, noting that even "very simple calculations" such as adding small numbers or percentages are "very difficult to do . . . over the phone" and are "prone to error"). As Mr. Boedeker explained, using an online methodology allows respondents to answer "at their own pace. They sit in front of a screen. And you can build in quality control, for example, when certain numbers or if I have to be divided across different choices to add up to 100 percent, for example, there is a way to program the survey

itself such that numbers wouldn't add up to more than 100 or less than 100. So those things cannot be done over the phone." 5/8/17 Tr. 2936:25-2937:8 (Boedeker); *see also* Trial Ex. 44 at ¶¶ 18-19 (Simonson WRT); Trial. Ex. 40 at ¶ 23 (Dhar WRT); 5/11/17 Tr. 3427:17-3428:19 (Simonson); 5/11/17 Tr. 3436:18-3427:4 (Simonson); 5/8/17 Tr. 2729:15-2733:7 (Dhar) (internet surveys allow respondents to "process information at [their] own pace" and read definitions and other information that clarifies the survey). *Cf.* Trial Ex. 40 at ¶ 27 (Dhar WRT) (noting that Mr. Lenski's telephone survey, which had no such safeguards, resulted in inconsistencies, including several respondents whose answers indicated that they would listen to various music service for *over* 24 hours per day).

SEPFF185. Mr. Boedeker determined that conducting an internet survey in this case "was better and would yield more reliable results" as compared to a telephone survey. 5/8/17 Tr. 2936:4-2937:8 (Boedeker). This approach allowed him to build in "quality control" measures: For those questions in which respondents were asked to allocate 100 points among music and non-music options, the survey was programmed so that a respondent could not move forward until the two numbers added up to 100. Trial Ex. 21 at ¶¶ 41-44 (Boedeker WDT); *see also* 5/8/17 Tr. 2936:10-2937:8 (Boedeker); *see also* 5/8/17 Tr. 2732:24-2733:7 (Dhar) (explaining that he conducted an internet survey for reasons including that it would allow people to better process the information presented); 5/11/17 Tr. 3427:8-3429:2 (Simonson) (same).

SEPFF186. It is possible to calculate approximate confidence intervals for non-probability samples, including internet panel surveys. The American Association of Public Opinion Research ("AAPOR") has issued a guidance paper on "Reporting Precision for Nonprobability Samples" which details approaches and reporting guidelines for precision calculations performed on non-probability samples. Trial Ex. 21 at ¶ 29 (Boedeker WDT) (citing

AAPOR Guidance on Reporting Precision for Nonprobability Samples - https://www.aapor.org/getattachment/Education-Resources/For-Researchers/AAPOR_Guidance_Nonprob_Precision_042216.pdf.aspx); 5/8/17 Tr. 2935:2-25 (Boedeker) (noting that AAPOR guidance describes "how to make technically non-random samples more understandable but also more reliable by calculating approximate confidence intervals"); *see also* Trial Ex. 21 at ¶ 89 (Boedeker WDT) (noting that because of how he identified his sample frame, selected participants, and applied balancing weights, the resulting sample within Mr. Boedeker's survey is "a representative selection from the target population"); 5/9/17 Tr. 3138:19-3139:1 (Hauser) (Sirius XM's survey expert testifying that he has estimated confidence intervals in internet surveys in many cases, including *SDARS II*).

SEPFF187. Mr. Boedeker applied the "bootstrapping" method, one of the valid re-sampling methods described in the AAPOR guidance, to obtain precision estimates for the results from his study. Trial Ex. 21 at ¶¶ 29, 90-96, Appendix G (Boedeker WDT); 5/8/17 Tr. 2935:2-2936:3 (Boedeker) (testifying that he followed AAPOR guidance "exactly").

SEPFF188. Sirius XM's survey expert Mr. Lenski served on the Executive Council of AAPOR, which approved the organization's Guidance on Reporting Precision for Nonprobability Samples. 5/4/17 Tr. 2684:11-13 (Lenski). Mr. Lenski agrees that bootstrapping is an appropriate method for calculating confidence intervals for internet surveys as long as it is properly applied, as described in the AAPOR guidance. 5/4/17 Tr. 2683:6-11 (Lenski).

SEPFF189. A random digit dial (RDD) telephone survey – like the one Mr. Lenski conducted – would not have allowed Mr. Boedeker to report his results with greater precision. 5/8/17 Tr. 2937:9-12 (Boedeker). As Mr. Boedeker explained, an RDD survey with less than a 100% response rate is not a truly random probability sample:

> A. In most telephone surveys they use RDD technology, which is the random digit dialing. That cannot be mistaken or misunderstood as a real random sample. Because the only thing that is randomly generated are phone numbers. So some of those phone numbers may not exist, there may not be any current users, and rarely do you get 100 percent response rates using this technology.
>
> And, therefore, the samples can at most be representative, but not true random samples, which will be necessary to calculate exact confidence and precision.
>
> Q. So using the purest definition of probability sample, is a telephone survey with anything less than 100 percent response rate a probability sample?
>
> A. No, not in the technical definition of a random sample.

5/8/17 Tr. 2937:14-2938:7 (Boedeker); *see also* 5/8/17 Tr. 2935:2-12 (Boedeker) (one can calculate – rather than estimate – precision only for a "true statistical probability sample," in which all members of a perfectly randomly selected group of participants agree to complete the survey).

SEPFF190. Mr. Boedeker engaged Amplitude Research, Inc. ("Amplitude") to implement his survey. Amplitude is a survey firm with expertise in questionnaire design, data collection, and reporting. Trial Ex. 21 at ¶¶ 54-55 (Boedeker WDT).

SEPFF191. Participants were recruited from the online panel maintained by Research Now, a highly experienced and well-established firm with over 6 million online panelists. Trial Ex. 21 at ¶¶ 22, 56 (Boedeker WDT).

SEPFF192. Research Now sent invitations to participate in this study to a random sample of its panelists. The random sample was balanced to be representative of the U.S. population by using demographic variables from the U.S. Census. The resulting population was within 3% of Census demographics. Trial Ex. 21 at ¶¶ 22, 64-67, Charts 1-5 at 17-19 (Boedeker WDT); Trial Ex. 315; 5/8/17 Tr. 2938:19-2939:21 (Boedeker).

SEPFF193. The survey population was comprised of verified Sirius XM subscribers within this random sample of panelists. Using data about real-world Sirius XM

subscribers, Mr. Boedeker compared the demographics of the survey population with those of the underlying target population. He found no statistically significant difference between the two groups. Trial Ex. 21 at ¶¶ 66-67, App. E (Boedeker WDT); Trial Ex. 129 (SXM_DIR_00023540-44); *see also* 5/8/17 Tr. 2938:19-2939:21, 3004:16-3005:16 (Boedeker).

SEPFF194. Mr. Boedeker's survey consisted of a set of screening questions, followed by a set of main survey questions. Based on their responses to the screening questions, respondents who fell outside of the target population were terminated from the survey. Only qualified respondents were asked the main survey questions. Trial Ex. 21 at ¶ 34, App. B, App. C (Boedeker WDT).

SEPFF195. In order to qualify for the main survey, respondents were required to be adults (18 years of age or older), who live in the United States, and who use a Sirius XM subscription package that includes both music and non-music programming. Members of the target population were required to either pay for the Sirius XM package themselves or live in the same household as the person who pays for it, and were required to use their subscription. Furthermore, individuals who were "employed by Sirius XM satellite radio," who were "employed in the music industry," or who lived in households with someone who was, were excluded from the target population. Trial Ex. 21 at ¶¶ 34, 36-39, App. B, App. C (Boedeker WDT).

SEPFF196. Although respondents were also asked to identify the Sirius XM packages to which they subscribe, responses to this question were not used to limit the survey population. Ex. 21 at ¶ 40, App. B, App. C (Boedeker WDT).

(2) Results

SEPFF197. In the main questionnaire, Questions 8, 10 and 11 of Mr. Boedeker's survey asked respondents to allocate 100 points between music and non-music programming on

Sirius XM. Trial Ex. 21 at ¶¶ 34, 36-39, App. B, App. C (Boedeker WDT); 5/8/17 Tr. 2941:14-2942:23 (Boedeker).

SEPFF198. Question 8 asked respondents to allocate 100 points between music and non-music programming to reflect its importance to their decision to subscribe to Sirius XM satellite radio. Trial Ex. 21 at ¶¶ 41-42, App. B, App. C (Boedeker WDT).

SEPFF199. Respondents to Question 8 allocated 72 points to music programming and 28 points to non-music programming. Trial Ex. 21 at ¶¶ 14, 71, 74 (Boedeker WDT); 5/8/17 Tr. 2944:1-8 (Boedeker).

SEPFF200. Question 10 asked respondents to allocate 100 points between music and non-music programming to reflect its importance in their decision to remain a subscriber to Sirius XM satellite radio. Trial Ex. 21 at ¶¶ 41, 43, App. B, App. C (Boedeker WDT).

SEPFF201. Respondents to Question 10 allocated 70.6 points to music programming and 29.4 points to non-music programing. Trial Ex. 21 at ¶¶ 14, 72, 74 (Boedeker WDT); 5/8/17 Tr. 2944:9-16 (Boedeker).

SEPFF202. Question 11 asked respondents asked to allocate 100 points between music and non-music programming to reflect the percentage of time they typically spend listening to music versus non-music programming on Sirius XM satellite radio. Trial Ex. 21 at ¶¶ 41, 44, App. B, App. C (Boedeker WDT).

SEPFF203. Respondents to Question 11 assigned 71.25% of their listening time to music programming and 28.75% to non-music programming. Because these two figures represent unweighted averages, Mr. Boedeker also calculated the median listening time as indicated by the responses to this question. He found that the median listening time for music programming is 80%, and the median listening time for non-music programming is 20%. Trial

Ex. 21 at ¶¶ 14, 73-74 (Boedeker WDT); 5/8/17 Tr. 2942:19-2945:18 (Boedeker) (discussing why median, not mean, is the appropriate measure for listening time).

SEPFF204. For each of the allocation questions, the order of the answer choices was randomly assigned to the survey participants. Based on a random selection, half of the participants saw "music" listed first and "non-music" listed second; and the other half saw "non-music" listed first and "music" listed second. Trial Ex. 21 at ¶¶ 45, 74, App. B (Boedeker WDT); 5/8/17 Tr. 2945:19-2946:11 (Boedeker).

SEPFF205. Mr. Boedeker performed statistical tests to assess whether the results of Questions 8, 10 and 11 were dependent on whether respondents saw music or non-music answer choices first. Trial Ex. 21 at ¶¶ 74-75 (Boedeker WDT); 5/8/17 Tr. 2946:12-16 (Boedeker).

SEPFF206. Table 1 reflects the results of the two-sample-t-tests that Mr. Boedeker performed:

Results of Two-Sample-t-Tests for Questions 8, 10, 11

2 Sample T-Test of the Mean: Percentage Allocation Questions Q8, Q10, Q11 (Welch's t-test)							
Survey Question	***Bucket Allocation***	***Test Variable***	***Mean***	***N***	***Sample Variance***	***t-value***	***p-value***
Q8	Music programming	First Asked: Music	72.03	486	651.4527	0.042955	0.97
		First Asked: Non-Music	71.96	458	608.1166		
	Non-Music programming	First Asked: Music	27.97	486	651.4527	-0.04296	0.97
		First Asked: Non-Music	28.04	458	608.1166		
Q10	Music programming	First Asked: Music	70.87	501	783.3961	0.304254	0.76
		First Asked: Non-Music	70.34	474	701.6314		
	Non-Music programming	First Asked: Music	29.13	501	783.3961	-0.30425	0.76
		First Asked: Non-Music	29.66	474	701.6314		
*Q11	Music programming	First Asked: Music	80.00				
		First Asked: Non-Music	80.00				
	Non-Music programming	First Asked: Music	20.00				
		First Asked: Non-Music	20.00				

** The estimate for Q11 is the median of the distribution. This is the appropriate measure because the actual listening time of individual respond*

Trial Ex. 21 at Table 1 (Boedeker WDT); 5/8/17 Tr. 2946:12-18 (Boedeker).

SEPFF207. These tests did not provide any evidence that there was a significant difference in respondents' answers to Question 8, 10, or 11 based on the order of the answer choices. Trial Ex. 21 at ¶¶ 74-75 (Boedeker WDT); 5/8/17 Tr. 2946:19-25 (Boedeker) (based on statistical tests performed, as reflected in Table 1, "there is no evidence that the order of the question mattered with respect to the average allocation of points").

SEPFF208. In addition to allocation questions, Mr. Boedeker asked respondents two sets of questions about pricing and cancellation. These questions were Questions 12A/B and 13A/B of Mr. Boedeker's survey. Trial Ex. 21 at ¶¶ 46-48, 76, 82, App. B, App. C (Boedeker WDT); 5/8/17 Tr. 2947:1-2948:2 (Boedeker).

SEPFF209. Question 12A asked:

> Would you continue to subscribe to SiriusXM satellite radio at your current subscription rates if music was no longer offered (i.e., if you could only have a non-music package)?
>
> - o Yes
> - o No
> - o Don't know

Trial Ex. 21 at ¶¶ 46, 76, App. B, App. C (Boedeker WDT).

SEPFF210. Question 12B asked:

> Would you continue to subscribe to SiriusXM satellite radio at your current subscription rates if non-music was no longer offered (i.e., if you could only have a music package)?
>
> - o Yes
> - o No
> - o Don't know

Trial Ex. 21 at ¶¶ 46, 48, 76, App. B, App. C (Boedeker WDT).

SEPFF211. In response to Question 12A/B, 70.1% of all survey respondents said they would no longer subscribe to Sirius XM satellite radio at their current subscription rates if music programming was no longer offered. 32.4% of all survey respondents said they would no longer subscribe to Sirius XM satellite radio at their current subscription rates if non-music programming was no longer offered. Trial Ex. 21 at ¶ 77 (Boedeker WDT); 5/8/17 Tr. 2951:1-10 (Boedeker).

SEPFF212. The order of Questions 12A and 12B was randomly assigned to the survey participants. All respondents were asked both questions. But based on a random selection, half of the participants saw the music programming question first, and the other random half saw the non-music programming question first. Trial Ex. 21 at ¶¶ 45, 78 (Boedeker WDT); 5/8/17 Tr. 2949:9-19; 2952:8-11 (Boedeker).

SEPFF213. Mr. Boedeker performed statistical significance tests to assess whether or not the order of Questions 12A and 12B impacted the results of the survey. Table 2 summarizes the answers to Questions 12A/B, as well as the results of these statistical tests:

Results of Two-Sample-t-Tests for Question 12

2 Sample T-Test for Proportions Q12A vs. Q12B									
Bucket Selection	*Order of Music v. Non-Music Question*	*Test Variable*	*Proportions*	*N*	*p-hat*	*q-hat*	*std.error*	*t-value*	*p-value*
Don't know	All respondents regardless of order	Music	0.105	105	0.112438	0.887563	0.042297	-0.33099	0.74
		Non-Music	0.119	119					
No	All respondents regardless of order	Music	0.701	701	0.581831	0.418169	0.033136	11.37723	0.00***
		Non-Music	0.324	324					
No	Music N/A asked first	Music	0.6905222437	357	0.578322	0.421678	0.044346	7.283966	0.00***
		Non-Music	0.3675048356	190					
No	Non-Music N/A asked first	Music	0.7122153209	344	0.590331	0.409669	0.050078	8.682113	0.00***
		Non-Music	0.2774327122	134					
Yes	All respondents regardless of order	Music	0.194	194	0.463229	0.536771	0.04157	-8.73218	0.00***
		Non-Music	0.557	557					
Yes	Music N/A asked first	Music	0.2108317215	109	0.427847	0.572153	0.056237	-5.43427	0.00***
		Non-Music	0.5164410058	267					
Yes	Non-Music N/A asked first	Music	0.1759834369	85	0.50421	0.49579	0.061668	-6.88248	0.00***
		Non-Music	0.6004140787	290					

**** p<0.01, Proportions significantly different at 99%*
*** p<0.05, Proportions significantly different at 95%*
** p<0.10, Proportions significantly different at 90%*

Trial Ex. 21 at Table 2 (Boedeker WDT); 5/8/17 Tr. 2952:12-23 (Boedeker).

SEPFF214. Table 2 shows that the proportion of subscribers who would not continue to subscribe to Sirius XM at their current subscription rate if music was no longer offered is statistically significantly larger than the proportion of subscribers who would not continue to subscribe to Sirius XM at their current subscription rate if non-music was no longer offered. Trial Ex. 21 at ¶¶ 78, 81 (Boedeker WDT) ("results for the "Yes" and "No" answers to Questions 12A and 12B are significant in excess of 1%").

SEPFF215. Table 2 also shows that the number of "Yes" and "No" answers show the same results at levels independent of the order of the questions. Trial Ex. 21 at ¶¶ 78, 80 (Boedeker WDT) (further noting that "the proportion of 'Don't know' answers are not

significantly different from each other when 'music' and 'non-music' questions were asked in different order"); 5/8/17 Tr. 2952:12-23 (Boedeker).

SEPFF216. Question 13A/B asked respondents to select the minimum level of discount (if any) that could be offered to convince them to still pay for a Sirius XM satellite radio subscription if music programming was no longer offered, and the minimum level of discount (if any) that could be offered to convince them to still pay for a Sirius XM satellite radio subscription if non-music programming was no longer offered. Trial Ex. 21 at ¶¶ 47-48, 82, App. B, App. C (Boedeker WDT); 5/8/17 Tr. 2952:24-2953:12 (Boedeker).

SEPFF217. Question 13A asked respondents about the level of discount they would require if music was no longer offered:

> If music was not offered (i.e., you could only select a non-music package), what is the minimum level of discount (if any) that could be offered to convince you to still pay for a SiriusXM satellite radio subscription?
>
> - 1%-10%
> - 11 % - 20%
> - 21 % - 30%
> - 31 % - 40%
> - 41%-50%
> - 51 % - 60%
> - 61%-70%
> - 71 % - 80%
> - 81 % - 90%
> - 91 % - 99%
> - None — I wouldn't need a discount to continue subscribing
> - None — no amount of discount would convince me if music was not offered
> - Don't know

Trial Ex. 21 at ¶¶ 47, 82, App. B, App. C (Boedeker WDT).

SEPFF218. Question 13B asked respondents the same question if non-music was no longer offered:

> If non-music was not offered (i.e., you could only select a music package), what is the minimum level of discount (if any) that could be offered to convince you to still pay for a SiriusXM satellite radio subscription?

- 1%-10%
- 11 % - 20%
- 21 % - 30%
- 31 % - 40%
- 41%-50%
- 51 % - 60%
- 61%-70%
- 71 % - 80%
- 81 % - 90%
- 91 % - 99%
- None — I wouldn't need a discount to continue subscribing
- None — no amount of discount would convince me if non-music was not offered
- Don't know

Trial Ex. 21 at ¶¶ 48, 82, App. B, App. C (Boedeker WDT).

SEPFF219. The order of Questions 13A and 13B was randomly assigned to the survey participants. All respondents were asked both questions. But based on a random selection, half of the participants saw the music question first, and the other random half saw the non-music question first. Trial Ex. 21 at ¶ 49, App. B (Boedeker WDT).

SEPFF220. Mr. Boedeker analyzed the responses to Questions 13A/B to identify the most frequent responses with regard to music and non-music programming. Table 3 summarizes the results of this analysis:

Frequency Distribution of Discount Categories

Discount Offered: Music Programming No Longer Offered	
None – no amount of discount...	42.7%
51% - 60%	8.3%
71% - 80%	8.3%
41% - 50%	7.1%
81% - 90%	6.3%
91% - 99%	4.9%
21% - 30%	4.8%
61% - 70%	4.3%
31% - 40%	4.2%
11% - 20%	2.6%
Don't know	2.6%
None – I wouldn't need a discount...	2.2%
1% - 10%	1.7%

Discount Offered: Non-Music Programming No Longer Offered	
21% - 30%	15.4%
None – I wouldn't need a discount...	12.2%
41% - 50%	11.0%
11% - 20%	10.2%
51% - 60%	10.2%
None – no amount of discount...	10.0%
31% - 40%	7.8%
71% - 80%	5.1%
61% - 70%	4.5%
1% - 10%	4.4%
Don't know	3.7%
91% - 99%	3.0%
81% - 90%	2.5%

Trial Ex. 21 at Table 3 (Boedeker WDT).

SEPFF221. As Table 3 shows, 42.7% of respondents would no longer subscribe to their Sirius XM package if music programming was no longer offered (regardless of any discount). By contrast, 10.0% of respondents would no longer subscribe to their current package if non-music programming was no longer offered. Trial Ex. 21 at ¶¶ 83-84 (Boedeker WDT); *see also* 5/8/17 Tr. 2952:24-2953:12 (Boedeker).

SEPFF222. Among those survey respondents who would continue their subscription at a discount, the median discount required for a hypothetical package in which music programming was no longer available was in the range between 51-60%. The discount categories of 51-60% and 71-80% were the most frequently mentioned discounts when music is no longer offered; and, the single largest category of responses (42.7%) was "None – no amount of discount would convince me if option was not offered." Trial Ex. 21 at ¶¶ 83, 85-87 (Boedeker WDT).

SEPFF223. With regard to a hypothetical package in which non-music programming was no longer available, the median discount requested was in the range between 31-40%. The most frequently mentioned discount when non-music is no longer offered is 21-30%; this was also the single largest category of responses. Trial Ex. 21 at ¶¶ 83, 85-87 (Boedeker WDT).

SEPFF224. The results of Question 13A/B further show that the number of subscribers who would continue their subscription without a discount when non-music programming was no longer offered is over 5.5 times larger than the number of subscribers who would continue their subscription without a discount when music programming was no longer offered (12.2% is .54 times 22%). Trial Ex. 21 at ¶¶ 83, 87 (Boedeker WDT).

SEPFF225. Together, these data indicate that Sirius XM subscribers would demand substantially larger discounts to continue their subscriptions if music were no longer offered versus if non-music were no longer offered. Trial Ex. 21 at ¶ 87 (Boedeker WDT).

SEPFF226. Mr. Boedeker's survey defined six measures of respondents' preference for music versus non-music programming on Sirius XM. "[E]ach one of them and all of them together even more so demonstrated that the subscribers value music content significantly more than non-music content." 5/8/17 Tr. 2963:18-24 (Boedeker); *see also* Trial Ex. 21 at ¶ 14 (Boedeker WDT).

SEPFF227. The raw data from Mr. Boedeker's survey, all charts and tabulations, and all statistical calculations referenced in his Report are included in Appendix F to his written direct testimony. Trial Ex. 21 at ¶ 70, App. F (Boedeker WDT).

SEPFF228. As discussed above, Mr. Boedeker applied the "bootstrap" approach endorsed by the AAPOR to obtain precision estimates for the results from his study. Mr.

Boedeker adhered to AAPOR's guidance in applying this methodology and in format of reporting the results of his precision computations. Trial Ex. 21 at ¶¶ 29, 90 (Boedeker WDT); 5/8/17 Tr. 2935:2-2936:3 (Boedeker) (Boedeker applied AAPOR guidance "exactly"); *see also* Trial Ex. 21 at ¶¶ 91-96, App. G (Boedeker WDT).

SEPFF229. To estimate the precision of the results from his survey and construct 99%, 95%, and 90% approximations to confidence intervals, Mr. Boedeker created 1,000 samples of size 500, size 750, and size 1000 from the combined results in the pilot study and the main study. Trial Ex. 21 at ¶ 91 (Boedeker WDT).

SEPFF230. For each of the key survey questions (Q8, Q10, Q11, Q12, and Q13), Mr. Boedeker resampled 1000 random draws for three different sample sizes (n=500, n=750, n=1000) from within the survey results. In other words, he randomly selected one thousand samples of size 500, one thousand samples of size 750, and one thousand samples of size 1000 from the survey results. He then computed the proportion estimators for the answer categories in each of the key questions. Each sample yields a different estimator. Mr. Boedeker then tabulated the results and determined the following percentiles for the distribution of each proportion estimator: 0.5th, 2.5th, 5th, 25th, 50th, 75th, 95th, 97.5th, and 99.5th. Trial Ex. 21 at ¶ 92 (Boedeker WDT).

SEPFF231. The n-th percentile of a distribution was defined as the value in that distribution for which n% of all data points in that distribution are smaller than or equal to that value. Based on this definition, the percentiles can be used to calculate approximate confidence intervals in the following way: The 2.5th percentile is the value in the distribution for which 2.5% of all data points are smaller than or equal to and the 97.5th percentile is the value in the

distribution for which 97.5% of all data points are smaller than or equal to. Trial Ex. 21 at ¶ 93 (Boedeker WDT).

SEPFF232. By definition, in every distribution 95% of all data points from that distribution fall between the 2.5th and the 97.5th percentile which makes the 2.5th percentile comparable to the lower bound of a 95% confidence interval and the 97.5th percentile comparable to the upper bound of a 95% confidence interval. Similarly, 99% of all data points from that distribution fall between the 0.5th and the 99.5th percentile which makes the 0.5th percentile comparable to the lower bound of a 99% confidence interval and the 99.5th percentile comparable to the upper bound of a 99% confidence interval. And, in every distribution 90% of all data points from that distribution fall between the 5th and the 95th percentile, which makes the 5th percentile comparable to the lower bound of a 90% confidence interval and the 95th percentile comparable to the upper bound of a 90% confidence interval. The following Table 4 displays the results for Questions Q8 and Q10:

Results from Bootstrapping

Percentiles of the Proportion Estimator												
		Percentiles	PE	0.5%	2.5%	5.0%	25.0%	50.0%	75.0%	95.0%	97.5%	99.5%
N=500	Q8	Music	78	69.0	69.8	70.1	71.2	72.0	72.8	73.9	74.3	74.8
1000	Q8	Non-Music	22	25.2	25.7	26.1	27.2	28.0	28.8	29.9	30.2	31.0
Random	Q10	Music	70.6	67.1	68.0	68.5	69.7	70.5	71.3	72.3	72.7	73.4
Draws	Q10	Non-Music	29.4	26.6	27.3	27.7	28.7	29.5	30.3	31.5	32.0	32.9
N=750	Q8	Music	78	69.7	70.2	70.4	71.4	72.0	72.6	73.6	73.8	74.5
1000	Q8	Non-Music	22	25.5	26.2	26.4	27.4	28.0	28.6	29.6	29.8	30.3
Random	Q10	Music	70.6	68.1	68.6	68.9	69.7	70.4	71.1	72.1	72.4	73.1
Draws	Q10	Non-Music	29.4	26.9	27.6	27.9	28.9	29.6	30.3	31.1	31.4	31.9
N=1000	Q8	Music	78	70.2	70.5	70.7	71.5	72.0	72.5	73.2	73.5	73.9
1000	Q8	Non-Music	22	26.1	26.5	26.8	27.5	28.0	28.5	29.3	29.5	29.8
Random	Q10	Music	70.6	68.1	68.8	69.1	69.9	70.4	70.9	71.8	71.9	72.5
Draws	Q10	Non-Music	29.4	27.5	28.1	28.2	29.1	29.6	30.1	30.9	31.2	31.9

PE Proportion estimator from Survey
Lower and upper bound of an approximate 90% confidence interval
Lower and upper bound of an approximate 95% confidence interval
Lower and upper bound of an approximate 99% confidence interval

Trial Ex. 21 at Table 4 (Boedeker WDT).

SEPFF233. The results from the bootstrapping approach to determine approximate confidence intervals for the proportion estimator presented in Table 4 indicate that the approximate 99% confidence interval for the proportion estimator (which is 72% based on the survey results) for the importance of music programming in the decision to subscribe has a lower bound of 69% and upper bound of 74.8% for a sample size of 500. When the sample size increases, the width of the approximate confidence interval decreases: for a sample size of 1000 the lower bound of an approximate 99% confidence interval is 70.2% and the upper bound is 73.9%. When the confidence requirements are lower, the width of the approximate confidence interval also decreases: For example, for a sample size of 1000 the lower bound of an approximate 95% confidence interval is 70.5% and the upper bound is 73.5%. Trial Ex. 21 at ¶ 95 (Boedeker WDT).

SEPFF234. The bootstrapping results are included in Appendix G to Mr. Boedeker's written testimony. Trial Ex. 21 at ¶ 96, App. G (Boedeker WDT).

(3) Response To Sirius XM Criticism Of Boedeker Survey

SEPFF235. In his written rebuttal testimony, Sirius XM's expert Professor Hauser criticized three aspects of Mr. Boedeker's survey. Professor Hauser argued that (1) the pricing questions (Questions 12 and 13) "elicit[ed] inconsistent responses," Trial Ex. 11 at ¶¶ 133-37 (Hauser WRT); (2) that pricing questions "may have led respondents to overstate their value for music and non-music programming" because they did not include information about other features of Sirius XM, Trial Ex. 11 at ¶¶ 133, 138-39 (Hauser WRT); and (3) that certain answer choices did "not following the basic principles of good survey design," Trial Ex. 11 at ¶¶ 133, 141-43 (Hauser WRT). *See also* 5/8/17 Tr. 2955:10-2956:5 (Boedeker). None of these criticisms have merit.

SEPFF236. With regard to supposedly "inconsistent" responses to the pricing questions, Professor Hauser took issue with two categories of respondents: (a) those who answered "Yes" to Questions 12A/B (i.e. that they would continue to subscribe at their current price even if music/non-music content were no longer offered) *and* indicated in response to Question 13A/B that they would need a discount to convince them to continue to subscribing; and (b) those who answered "Yes" to Questions 12A/B *and* said in answer to Question 13A/B that no amount of discount would convince them to continue subscribing. Trial Ex. 11 at ¶¶ 133-37 (Hauser WRT); 5/8/17 Tr. 2956:10-2957:23 (Boedeker).

SEPFF237. But as Mr. Boedeker explained in his oral testimony, the first category of responses are not inconsistent. Whereas Question 12 was designed "to find out how [subscribers would] react if one type of programming were no longer available," Question 13 introduced additional information. It presented respondents with the option not just to continue or discontinue service if one type of programming was no longer available, but to opt for a discounted rate. As Mr. Boedeker explained, Question 13A/B measured "which type of programming would require a larger discount *if people had the option of a discount* if they wanted to continue subscribing." 5/8/17 Tr. 2947:18-2948:19 (Boedeker). There is nothing contradictory about choosing to continue service at one's current rate if no discount is available, but demanding a discount for a reduction in programming when discount options were presented. Mr. Boedeker testified to the following illustration: Imagine jogging on a hot day and being offered a bottle of water for $10. Even if you might choose to purchase the water for $10, if there was an option to buy a bottle for $3 instead, it would not be at all contradictory to say that you would only buy the $3 bottle. 5/8/17 Tr. 2948:9-15 (Boedeker).

SEPFF238. With regard to the second category of respondents (those who said they would continue their subscriptions in answer to Question 12A/B *and* said that no amount of discount would convince them to continue subscribing in answer to Question 13A/B), Mr. Boedeker agreed that that limited set of responses was internally inconsistent. 5/8/17 Tr. 2957:14-2958:4 (Boedeker). These inconsistent responses do not, however, make Mr. Boedeker's results unreliable. As he noted, only 20 respondents gave this type of response. 5/8/17 Tr. 2958:2-4 (Boedeker) (15 on the music programming question and 5 on the non-music programming question). Out of a survey of 1,101 people, this represents less than 2% of the survey population. Any variation based on these results would fall within a reasonable margin of error. 5/8/17 Tr. 2958:8-15 (Boedeker).

SEPFF239. Removing these respondents did not result in statistically different results. 5/8/17 Tr. 2958:16-2959:16 (Boedeker) (noting that when he removed the 20 respondents who gave inconsistent responses, the median distribution for Question 11 "did not change at all" and deviations for other key questions were very small, generally less than a percent).

SEPFF240. Professor Hauser is also wrong that the pricing questions should not have "focused solely on the music and non-music programming features of Sirius XM," without asking respondents about other features of the service. Trial Ex. 11 at ¶ 138 (Hauser WRT) (suggesting that Mr. Boedeker should have asked respondents about the value of, e.g. sound quality, station availability, and freedom from commercials, as Hauser did in his *SDARS I* and *II* surveys). Mr. Boedeker's survey was designed to measure the *relative* value of music and non-music programming. Because these two types of programming make up the entire universe of available programming types, asking about other features is not necessary for this purpose. As

Mr. Boedeker testified, what *additional* features either of these two types of programming may have was irrelevant to the scope his survey. 5/8/17 Tr. 2959:22-2961:3 (Boedeker) (noting that better sound quality, etc. are features that either music or non-music programming may or may not have).

SEPFF241. In his hearing testimony, Professor Hauser agreed that focusing solely on music and non-music programming was entirely appropriate to the extent that Mr. Boedeker's survey measured the relative value of these two types of programming content. 5/9/17 Tr. 3112:17-3113:9 (Hauser) (after listening to Mr. Boedeker's oral testimony, agreeing that "if his goal is purely to parse music versus non-music then I don't have a problem" with not listing other features). In an exchange with Judges Strickler and Barnett, Professor Hauser again confirmed this view:

> JUDGE STRICKLER: When you say "other things," [would need to be included in the survey in order to assess the value of music in terms of percent] what other things are you referring to?
>
> THE WITNESS: Well, in the SDARS, I think, I and II, again based upon talking with consumers, there were things like commercial-free radio, the fact that I could listen to it anywhere, the fact that they've got DJs to curate the listening and a lot of people actually care about the curation at Sirius XM, at least for some of the channels, are very popular because of these DJs; the fact that Sirius XM has CD quality sound coming from the satellite. And I think there were a few others that we found in the previous testimony that were important to consumers.
>
> JUDGE BARNETT: But wasn't Mr. Boedeker's aim simply to find the relative valuation of music and non-music without regard to the other features?
>
> THE WITNESS: Then he would be fine.
>
> JUDGE BARNETT: Okay.

5/9/17 Tr. 3113:10-3114:3 (Hauser).

SEPFF242. Professor Hauser's reliance on the survey he conducted in *SDARS II* – and his suggestion that Mr. Boedeker's survey would have been *more* reliable if it had employed

a similar methodology– is remarkable in light of the problems with his previous survey. Professor Hauser's written testimony notes that "[i]n a previous survey of Sirius XM listeners that I conducted as part of the 'SDARS II' proceedings, I found that respondents valued several Sirius XM features other than music and non-music programming such as 'Ubiquity of Station Availability,' 'Premium Sound Quality,' and 'Freedom from Commercials.'" Trial Ex. 11 at ¶ 138 (Hauser WRT); *see also* 5/9/17 Tr. 3113:12-23 (Hauser) (referring to his prior testimony). But in *SDARS II*, the Judges did not adopt Professor Hauser's survey, due to its flawed design:

> Professor John Hauser that attempts to measure the value of music to Sirius XM subscribers. Professor Hauser posited an anchor price for the Sirius XM service to his survey respondents, and then randomly removed features (such as lack of commercials, quality of sound, etc.) to determine how much the respondents would be willing to pay for the service after each feature is removed. After averaging the results, he determined that subscribers place an average value on Sirius XM's music channels of $3.24. *Professor Hauser's survey is of limited value.* By design, the higher number of features or attributes of the Sirius XM service included in the survey, the lower the estimated value of any given service. *This feature of the survey produces anomalous outcomes, such as survey results showing that subscribers would pay a certain amount for ubiquitous station availability, premium sound quality and absence of commercials, all without any programming content.*

SDARS II, 78 FR at 23064 (internal citations omitted; emphasis added).

SEPFF243. Professor Hauser's final criticism focuses on two specific aspects of "good survey design:" rotating answer choices and including quasi filters (e.g. "don't know" or "unsure" options). *See* Trial Ex. 11 at ¶¶ 133, 141-43 (Hauser WRT). These criticisms are both unfounded and relate only to select questions within Mr. Boedeker's survey.

SEPFF244. Although rotating answer choices and including quasi filters may be good methodological choices generally, Professor Hauser cites no authority that asserts these approaches are hard and fast rules that are required for every question. In fact, as Mr. Boedeker explained in his hearing testimony, he had good reasons for declining to take these approaches in several questions in his survey.

SEPFF245. At the outset, Professor Hauser's criticism that "Mr. Boedeker does not rotate or randomize the options available to participants for several questions in his survey" applies only to Questions 7 and 9, and Questions 12 and 13.

SEPFF246. As Mr. Boedeker testified, there was no need to rotate the order of the answer choices in Questions 12 and 13 for several reasons. Questions 12A and 12B asked respondents whether they would "continue to subscribe to SiriusXM satellite radio at [their] current subscription rates if music [or non-music] was no longer offered." Although the answer choices ("Yes" / "No" / "Don't Know") always appeared in the same order, the order in which the *questions* appeared randomly assigned to the survey participants. Randomizing the order in which respondents were asked about music *and non-music* functioned to protect against order bias. Additionally, this question presented a short list of options which was unlikely to confuse respondents or create order bias. 5/8/17 Tr. 2952:1-7 (Boedeker).

SEPFF247. Similarly, in Question 13 – in which respondents were about the percent discount they would require if music or non-music was no longer offered – the order of the response options always appears in ascending order (1-10%, 11-20%, etc.). However, the order in which respondents were asked about music *and non-music* in Questions 13A and 13B was randomized, protecting against order bias. Additionally, these answer choices have a natural, numerical order. 5/8/17 Tr. 2953:13-2954:12 (Boedeker).

SEPFF248. Randomizing answer choices that have a natural, numerical order can create confusion and lead to less reliable results. *See* 5/8/17 Tr. 2953:23-24 (Boedeker) (randomizing order of responses to Question 13 was not only unnecessary but also likely to "create less reliable results"); 5/9/17 Tr. 3031:8-22 (Hauser) (Sirius XM's survey expert agreeing

with Judge Barnett that randomizing numerically ordered answer choices would confuse respondents).

SEPFF249. It was also unnecessary to rotate the answer choices to Questions 7 and 9. Question 7 asked respondents "Were you involved in your household's decision to subscribe to Sirius XM satellite radio?" (Yes / No). Question 9 asked respondents "Are you involved in your household's decision about whether to remain a subscriber to Sirius XM satellite radio?" (Yes / No). Both are factual questions with short, binary answer choices for which there was "no need to randomize the order." 5/8/17 Tr. 2962:1-15 (Boedeker). Moreover, neither Question 7 nor Question 9 is a key question with regard to the relative value of music and non-music.

SEPFF250. Professor Hauser's criticism regarding quasi filters applies only to these same two questions: Questions 7 and 9. Because these questions have binary, factual question answer choices, Mr. Boedeker chose not to include a "don't know" option. As Mr. Boedeker testified, "yes and no cover 100 percent of the answer choices." Either respondents participated in their household's decisions regarding Sirius XM or they did not. Accordingly, "there was no quasi-filter necessary." 5/8/17 Tr. 2962:16-2963:7 (Boedeker).[7]

SEPFF251. Even if any of the above criticisms were valid with regard to certain pricing questions, Professor Hauser's arguments do not invalidate the validity of the survey as a whole. Notably, none of Professor Hauser's criticisms relate to Mr. Boedeker's key allocation questions (Questions 8, 10, or 11).

b. Mr. Boedeker's results are consistent with other available evidence

[7] It is unclear what separate meaning a "don't know" response would have in the context of these two questions about respondents' participation in decision-making. Presumably, for any respondent who truly did not know whether or not he or she participated in the decision to subscribe to Sirius XM or to remain a subscriber to that service, the correct answer to Question 7 and 9 would have been "no." Professor Hauser does not address this issue or explain why "no" would not have been an accurate answer choice for such respondents.

SEPFF252. Numerous other data points support Mr. Boedeker's conclusion that Sirius XM subscribers value music programming more than non-music programming. These include evidence from Professor Simonson's survey; expert testimony from prior SDARS proceedings, including from one of Sirius XM's own experts; internal Sirius XM consumer surveys; and Sirius XM's pricing structure.

SEPFF253. Professor Simonson's survey included a pair of open-ended questions, which asked respondents about their decision to subscribe to Sirius XM satellite radio. Question 220 of the Simonson survey asked:

> If you remember, why did you subscribe to the Sirius XM service? Please type your answers below. Please be specific and include details.

The following question (Question 225) probed further:

> If you remember, what other reasons, if any, led to your decision to subscribe to Sirius XM? Please type your answer below. Please be specific and include details.

Trial Ex. 44, App. D (Simonson WRT). Respondents were allowed to include multiple answers and were not asked specifically about music, non-music, or any other feature of Sirius XM. The results of these open-ended questions are reported in Appendix F to Professor Simonson's written testimony. Trial Ex. 44, App. F (Table 10) (Simonson WRT).

SEPFF254. In response to Professor Simonson's open-ended questions, more respondents mentioned music as one of the reasons that led to their decision to subscribe to Sirius XM than mentioned non-music as one of the reasons that led to their decision to subscribe. Trial Ex. 44, App. F (Table 10) (Simonson WRT) (showing that 378 respondents mentioned music in response to Questions 220/225, whereas only 261 respondents mentioned news, talk, and other non-music channels).

SEPFF255. In the *SDARS II* proceeding, both sides' experts attributed at least half of the value of Sirius XM's content to music. Sirius XM's expert Roger Noll agreed that music represents at least 55% of the value of content on Sirius XM. *See SDARS II*, 78 FR at 23064-65. SoundExchange's expert Dr. Janusz Ordover conservatively assumed that music accounts for at least 50% of the value of Sirius XM content. *See SDARS II*, 78 FR at 23063, 23088 (assigning hypothetical music-only package 50% of subscription price).

SEPFF256. In *SDARS II* the Judges repeatedly found that there was no evidence that Sirius XM's non-music content had *any* marketplace value, independent of its music offerings. *SDARS II*, 78 FR at 23065 (finding that the "value of Sirius XM's satellite radio service is the bundling of music and non-music content with its delivery platform, and Sirius XM has failed to present convincing evidence that its delivery platform and non-music content, alone, present a viable business"); 78 FR at 23089 (same).

SEPFF257. Internal Sirius XM surveys further confirm that subscribers value music more than non-music content. For example, [ ]. Trial Ex. 129 at 18-19 (SXM_DIR_00023555-56). [ ]. Trial Ex. 130 at 5 (SXM_DIR_00024240), 27 (SXM_DIR_00024262). [ ]. Trial Ex. 132 at 13 (SXM_DIR_00023902). [

[redacted]. Trial Ex. 132 at 13 (SXM_DIR_00023902).

SEPFF258. Finally, Sirius XM's pricing structure supports the conclusion that the service itself views music as at least as valuable to its subscribers as non-music. Sirius XM charges the same base subscription rate for its Mostly Music package and its Sports/News/Talk package. Trial Ex. 26 at ¶ 49 (Orszag Am. WDT); *see also* Trial Ex. 643, 707, 708 (showing "Mostly Music" monthly price of $10.99); Sirius XM, Sirius XM News, Sports & Talk, http://www.siriusxm.com/packages/sxmnewssportstalk (showing "News, Sports & Talk" monthly price of $10.99); Trial Ex. 26 at n.40 (Orszag Am. WDT) (further noting the unlike "News, Sports & Talk" subscribers, "Mostly Music subscribers are assessed a monthly music royalty fee of $1.53 which takes the monthly subscription price to $12.52" (citing Sirius XM, Summary of U.S. Music Royalty Fees by Package, http://www.siriusxm.com/usmusicroyalty/chart)).

SEPFF259. The Boedeker survey, along with other corroborating evidence, makes it plain that music content is considerably more valuable than non-music content to Sirius XM subscribers.

ii. No Adjustment Is Necessary Under Approach One To Account For The Alleged Value Of The Sirius XM Network

SEPFF260. Professor Shapiro argues that, in addition to accounting for the value of non-music content under Approach One, Mr. Orszag also should have accounted for (and backed out of the rate calculation) the value consumers place on the Sirius XM satellite network. Trial Ex. 9 at 19-20 (Shapiro Corr. WRT). Mr. Orszag explained at trial why this argument is incorrect.

SEPFF261. First, as a matter of theory, where the network has no value without the content, "it makes sense that – to think about the economics here as the labels and the services as partners. They are jointly creating a product to the benefit of consumers. And it makes sense that they are sharing in that." 4/25/17 Tr. 1034:13-22 (Orszag). As Mr. Orszag pointed out, to the extent that value is jointly created by the combination of the sound recording inputs and the Sirius XM network input, under the SoundExchange proposal that gives the copyright owners less than 25 percent of Sirius XM's revenue, "most of the gains that are going to the value that flows to Sirius, but there is a portion that goes to the labels which is a necessary input." 4/25/17 Tr. 1034:21-25(Orszag). Mr. Orszag concluded, "[a]nd, again, that is consistent with sound economics." 4/25/17 Tr. 1034:25-1035:1 (Orszag).

SEPFF262. The factual premise of Mr. Orszag's economic theory – that Sirius XM's network has no independent, stand-alone value to consumers – is undisputed. As acknowledged by David Frear, Sirius XM's CFO, [redacted]. Trial Ex. 43 at n.65 (Orszag WRT) (internal citation omitted). Moreover, the notion that Sirius XM's satellite-based delivery platform does not provide value separate and apart from the content itself is supported by the fact that Sirius XM charges the same price for its Sirius Select satellite radio package and its Internet Radio package. *See* Trial Ex. 734 (SXM_DIR_00114970-71). Were the company to view its satellite network as offering incremental value to consumers over and above the content of the service itself, such pricing would seem irrational. Trial Ex. 43 at n.65 (Orszag WRT).

SEPFF263. Mr. Orszag's analysis also is consistent with marketplace evidence. There is no evidence from other markets that a service provider's investments in its delivery platform (including its user interface, recommendation algorithms, and so on) are carved out of its revenue base before the royalties owed to copyright holders are calculated. Trial Ex. 43 at n.65 (Orszag WRT). As Mr. Orszag put it at trial, "no other service nets out the value of the distribution network from the prices." 4/25/17 Tr. 1034:6-8 (Orszag). Rather, insofar as these investments result in an offering more highly valued by consumers, as reflected ultimately in the service's price and demand, both copyright holders, through higher royalties, and the service, through higher revenues, will benefit. Trial Ex. 43 at n.65 (Orszag WRT).

SEPFF264. Nor would the outcome be different under the Section 801(b)(1) objectives. In Mr. Orszag's opinion as an economist, the first three Section 801 objectives are consistent with marketplace outcomes, 4/25/17 Tr. 1037:1-5 (Orszag), and thus setting market-based rates would serve those three factors, including Section 801(b)(1)(C). 4/25/17 Tr. 1035:13-24 (Orszag).

iii. Mr. Orszag's Calculations Under Approach One

SEPFF265. To recap the prior steps of the calculation, Mr. Orszag began with $[[redacted]], which is the effective weighted average monthly per-subscriber royalty payment made by the benchmark interactive subscription services to the three major record labels and their distributed indie labels. That per-subscriber payment equals is approximately [[redacted]]. Trial Ex. 26 at ¶ 47 (Orszag Am. WDT).

SEPFF266. As discussed above, there is evidence supporting a conclusion that music content represents considerably more than one-half the value of Sirius XM's blended service packages. Mr. Orszag nevertheless followed a conservative path and assigned one-half

the value of Sirius XM's blended service packages to music content. Trial Ex. 26 at ¶ 54 (Orszag Am. WDT).

SEPFF267. To account for the fact that Sirius XM transmits both non-music content and music content, and that music content is estimated to account for only 50% of the value of Sirius XM's service, Mr. Orszag divided the [[redacted]] to arrive at a percentage-of-revenue rate of [[redacted]]% for Sirius XM.

SEPFF268. To obtain an equivalent per-subscriber rate, Orszag applied the [[redacted]]% rate to the average revenue per subscriber (referred to herein as "royalty-base ARPU") of $[[redacted]], as gross revenue is defined by the statutory license.[8] This results in a per-subscriber rate of $[[redacted]]. Trial Ex. 26 at ¶ 54 (Orszag Am. WDT) (footnote omitted).

3. Mr. Orszag's "Approach Two" Calculation: Applying The Royalty-To-Subscription-Price Ratio From The Interactive Market To The Subscription Prices Of Subscription Noninteractive Streaming Services

SEPFF269. The benefit to Approach One, using percentage-of-revenue royalty payments by interactive subscription services to calculate a benchmark rate, is that it avoids the need to account specifically for differences between the target and benchmark services. It is able to do so because a service's revenues are a direct function of consumer subscription prices, and those prices, as already explained, reasonably reflect how consumers value any given service's set of attributes and functions. Because prices reflect the different valuations consumers assign to different combinations of features and functions, percentage-of-revenue rates will likewise

[8] The royalty-base ARPU – that is, the revenue that Sirius XM reports to SoundExchange and is the base against which the percentage of revenue rate is applied under the relevant regulations – was calculated by Mr. Orszag as explained in his amended written direct testimony. See Trial Ex. 26 at 26-27 (Orszag Am. WDT). See also 4/25/17 Tr. 1001:10-15 (Orszag) (the ARPU figure used should be consistent with the CRB regulations defining gross revenue).

reflect such differences, given that the sound recordings distributed by the various services are identical. Trial Ex. 26 at ¶ 55 (Orszag Am. WDT).

SEPFF270. A reasonable alternative methodology is to account directly and specifically for the absence of interactivity in the target satellite radio market. Mr. Orszag also calculated an effective rate using this methodology (his Approach Two) – that is, proceeding on the premise that interactivity is the only difference between the benchmark market and the target market sufficiently important to justify an adjustment. Trial Ex. 26 at ¶ 56 (Orszag Am. WDT).

SEPFF271. Mr. Orszag isolated the value of interactivity by comparing the retail prices of interactive and noninteractive subscription services. 4/25/17 Tr. 986:1-5 (Orszag) ("The second approach is that I do what is called an interactivity adjustment, so I use the ratio of the retail prices between non-interactive and interactive services to assess the appropriate royalty rate."). This approach works for the straightforward reason that these two categories of service differ only with respect to the feature of interest, *i.e.*, interactivity. 4/25/17 Tr. 986:10-12 (Orszag). Approach Two avoids the need to adjust for non-music content (since streaming services are music-only services) or the alleged need to adjust for value of a satellite network (since streaming services are internet-based). Trial Ex. 26 at ¶ 56 (Orszag Am. WDT).

SEPFF272. Mr. Orszag used three non-interactive subscription services – Pandora One, Rhapsody (Napster) unRadio, and Slacker Radio – to calculate a weighted average monthly retail price of $4.91 for the service category. Trial Ex. 26 at ¶ 56 (Orszag Am. WDT) (footnote omitted). The details of that calculation are presented in the following table.

Table Two: Non-Interactive Subscription Services Weighted Average Monthly Price [RESTRICTED]

	Price	Subscribers	Weight (Subs)	Weight (Price)
Pandora One/Plus	$4.99	3,900,000	[redacted]	[redacted]
Rhapsody (Napster) unRadio	$4.99	[redacted]	[redacted]	[redacted]
Slacker Radio	$3.99	[redacted]	[redacted]	[redacted]
TOTALS:		**4,401,891**	**100%**	**$4.91**

Trial Ex. 26, Table Two at 25 (Orszag Am. WDT) (footnotes omitted).

SEPFF273. Given the $9.99 monthly retail price for interactive subscription services, a ratio of the two prices provided an interactivity adjustment of 2.04 (or $9.99/$4.91, to account for the presence of interactivity), or 0.49 (or $4.91/$9.99, to account for the absence of interactivity). Mr. Orszag used the latter ratio of 0.49 to convert the interactive subscription services monthly per-subscriber rate of [[redacted]] to an equivalent per-subscriber rate for Sirius XM (which, unlike the benchmark services, is noninteractive). This calculation yielded a per-subscriber rate of [[redacted]]. Trial Ex. 26 at ¶ 57 (Orszag Am. WDT).

SEPFF274. The final step was to calculate an equivalent percentage-of-revenue rate. This required selection of the appropriate denominator, *i.e.*, the most suitable measure of Sirius XM's per-subscriber revenues. The company's posted prices represented one option; however, due to the various discounts extended to certain Sirius XM subscribers, using the list price would have provided an inflated assessment of consumer valuations. This shortcoming was, however, cured by using the actual per-subscriber revenues received by Sirius XM. Sirius XM reports publicly a monthly average revenue per-user (ARPU). Although this figure includes a number of revenue sources on which Sirius XM pays no royalties to SoundExchange – including subscription revenues earned from non-music packages, revenues earned from the sale of advertising on non-music channels, equipment sales, and activations and other fees – Sirius XM also reports to SoundExchange on a monthly basis the revenues on which Sirius XM pays

statutory royalties. In addition, in its SEC filings, Sirius XM reports its daily weighted average number of subscribers. Using these data, Mr. Orszag was able to calculate the "royalty-base" ARPU, *i.e.*, the average revenue per-user (*i.e.*, subscriber) on which the statutory rate should be assessed. *See* 4/25/17 Tr. 1001:10-15 (Orszag) (testifying that the ARPU figure used for this calculation should be consistent with the Judges' regulations defining what percentage of revenue is subject to the statutory percentage of revenue rate). The table below illustrates (i) Sirius XM's gross revenues for the first months of 2016, as reported to SoundExchange; (ii) Sirius XM's reported daily weighted total subscribers for that time period; and (iii) the calculation of royalty-base ARPU from these figures. Trial Ex. 26 at ¶¶ 58, 59 (Orszag Am. WDT).

Table Three: Sirius XM "Royalty-Base ARPU" [RESTRICTED]

	Gross Revenues (A)	Daily Weighted Average Subscribers (B)	Royalty Base ARPU (A / B)
Jan-16	[redacted]		
Feb-16	[redacted]		
Mar-16	[redacted]		
Apr-16	[redacted]		
May-16	[redacted]		
Jun-16	[redacted]		
Total:	[redacted]	30,044,000	[redacted]

Trial Ex. 26, Table Three at 27 (Orszag Am. WDT)

SEPFF275. As this table demonstrates, for the first six months of 2016, Sirius XM's royalty-base ARPU was [redacted]. Given a per-subscriber rate of [redacted], Mr. Orszag's Approach Two produced a percentage-of-revenue rate of [redacted]%. Trial Ex. 26 at ¶ 60 (Orszag Am. WDT).

G. Although Mr. Orszag Concluded That No Adjustment Was Necessary To Address The Alleged Lack Of Effective Competition In The Interactive

Market, He Offered Three Potential Ways To Adjust Rates If Such An Adjustment Is Deemed Necessary

SEPFF276. Having derived proposed rates for Sirius XM by examination and adjustment of the benchmark interactive services rates, Mr. Orszag considered whether a further adjustment was necessary to account for the alleged lack of effective competition in the interactive services market.

SEPFF277. In *Web IV*, the Judges found that the market for subscription interactive services was not effectively competitive, and therefore made a downward adjustment to the rate recommended by SoundExchange's interactive services benchmark. *Web IV*, 81 FR at 26344.

SEPFF278. The record in this case, however, establishes that the market for subscription interactive services is effectively competitive. This evidence, which was not presented to the Judges in *Web IV*, demonstrates that no downward adjustment for effective competition is needed.

SEPFF279. We review this record evidence below. Nevertheless, should the Judges determine that it is necessary to make an adjustment for effective competition, we also present several mechanisms for such an adjustment.

1. Evidence Not Presented To The Judges In *Web IV* Demonstrates That The Market For Subscription Fully Interactive Services Is Effectively Competitive

SEPFF280. To assess the competition to license sound recording rights in the interactive market, it is important to identify the factors that affect the negotiations. Trial Ex. 39 at ¶ 8 (Blackburn WRT). One factor that affects the terms of the benchmark agreements is negotiating power. When contracts are bilaterally negotiated, the bargained for price typically falls between what either side would dictate, and ultimately depends on the relative bargaining

power of the negotiating parties. Trial Ex. 8 at 20 & n.28 (Shapiro WDT). If the seller has appreciably more bargaining power than the buyer, the price will be closer to the seller's dictated price and vice versa. Trial Ex. 8 at n.28 (Shapiro WDT).

SEPFF281. For this reason, it is critical to analyze the relative bargaining power of the licensors and licensees in assessing potential benchmarks. Trial Ex. 39 at ¶ 9 (Blackburn WRT). Professor Shapiro, when analyzing the unregulated market agreements between record companies and interactive services, does not do this. Trial Ex. 39 at ¶ 9 (Blackburn WRT). Instead, he focuses solely on the ostensible bargaining power of the record companies, without assessing the bargaining power of the interactive services. Trial Ex. 39 at ¶ 9 (Blackburn WRT).

SEPFF282. Because Professor Shapiro does not consider relative bargaining power, his conclusion that the market for interactive services is not effectively competitive and therefore does not provide a suitable benchmark to use in this proceeding, is unreliable. Trial Ex. 39 at ¶¶ 9, 10 (Blackburn WRT). Moreover, Professor Shapiro fails to consider relative bargaining power despite articulating the framework for doing so. According to Professor Shapiro, a workably competitive market is one in which "there are multiple suppliers who are capable of offering buyers meaningful alternatives, so that no single supplier has substantial unilateral market power" and the suppliers "do not engage in coordinated interaction." Trial Ex. 8 at 22 (Shapiro WDT). Professor Shapiro further states that, in practice, economists interested in evaluating whether a market is workably competitive look at "market concentration, entry conditions, profits and price/cost margins, and especially more direct evidence regarding how suppliers compete, or refrain from competing, for the patronage of buyers." Trial Ex. 8 at 22 (Shapiro WDT).

SEPFF283. Professor Shapiro does not perform this analysis. Ignoring that agreements executed between the record companies and interactive services are the result of direct and bilateral negotiations, he focuses solely on the bargaining power of the record companies. Trial Ex. 39 at ¶¶ 12-13 (Blackburn WRT). This approach is incomplete and biased. Trial Ex. 39 at ¶ 13 (Blackburn WRT). It amounts to assuming a price-setting model in which record companies set rates, and licensees are price takers that must either accept those rates or decline a license. *See* Trial Ex. 39 at ¶ 10 (Blackburn WRT) (citing Trial Ex. 8 at 15-24, Section 5 (Shapiro WDT)).

SEPFF284. Economic models of bargaining – including those cited by Dr. Shapiro – predict that, under standard assumptions, the value of the bargain will be divided between the parties in proportion to their negotiating power.[9] Trial Ex. 39 at ¶ 13 (Blackburn WRT). Professor Shapiro analyzes whether the record companies have strong bargaining positions, but stops there. Trial Ex. 39 at ¶ 13 (Blackburn WRT). He does not consider whether the services also have strong bargaining positions that would lead to lower royalty rates. Trial Ex. 39 at ¶ 13 (Blackburn WRT). As a result, Professor Shapiro's assessment of the candidate benchmarks is incomplete and his conclusions are unreliable. Trial Ex. 39 at ¶ 13 (Blackburn WRT).

SEPFF285. Below, we present record evidence demonstrating that the interactive services have and exert substantial leverage in their negotiations with the record companies. We then review record evidence demonstrating that the royalty rates reflected in the record companies' agreements with the interactive services reflect the fair market value of the rights

[9] Dr. Shapiro acknowledges as much. *See* Trial Ex. 8 at p. 20, n.28 (Shapiro WDT) ("The negotiated price will be closer to the price the seller would dictate if the seller has more bargaining skill or bargaining power than the buyer, and vice versa.").

being licensed. Collectively, this evidence demonstrates that the market for fully interactive services is effectively competitive. Trial Ex. 39 at ¶ 14 (Blackburn WRT).

i. The Interactive Services Have Considerable Leverage

a. Subscription Interactive Services Provide Record Companies With Their Principal Source of Revenue

SEPFF286. The fortunes of the recorded music industry hinge to an important degree on the growth of subscription interactive streaming services. Trial Ex. 26 at ¶ 79 (Orszag Am. WDT). Accordingly, record labels have potent incentives to negotiate licensing rates that are remunerative for the record companies, but not so high as to jeopardize the mutually beneficial upward trajectory of interactive subscription services. Trial Ex. 26 at ¶ 79 (Orszag Am. WDT).

SEPFF287. The fact that the interactive services are increasingly important generators of revenues and profits for the record companies is demonstrated by Professor Shapiro himself. Trial Ex. 39 at ¶ 18 (Blackburn WRT). Since 2012, subscription and on-demand services have grown from 8 percent of record label revenue to 40 percent of record label revenue. *See* Trial Ex. 8, Figure 5 at 28 (Shapiro WDT); 5/01/17 Tr. 1712:17-1713:17 (Blackburn). Indeed, since 2014 alone, the share of record company revenues attributed to interactive services has more than doubled, while total industry revenue remained relatively flat. Trial Ex. 39 at ¶ 18 (Blackburn WRT) (citing Trial Ex. 8, Figure 5 at 28 (Shapiro WDT)). UMG's experience is illustrative: [ ]. 5/16/17 Tr. 3942:19-21 (Harrison). In 2015, [ ]. Trial Ex. 32 at ¶12(Harrison WDT).

SEPFF288. The concentrated nature of the market for interactive services further constrains the record companies' ability to negotiate rates. The interactive services marketplace

is dominated by a small number of large services, including Spotify, Apple, and Google, as well as other sizable services, like Amazon. As shown in Blackburn Figure 1 below, Spotify, Apple, and Google accounted for over [ ] percent of premium subscriptions in 2015, with Spotify alone accounting for almost [ ] percent.

Blackburn Figure 1 [RESTRICTED]

Trial Ex. 39, Figure 1 at 9 (Blackburn WRT)

SEPFF289. [ ]. Trial Ex. 39 at ¶ 16 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 16 (Blackburn).

SEPFF290. Testimony from other record companies corroborates that a few services dominate the market for fully interactive services. For example, Mr. Harrison testified that, [ ]. Trial Ex. 49, at ¶ 4 (Harrison WRT). [ ]. 5/16/17 Tr. 3952:18-19 (Harrison). [ ]. 5/16/17 Tr. 3953:8-10 (Harrison). Spotify [ ]. Trial Ex. 49 at ¶ 4 (Harrison WRT).

SEPFF291. Because services like Spotify, Apple, Google, and Amazon are critical to the record companies' financial health, they have substantial bargaining power and leverage and are able to negotiate fair market rates. As Mr. Harrison put it:

> UMG agreements with these interactive service providers (such as [ ]) provide fair market rates, and not rates that are "supra-competitive." This is because the services have substantial bargaining power and leverage that they can and do exercise in our negotiations. This bargaining power and leverage arises out of the fact that these services, individually and collectively, are of increasing importance to our business. Because subscription streaming represents a very substantial portion of UMG's total revenue, the negotiations with subscription services have been complex and intense, requiring UMG to accept more compromises on terms, including financial terms, in the agreements that it has reached

Trial Ex. 49 at ¶ 3 (Harrison WRT).

SEPFF292. Revenue generated by interactive services will come to comprise an even greater share of record company revenue over the coming licensing term. Between 2015 and 2021, Spotify is projected to more than triple its number of subscribers in the United States. Trial Ex. 39 at ¶ 18 (Blackburn WRT). Similarly, between 2015 and 2021, U.S. subscribers for interactive streaming services are expected to more than double from 12.5 million subscribers in

2015 to 30.9 million subscribers in 2021. Trial Ex. 39 at ¶ 18 (Blackburn WRT). Put simply: interactive services are increasingly important as a profit and revenue source to the record companies. Trial Ex. 39 at ¶ 18 (Blackburn WRT).

SEPFF293. The critical importance of interactive streaming to the record industry is directly relevant to the relative bargaining power of the record companies and the service providers. Trial Ex. 39 at ¶ 20 (Blackburn WRT). Ultimately, because the interactive services account for a substantial proportion of industry revenues and many of the major players also have important positions in other distribution channels, it is clear that they have leverage which they can use to strengthen their bargaining position in negotiations for sound recording licenses for interactive streaming. Trial Ex. 39 at ¶ 20 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 20 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 20 (Blackburn WRT).

SEPFF294. Industry observers recognize this,[10] and marketplace evidence confirms it: after the term of Spotify's existing deal with the Majors expired, Spotify was able to engage in extended negotiations on a long-term deal. 5/01/17 Tr. 1703:5-1704:13 (Blackburn). None of the Majors have pulled their catalogue during these negotiations. 5/01/17 Tr. 1703:25-1704:2 (Blackburn). Instead, the parties have carried over their agreement on a month-to-month basis. 5/01/17 Tr. 1703:25-1704:2 (Blackburn). Spotify's hold out power, together with the

[10] Trial Ex. 39 at ¶ 20 (Blackburn WRT) (citing Tim Ingham, "Spotify is out of contract with all three major labels – and wants to pay them less," August 22, 2016, Music Business Worldwide, *available at* http://www.musicbusinessworldwide.com/spotify-contract-three-major-labels-wants-pay-less/ ("the possibility of UMG, Sony or Warner catalogues being pulled is widely regarded as out of the question.")).

Majors' unwillingness to pull their content from Spotify, suggests that Spotify has meaningful bargaining leverage. 5/01/17 Tr. 1704:7-12 (Blackburn); 5/01/17 Tr. 1804:16-1805:22 (Blackburn).

SEPFF295. It is not just that the interactive services as a group are important to the record companies' bottom line – individual services are important as well. At trial, Mr. Harrison testified that the [ ]. 5/16/17 Tr. 3942:22-25 (Harrison); 5/16/17 Tr. 3943:4-14 (Harrison). The reason is that it [ ]. 5/16/17 Tr. 3944:18-25 (Harrison). For example, Mr. Harrison testified that [ ]. 5/16/17 Tr. 3944:23-3945:19 (Harrison). Similarly, in response to questions from Judge Strickler, [ ], 5/16/17 Tr. 3944:9-12 (Harrison), [ ]. 5/16/17 Tr. 3944:13-22 (Harrison).

SEPFF296. In short, a handful of major services dominate the market for interactive services. The revenue generated by the dominant services is increasingly important to the record companies' financial health, and will become ever more critical to profitability. As a result, losing any of the dominant services would have a meaningful impact on record company

revenues, now and going forward. For these reasons, the dominant fully interactive services have significant leverage that they can exercise in negotiations with record companies.

b. Subscription Fully Interactive Services Are Offered by Companies with Tremendous Market Power

SEPFF297. Looking at the amount and share of record company revenues now comprised of revenue generated by fully interactive services actually understates the bargaining power of interactive services that are operated by well-diversified and financially stable companies. Trial Ex. 39 at ¶ 17 (Blackburn WRT). For example, Apple is the largest retailer of digital download sales, while Amazon is one of the largest retailers of physical music sales.[11] Trial Ex. 39 at ¶ 17 (Blackburn WRT). Companies like Apple and Amazon have more resources to draw on in negotiations, are able to withstand protracted negotiations, and are able to rely on their experience as negotiators. 5/01/17 Tr. 1706:18-21 (Blackburn).

SEPFF298. For large and diversified companies, agreements to license fully interactive services are far less important than they are to the record companies. [ ] 5/16/17 Tr. 3954:3-12 (Harrison). [ ] 5/16/17 Tr. 3953:21-25 (Harrison).

SEPFF299. Services like Apple, Amazon, and Google can draw on their economic clout in spaces other than the market for fully interactive services when negotiating with record companies. 5/01/17 Tr. 1707:7-14 (Blackburn).

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11 [ ]. Trial Ex. 39 at ¶ 17 n.21 (Blackburn WRT) (citing SoundX_000045626-61 at 36); Trial Ex. 30 at 6 (Gallien WDT).

SEPFF300. [ ]. Trial Ex. 49 at ¶ 4 (Harrison WRT). Mr. Harrison testified that, as a result, Apple has [ ] 5/16/17 Tr. 3955:15-20 (Harrison). [ ]. 5/16/17 Tr. 3957:20-3958:2 (Harrison).

SEPFF301. Amazon also brings considerable leverage to bear in negotiations with the record companies. As Mr. Harrison explained, [ ]. Trial Ex. 49, at ¶ 5 (Harrison WRT). Moreover, ["]. Trial Ex. 32 at ¶ 44 (Harrison WDT). At trial, [ ]. 5/16/17 Tr. 3954:16-21.

SEPFF302. Like Apple and Amazon, Google has tremendous bargaining power when it negotiates with record companies. Google – together with its subsidiary, YouTube – is the largest streaming destination in the U.S. by volume. Additionally, Google is the gateway to the internet for many people to consume music. In negotiations, [ ]. Trial Ex. 49 at ¶ 5 (Harrison WRT). Furthermore, [ ]. 5/16/17 Tr. 3932:19-3933:5 (Harrison); 5/16/17 Tr. 3999:3-21 (Harrison). As Mr. Harrison testified, [ ]. 5/16/17 Tr. 3956:24-3957:10 (Harrison).

SEPFF303. Other prominent interactive services also exercise considerable leverage over the record companies in negotiations. For example, [ ]. Trial Ex. 49, at ¶ 5 (Harrison WRT).

ii. Marketplace Evidence Indicates That Subscription Interactive Services Pay Workably Competitive Market Rates

SEPFF304. Because the companies operating interactive services have considerable leverage in their negotiations with the record companies, and because of the pivotal

role interactive services play in sustaining record company revenues, it is incorrect to conclude on the basis of *record company* bargaining power – as Professor Shapiro does – that the royalty rates at which sound recordings are licensed to interactive streaming services are not fair market rates. Trial Ex. 39 at ¶ 21 (Blackburn WRT).

SEPFF305. To evaluate whether the interactive streaming services pay competitive market rates, it is necessary to assess whether there is market evidence of: (1) a suppression of output for recorded music; (2) supracompetitive profits inuring to the record companies; and (3) a lack of alternatives to which downstream consumers might turn. Trial Ex. 39 at ¶ 22 (Blackburn WRT).

SEPFF306. As described below, the record evidence in this case indicates that the interactive streaming services pay rates consistent with a market characterized by workable competition. Interactive streaming has grown substantially over the past several years and is forecast to continue this growth. Meanwhile, the profits earned by the record companies do not suggest that the record companies are earning supracompetitive returns. This – along with additional evidence of market pressures that would tend to depress the record companies' incentives to raise royalty rates – supports a conclusion that the licensing rates for sound recordings in interactive streaming agreements do, in fact, represent fair and reasonable rates. This conclusion is buttressed by the fact that recent agreements between interactive services and a consortia of independent record labels – *i.e.*, agreements of the type that Professor Shapiro has previously held out as reflective of an effectively competitive market – reflect essentially the same rates as those in SoundExchange's interactive services benchmark.

a. Rates Charged For Interactive Streaming Rights Have Not Suppressed Growth Or Discouraged Entry

SEPFF307. Interactive streaming has grown enormously in recent years in both absolute and relative terms, and this growth has not slowed down. Trial Ex. 39 at ¶ 23 (Blackburn WRT). For example, [ ]. Trial Ex. 39 at ¶ 2 (Blackburn WRT). As Professor Shapiro reports in his Table 5, [ ]. Trial Ex. 8 at 28 Fig. 5 (Shapiro WDT). In fact, record company revenues from interactive services grew to 40 percent of record company revenues in 2016. 5/01/17 Tr. 1712:17-1713:17 (Blackburn). This growth was largely driven by Spotify, which increased by more than threefold its global revenues from approximately $553 million in 2012 to over $2 billion in 2015. Trial Ex. 39 at ¶ 2 (Blackburn WRT).

SEPFF308. Blackburn Figures 2 and 3 show the growth in the number of active Spotify users and the number of paying Spotify subscribers worldwide. Between December 2012 and June 2016, the number of monthly Spotify global users increased from 20 million to 100 million users – a fivefold increase in less than 4 years. Trial Ex. 39, Fig. 2 (Blackburn WRT). Similarly, between December 2012 and August 2016 the number of global paid Spotify subscribers increased from 5 million to 39 million subscribers – almost an eightfold increase in less than 4 years. Trial Ex. 39, Fig. 3 (Blackburn WRT).

Blackburn Figure 2 [RESTRICTED]

SEPFF309. Importantly, the rates paid by interactive services to record companies have not discouraged the growth of the market or new market entry. In fact, since 2014, Amazon, Apple, iHeart, Pandora, and Tidal launched interactive services. Trial Ex. 39 at ¶ 18 (Blackburn WRT); 5/01/17 Tr. 1733:10-14 (Blackburn). Notwithstanding any bargaining power of the record labels when negotiating for licenses to operate an interactive streaming service, there is no shortage of entrants who believe that participation in the market will be profitable given the rates at which they can license sound recordings.[12] Trial Ex. 39 at ¶ 26 (Blackburn WRT).

SEPFF310. The proliferation and growth of interactive services is particularly impressive in light of the downstream competition that interactive services face from other distribution channels. As Professor Blackburn noted: if rates charged to fully interactive services were above fair market value, then the sheer amount of downstream competition would inhibit growth. Trial Ex. 39 at ¶ 27 (Blackburn WRT). Instead, growth continues unabated and interactive streaming has exploded in importance. Trial Ex. 39 at ¶ 27 (Blackburn WRT). As UMG has stated, "its best hope of increasing its revenues lies with subscription on-demand services" and, as a result, the subscription on-demand services "have considerable clout in [royalty rate] negotiations." Trial Ex. 32 at ¶¶ 34-35 (Harrison WDT).

b. The Record Companies' Financial Performance Does Not Indicate They Are Earning Excessive Returns

SEPFF311. Sirius XM, in asserting that the market for interactive services is not workably competitive, implies that the record companies earn supracompetitive profits as a result of the exercise of their alleged complementary oligopoly power. Trial Ex. 39 at ¶ 28 (Blackburn

[12] Indeed, Spotify is currently valued at $8.5 billion. Trial Ex. 39 at ¶ 18 (Blackburn WRT).

WRT). In *Web IV* the record was silent on whether the record companies in fact earn supracompetitive profits in the market for interactive services and, as a result, the Judges invited such an analysis in their decision. *Web IV*, 81 FR at 26343 & n.99. As detailed below, analysis of the record companies' financial performance shows no such excessive returns.

SEPFF312. To assess whether record companies are earning supracompetitive profits with respect to interactive services, it is necessary to review each major label's annual operating margins. Trial Ex. 39 at ¶ 29 (Blackburn WRT). These margins are based on revenues from physical sales, digital downloads, and streaming and related costs. Trial Ex. 39 at ¶ 29 (Blackburn WRT). While particular costs included in this analysis are only attributable to certain revenue channels (*e.g.*, manufacturing costs related to physical sales), most of the included costs relate to advances and recording expenses, and marketing and promotion expenses which are spread across the entirety of the recorded music business. Trial Ex. 39 at ¶ 29 (Blackburn WRT).

SEPFF313. Although the data presented at trial was not limited to interactive streaming services (because the record companies do not maintain their financial records in that fashion), to the extent there is undue market power in streaming on the part of the record companies, such market power presumably would extend to physical and digital sales as well. Trial Ex. 39 at ¶ 29 (Blackburn WRT). Thus, there is no reason why recorded music business profits could not be used as a proxy for assessing whether record companies earn supracompetitive profits. Trial Ex. 39 at ¶ 29 (Blackburn WRT). Indeed, given the increased share of revenues (and therefore profits) attributable to interactive streaming, *if* it were the case that supracompetitive pricing and profits existed in interactive streaming, it should be apparent in the overall profitability of the recorded music business. Trial Ex. 39 at ¶ 29 (Blackburn WRT).

SEPFF314. Blackburn Figures 4-6 (Trial Ex. 39 at 18-19 (Blackburn WRT)) show the annual worldwide, and where available, the U.S. operating margins for each of the three major record companies for the period 2014 to 2016.

Blackburn Figure 4 [RESTRICTED]

Blackburn Figure 5 [RESTRICTED]

Blackburn Figure 6 [RESTRICTED]

The margins earned by the three major record companies in recent years do not indicate any cause for concern with regard to pricing power.[13] Trial Ex. 39 at ¶ 31 (Blackburn WRT). The interpretation of a firm's pre-tax operating margin will be driven by the industry in which that firm is a part. Trial Ex. 39 at ¶ 31 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 31 (Blackburn WRT). [ ].

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13 [ ]. Trial Ex. 39 at ¶ 31 n.41 (Blackburn WRT). One explanation for this is that in physical and digital sales, which had been the dominant distribution channels in the past, the record companies collect additional revenues to pay mechanical publishing royalties that are passed on directly to the owners of musical work copyrights. Trial Ex. 39 at ¶ 31 n.41 (Blackburn WRT). With respect to streaming, however, this is not the case – the services typically pay music publishers directly. Trial Ex. 39 at ¶ 31 n.41 (Blackburn WRT). Because a cost that exists in physical and digital distribution is not present for streaming (and the associated revenues to cover those costs is eliminated one for one), this will tend to increase margins (profits divided by revenues) in streaming even when the economics are otherwise identical. Trial Ex. 39 at ¶ 31 n.41 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 31 n.41 (Blackburn WRT).

Trial Ex. 39 at ¶ 31 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 31 (Blackburn WRT).

Blackburn Figure 7 [RESTRICTED]

SEPFF315. Given this, the financial performance of the record companies in recent years does not suggest that they are able to earn supracompetitive profits in the recorded music business in general, or in the market for fully interactive streaming specifically. Trial Ex. 39 at ¶ 32 (Blackburn WRT). Instead, these margins are consistent with the premise that the prices charged by the record companies (for interactive streaming licenses as well as for physical and digital sales, and other revenue sources) are a result of negotiations in which both sides possess and exercise leverage in bargaining. Trial Ex. 39 at ¶ 32 (Blackburn WRT).

c. The Record Companies Need Interactive Services to Prevail in Downstream Competition for Consumers

SEPFF316. Music listeners can acquire music from a variety of service providers: terrestrial radio, satellite radio, webcasting, interactive services, digital downloads, and through

the purchase of CDs. Trial Ex. 39 at ¶ 33 (Blackburn WRT). Even Professor Shapiro acknowledged that the markets for satellite radio, statutory webcasting, and interactive services "are related because of the downstream competition." 4/19/17 Tr. 194:12-13 (Shapiro). There is "a single downstream market where the services all compete against each other, and indeed, against other forms of music, such as digital downloads, terrestrial radio . . . , CDs." 4/19/17 Tr. 194:18-22 (Shapiro).

SEPFF317. There is little dispute that downstream competition has an impact on the rates charged upstream by rights holders. Trial Ex. 8 at 11 (Shapiro WDT); Trial Ex. 32 at ¶ 34 (Harrison WDT). And downstream competition has served as a check on the leverage that the record companies might otherwise have in negotiations with the interactive services. Trial Ex. 39 at ¶ 34 (Blackburn WRT). In their negotiations with interactive streaming services, record labels understand that higher licensing rates potentially hamstring the services' ability to compete.

SEPFF318. For example, higher licensing rates could necessitate price increases that make the services less appealing to consumers. Trial Ex. 26 at ¶ 79 (Orszag Am. WDT); *see also* Trial Ex. 39 at ¶ 34 (Blackburn WRT). Given the downstream competition faced by interactive services, higher consumer-facing prices could result in a loss of subscribers to alternatives, such as free ad-supported services, satellite radio, or terrestrial radio. Trial Ex. 39 at ¶ 34 (Blackburn WRT); *see also* Trial Ex. 34 at ¶ 21 (Kushner WDT) (". . .we have to view use of our music in every type of streaming service as competing to some extent with every other such use of our music. We view none of them as promotional of any other, and indeed, we view each as potentially cannibalizing others. Thus, we are focused on growing the lines of business

that generate the highest revenue per user, and need to generate an appropriate level of revenue from each of them.").

SEPFF319. A loss of interactive service subscribers would reduce the revenues of interactive services and, thus, the record companies' revenues. Trial Ex. 32 at ¶ 34 (Harrison WDT); Trial Ex. 39 at ¶ 34 (Blackburn WRT). UMG, for example, is keenly aware that its best hope of increasing its revenues lies with subscription on-demand services because [ ]. Trial Ex. 32 at ¶ 34 (Harrison WDT). The record companies recognize that their success now turns on streaming and need subscription interactive services to grow their subscriber base. Trial Ex. 32 at ¶ 34 (Harrison WDT).

SEPFF320. Record companies also recognize that seeking higher royalty rates from interactive services can squeeze the services' margins and that tight margins could be problematic because the services need a path to profitability. Trial Ex. 32 at ¶ 34 (Harrison WDT). Absent any path to profitability, it is possible that interactive services will lose their investors or abandon their interactive service tiers in favor of their lower priced subscription or ad-supported services. Trial Ex. 32 at ¶ 34 (Harrison WDT). These are risks that record companies take very seriously. As Aaron Harrison testified, [ ] 5/16/17 Tr. 3981:14-18 (Harrison).

SEPFF321. Both risks – that the fully interactive services will lose investors or elect to abandon their on-demand service tiers – would materially impact record company revenues. Trial Ex. 32 at ¶ 34 (Harrison WDT). And in any way impeding the ability of

interactive services to compete could also drive users to illegally download (or pirate) sound recordings. Trial Ex. 39 at ¶ 35 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 35 (Blackburn WRT). [ ]. Trial Ex. 39 at ¶ 35 (Blackburn WRT). The record companies understand the costs of piracy to their business – and the impact on their recording artists – and consider this reality in their negotiation with interactive services to establish royalty rates. Trial Ex. 39 at ¶ 35 (Blackburn WRT).

SEPFF322. In short, the royalty rates sought by the record companies are constrained by the importance of interactive services to record companies' bottom lines, as well as the competition that interactive services face. Trial Ex. 32 at ¶ 35 (Harrison WDT); Trial Ex. 39 at ¶ 34 (Blackburn WRT); 5/01/17 Tr. 1769:2-1770:22 (Blackburn). The importance of revenue generated by interactive services, as well as downstream competition between interactive services and other methods of music delivery, restricts the ability of record companies to price sound recordings at rates above the fair market value. Trial Ex. 39 at ¶ 36 (Blackburn WRT).

d. The Major Record Labels Are Not Price-Setters

SEPFF323. The importance of revenue from fully interactive services, together with the considerable leverage that the dominant interactive services possess and the market indications discussed above, collectively demonstrate that record companies cannot charge and are not charging supracompetitive rates to license fully interactive services. The testimony provides further evidence that Sirius XM's single-minded focus on tit-for-tat price competition misapprehends how the market for fully interactive services operates.

SEPFF324. For example, at trial, Mr. Harrison [ ]

[redacted]. 5/16/17 Tr. 3930:7-3931:14 (Harrison). [redacted]. 5/16/17 Tr. 3931:8-10 (Harrison). [redacted]. 5/16/17 Tr. 3931:11-14 (Harrison).

SEPFF325. [redacted]. 5/16/17 Tr. 3926:17-3927:3 (Harrison). [redacted]. 5/16/17 Tr. 3926:17-3927:3 (Harrison). [redacted]. 5/16/17 Tr. 3946:15-3947:5 (Harrison). This [redacted] is evident in marketplace agreements. *See* Trial Exs. 125-128, 137.

SEPFF326. As discussed above, there are other reasons why record companies like UMG may be unable to secure rates they consider fair market value, [redacted]. [redacted]

[redacted]]. 5/16/17 Tr. 3932:19-3933:5 (Harrison). [[redacted]"]. 5/16/17 Tr. 3933:15-23 (Harrison). As Mr. Harrison testified, [[redacted]]. 5/16/17 Tr. 3933:15-23 (Harrison).

SEPFF327. According to Mr. Harrison, [[redacted]] 5/16/17 Tr. 3933:5-6 (Harrison). [[redacted]]. 5/16/17 Tr. 3933:4-23 (Harrison). [[redacted]]. 5/16/17 Tr. 3933:9-14 (Harrison).

SEPFF328. Sirius XM points to the fact that agreements with interactive services often contain no-steering provisions as evidence that the record companies are in fact price-setters. Trial Ex. 9 at 10-11 (Shapiro Corr. WRT). Not so. When services can credibly threaten to steer – and the interactive services do in fact have some ability to steer, as discussed *infra* at Section VI.C.1, the services will not agree to a no-steering provision without obtaining concessions in return. 5/04/17 Tr. 2605:12-2606:15 (Shapiro). Even Professor Shapiro acknowledges that services capable of making credible threats to steer might agree to an anti-steering provision in exchange for some concessions. 5/04/17 Tr. 2603:9-2606:15 (Shapiro). [[redacted]].

5/15/17 Tr. 3894:7-11 (Walker); 5/16/17 Tr. 3983:21-3984:6 (Harrison). And as Professor Shapiro recognized in response to questions from Judge Strickler, the cost-savings from exchanging rate breaks for a no-steering provision can be passed through to consumers:

[ ].

5/04/17 Tr. 2545:6-2546:7 (Shapiro).

SEPFF329. These dynamics suggest that anti-steering provisions can be pro-competitive. *See, e.g.*, 5/02/17 Tr. 2001:19-2002:1 (Willig). Indeed, they enable price competition to occur while eliminating the incentive for distributors to depart from the optimal mix of music – that is, for distributors to alter the play mix in a manner that reduces consumer welfare. 5/02/17 Tr. 1976:19-1976:25, 1989:16-1989:22 (Willig).

SEPFF330. As Professor Willig explained, steering encourages the distributor to select music based on cost. 5/02/17 Tr. 1989:16-1989:22 (Willig). But variations in cost are at odds with consumer welfare, because such variation encourages a distributor to select music based on price, rather than consumer taste. Indeed, when steering creates different price points for different content, the incentive to prioritize cost over quality is bounded only by the

consumer's willingness and ability to abandon one service for another. 5/02/17 Tr. 1989:16-1989:22 (Willig).

SEPFF331. Professor Willig elaborated that the outcome of bargaining for a no-steering provision is efficient. If maximizing consumer welfare is the priority, then the optimal result of unregulated negotiations to license fully interactive services will involve bargaining for anti-steering provisions, which can reduce "the overall uniform royalty rate to a level that's consistent with effective competition" without "the distributor's choices of plays being influenced by differential prices." 5/02/17 Tr. 1976:19-1976:25 (Willig); *see also* 5/02/17 Tr. 2011:1-4 (Willig).

SEPFF332. Testimony from record company witnesses further illustrates why anti-steering provisions are pro-competitive. [5/16/17 Tr. 3940:7-13 (Harrison). The only way for record companies to compete downstream is on the quality of their content. Anti-steering provisions ensure that this competition occurs and preserve incentives for record companies and labels to invest in sound recordings that reflect consumer tastes. 5/02/17 Tr. 2008:11-2009:6 (Willig).

SEPFF333. For all of these reasons, if both parties know that there will be steering unless steering is restricted by contract, the parties will negotiate a lower price. 5/02/17 Tr. 1990:4-12 (Willig). [ ]. 5/15/17 Tr. 3894:7-11 [ ]; 5/16/17 Tr. 3983:21-3984:6 (Harrison); *see also*

5/04/17 Tr. 2600:3-10, 2598:18-21 (Shapiro) [ ]. And where anti-steering provisions are bargained over, "the potentiality for steering is influencing, perhaps in a very strong way, the level of a uniform royalty rate in the presence of a no-steering provision, which means it's highly pro-competitive because it's adjusting prices in accordance with what steering would do, but without distorting consumer welfare at the same time." 5/02/17 Tr. 2001:19-2002:1 (Willig).

SEPFF334. In short, anti-steering provisions not only represent price competition at work, but also ensure that price competition does not reduce consumer welfare by distorting the mix of music that consumers receive, or disrupting the incentive to create new content. The existence of these provisions in agreements with the interactive services therefore do not cast doubt on the evidence that the record labels are not price-setters in the interactive market, and that the interactive services have substantial bargaining power.

e. The "Indie" Rates Paid By Interactive Streaming Services Are Comparable To SoundExchange's Benchmark Rates

SEPFF335. Professor Shapiro rejects SoundExchange's interactive services benchmarks because he contends they consist solely of agreements between subscription interactive service providers and the "major record labels," which he contends are complementary oligopolists, such that their agreements ostensibly do not reflect effective competition. Trial Ex. 9 at 7-8 (Shapiro Corr. WRT).

SEPFF336. In *Web IV*, Professor Shapiro relied upon an agreement between Pandora and Merlin, a collective that represents independent record labels, as a benchmark for setting rates for webcasting services. Trial Ex. 8 at 23 (Shapiro WDT). At the time of *Web IV*, Pandora operated only a statutory webcasting service. Trial Ex. 39 at n. 36 (Blackburn WRT).

Since that time, however, Pandora has also entered the interactive streaming services market. Trial Ex. 39 at n. 24 (Blackburn WRT).

SEPFF337. The record evidence in this proceeding includes [ ]. Trial Ex. 243. These rates – [ ].

SEPFF338. The current Merlin/Pandora agreement provides for royalty rates that are [ ]. Trial Ex. 243 at 11. [ ]. Trial Ex. 9 at 25 (Shapiro Corr. WRT).

SEPFF339. Record evidence demonstrates [ ], as follows:

a. [ ] (Trial Ex. 278 at 10);

b. [ ] (Trial Ex. 272 at 30); and

c. [redacted] (Trial Ex. 271 at 28).

SEPFF340. In sum, the record evidence demonstrates that [redacted] confirms that the rates in SoundExchange's interactive services benchmark are consistent with the operation of an effectively competitive market.

2. Should The Judges Conclude That The Interactive Services Market Is Not Effectively Competitive And Deem A Competition Adjustment Necessary, There Are Three Ways To Calculate Such An Adjustment

SEPFF341. The Judges in *Web IV* regarded the interactive subscription services marketplace as not effectively competitive because the fully interactive services had no way to induce price competition among the major record company sellers. *Web IV*, 81 FR at 26341-44. In the webcasting marketplace, however, the Judges concluded that the putative "must have" status of the major record labels did not preclude price competition due to the ability of webcasters to engage in steering. *Web IV*, 81 FR at 26344. Thus, it was determined by the Judges that the interactive streaming services benchmark required a downward adjustment to account for the inability of services in the benchmark interactive services to induce price competition *via* steering (or the threat thereof). Trial Ex. 26 at ¶ 64 (Orszag Am. WDT).

SEPFF342. For the reasons discussed above, Mr. Orszag concluded that the market for licensing sound recordings to interactive streaming services produces rates that do not require a competition adjustment. *See* Trial Ex. 26 at ¶ 36 (Orszag Am. WDT). Nevertheless, should

the Judges determine that a competition adjustment is needed, Mr. Orszag has offered several approaches to making a downward adjustment for effective competition. Mr. Orszag's suggested approaches to implement a competition adjustment propose discounts from the benchmark rates of between [redacted].

i. [redacted] Adjustment Based on Sirius XM's Direct Licenses

SEPFF343. The Judges in *Web IV* determined that direct licenses in the target market provided evidence from which to calculate the likely effects of steering on the interactive service benchmark rates. *Web IV*, 81 FR at 26343, 26404. Following that approach, the Judges could look to licensing deals that Sirius XM has negotiated directly with certain record labels to ascertain the magnitude of an effective competition adjustment. In particular, the Judges could assess the extent to which the rates in those deals are – as a result of steering – discounted *vis-à-vis* statutory rates.

SEPFF344. Mr. Orszag's written direct testimony suggested an effective competition adjustment of [redacted] to account for the potential effect of steering on interactive subscription service benchmark rates. That [redacted] figure, in Mr. Orszag's view, represented the upper bound of a reasonable competition adjustment because it was equal to the difference between the statutory rate and the weighted average rate found in Sirius XM's direct licenses. Trial Ex. 43 at ¶ 65 (Orszag WRT). In other words, it assumed that the entire discount observed in Sirius XM direct deals was attributable to steering. Trial Ex. 43 at ¶ 65 (Orszag WRT).

SEPFF345. After conducting further analysis, Mr. Orszag determined that the entirety of the difference between the statutory and average direct license rate was not the most appropriate mechanism for making an adjustment based on Sirius XM's direct licenses. Trial Ex. 43 at ¶ 65 (Orszag WRT). That is because, according to Professor Lys, the record companies that entered into direct licenses with Sirius XM receive tangible economic benefits other than

steering in return for agreeing to a discount from the statutory rate. *See infra* Section VII. These benefits include (i) paying direct licensors on the basis of their share of performances, instead of their share of spins ("over-indexing"); (ii) direct payment of 100% of royalties to the label; (iii) payment of royalties for pre-1972 sound recordings; (iv) provision of advances; (v) more accurate payment by allowing the record company to provide a direct content feed and metadata; and (vi) the avoidance of the administrative fee paid to SoundExchange. *See infra* Section VII.G. Each of these benefits, which have nothing to do with steering, provide value to a record company.

SEPFF346. As the analysis performed by Professor Lys demonstrates, little if any of the [ ] gap between the statutory and direct license rates is properly attributable to steering. *See infra* Section IX. Accordingly, a [ ] adjustment based on Sirius XM's direct licenses would be in excess of any reasonable upper bound steering adjustment. Trial Ex. 43 at ¶ 65 (Orszag WRT). Instead, Mr. Orszag concluded that, based on Sirius XM's direct licenses, the maximum possible rate discount attributable to steering is around [ ]. Trial Ex. 43 at ¶ 70 (Orszag WRT).

SEPFF347. Mr. Orszag's proposed [ ] discount results from two adjustments to the upper-bound discount originally stated in his written direct testimony. First, based on additional information received in discovery, [ ], according to the testimony of Professor Lys. Trial Ex. 43 at ¶ 29 & n.39 (Orszag WRT).[14] Although the amount by which direct license rates were discounted below the statutory rate can be explained by a number of

[14] For 2016, Professor Lys reports an average direct license royalty rate of [ ]. Trial Ex. 42, Fig. 7 (Lys WRT). This rate represents a roughly [ ] discount from the 2016 statutory rate of 10.5%. Trial Ex. 42, Fig. 7 (Lys WRT).

factors, one factor besides steering that applies to all direct licenses is the administrative fee collected by SoundExchange from record labels operating under the statutory license. The SoundExchange administrative fee in 2015 was 4.6% of royalty revenues. Trial Ex. 8 at 42 (Shapiro WDT). However, by virtue of entering into direct licenses, record companies save this 4.6% fee. Trial Ex. 43 at ¶ 29 (Orszag WRT). Thus, accounting only for the SoundExchange administrative fee, steering, on average, could account for a rate discount of no more than approximately [ ].[15] Trial Ex. 43 at ¶ 29 (Orszag WRT). This is undisputed:

> Q. If you take into account the fact that direct license labels were avoiding having to pay the SoundExchange administrative fee, in effect the average discount below the statutory rate wound up being about 6 percent, right?
>
> A. I think that's right. I think that's right. I will go with that.

4/20/17 Tr. 467:20-468:1 (Shapiro).

SEPFF348. For this reason, [ ] represents the maximum average rate discount for which steering can account, and thus is an upper bound for a competition adjustment based on the Sirius XM direct licenses. Trial Ex. 43 at ¶ 31 (Orszag WRT).

ii. 12% Adjustment Based On *Web IV*

SEPFF349. In *Web IV*, the Judges determined that direct licenses in the noninteractive service market provided evidence from which to calculate the likely effects of steering on the interactive service benchmark rates. *Web IV*, 81 FR at 26343, 26404. In this case, because there is no reason to believe that Sirius XM's incentives to steer are stronger than Pandora's, or that its ability to steer is greater, the 12 percent adjustment in *Web IV* is a reasonable upper bound for an adjustment here. As Mr. Orszag noted in response to questions by

[15] Calculated as follows: [ ]. Trial Ex. 43 at ¶ 29 n.41 (Orszag WRT). The term [ ] represents the average rate discount across the direct licenses and the term "0.046" represents the SoundExchange administrative fee of 4.6% that directly licensed labels avoid paying. Trial Ex. 43 at ¶ 29 n.41 (Orszag WRT).

Judge Strickler, given that both Sirius XM and Pandora's service at the time the *Web IV* proceeding are noninteractive, it is reasonable to use the 12 percent *Web IV* steering adjustment in this case as an upper bound if the Judges decide that a steering adjustment is necessary: "I think it is reasonable to turn to the next best piece of evidence which at this point may be somewhat dated, which is the Merlin/Pandora deal and look at the difference between the price with steering and without steering as the metric to use to make an adjustment, that that is a reasonable step to take." 4/25/17 Tr. 1011 8:14 (Orszag).

SEPFF350. There are several reasons to think that Sirius XM's incentive to steer is less than that of Pandora. First and foremost is the value of an incremental subscriber to Sirius XM. Professor Shapiro testified that steering towards lower priced sound recordings might result in a departure from the optimal mix of music, and subscribers might respond to such a departure by abandoning the service; a service must consider this cost in determining whether to steer. 4/20/17 Tr. 452:11-453:1 (Shapiro). In the case of Sirius XM, lost subscribers are very costly. Professor Lys estimates that a subscriber cancellation, on a yearly basis, removes around $90 from Sirius XM's contribution to fixed costs and profits. Trial Ex. 26 at ¶ 70 & n.83 (Orszag Am. WDT). In light of the price that Pandora charges for its subscription mid-tier service, $4.99, a subscriber cancellation could not possibly have the same financial impact, and the loss of a user of the ad-supported service would have a still smaller effect. Trial Ex. 26 at ¶ 70 (Orszag Am. WDT). All else equal, services have less incentive to steer if the cost of steering is higher. 4/20/17 Tr. 453:2-5 (Shapiro). Because the cost of steering, in terms of lost revenue, is higher for Sirius XM than it is for Pandora or for similarly priced subscription services, Sirius XM has less incentive to steer.

SEPFF351. Relative to Sirius XM, Pandora and other noninteractive streaming services also have stronger incentives to steer because they can fine-tune playlists at the individual subscriber-level. Trial Ex. 26 at ¶ 71 (Orszag Am. WDT). This degree of specificity allows noninteractive subscription services to target playlist adjustments that satisfy its steering obligations while minimizing subscriber backlash. Trial Ex. 26 at ¶ 71 (Orszag Am. WDT). Indeed, Professor Shapiro testified in *Web IV* that Pandora' use of algorithms was important to its ability to steer. 4/20/17 Tr. 455:14-18 (Shapiro). According to Professor Shapiro:

> Pandora's flexibility is directly related to its use of an optimizing algorithm to select playlists. The key point is that Pandora can selectively increase and decrease performances of recorded music in a manner that is highly attuned to the preferences of listeners. This may involve little or no steering for listeners who are picky about their music or on stations seeded with particular artists, along with a great deal of steering for listeners who are relatively indifferent to the music they hear, or on stations seeded by particular artists.

Trial Ex. 669 at 16 (Shapiro *Web IV* testimony).

SEPFF352. While there is no doubt that Sirius XM has the ability to steer (*see* 4/20/17 Tr. 451:1-2 (Shapiro); 5/10/17 Tr. 3365:24-3366:7 (Blatter)), Sirius XM does not have the ability to implement targeted steering. 4/20/17 Tr. 461:4-5 (Shapiro). Sirius XM's inability to implement targeted steering matters because consumer taste bounds the incentive to steer. 5/02/17 Tr. 1989:16-1989:22 (Willig); 5/04/17 Tr. 2600:24-2601:2 (Shapiro).

SEPFF353. Because Sirius XM has less incentive to steer than Pandora, there is no reason to think that the competition adjustment should be any higher than the 12 percent competition adjustment imposed in *Web IV* based on the steering in the noninteractive market, and 12 percent therefore is an appropriately conservative approach.

iii. [redacted] Adjustment Based on Recently Executed Mid-Tier Agreements

SEPFF354. Just as the Judges looked to the Merlin/Pandora agreement to determine an appropriate competition adjustment in *Web IV*, *see* 81 FR at 26404, in this case the Judges could look to direct licenses negotiated by Pandora and by iHeart for subscription mid-tier services. As described below, the major record labels, Merlin, and The Orchard in negotiations with [redacted].

SEPFF355. At trial, Mr. Orszag acknowledged that [redacted]. 4/25/17 Tr. 1053:1-8 (Orszag). However, as Mr. Orszag testified, to the extent that the entire difference between the top rate in the iHeart agreement [redacted] and the bottom rate in the Pandora agreement [redacted] is attributable to [redacted]. 4/25/17 Tr. 1053:13-30 (Orszag). That [redacted] difference is, of course, nearly identical to the steering adjustment that the Judges applied in *Web IV*.

SEPFF356. To assist the Judges in evaluating the extent to which [redacted] were priced into agreements executed by Pandora, on the one hand, and the major record labels, Merlin and The Orchard, on the other, we summarize the rates and key terms in the tables that follow. Significantly, rates in the iHeart agreements executed with [redacted]. And rates in the Pandora agreements executed with [redacted].

Summary of Warner's Mid-Tier Deals [RESTRICTED][16]

Summary of Sony's Mid-Tier Deals [RESTRICTED][17]

[16] Sources: Trial Ex. 114-018A at § 3(a) (SoundX_000107206) (iHeart royalty provisions); Trial Ex. 114-018B (SoundX_000107127-130) (Pandora royalty provisions); Trial Ex. 114-018B at Appendix B § 9(a) (SoundX_000107153) [[redacted]].

[17] Sources: Trial Ex. 112-16A at Service Schedule #1 § 7 (SoundX_000107458) (iHeart royalty provisions); Trial Ex. 112-16B at § 11 (SoundX_000107538-539) (Pandora royalty provisions); Trial Ex. 112-16B at § 8 (SoundX_000107536) [[redacted]].

Summary of UMG's Mid-Tier Deals [RESTRICTED][18]

[18] Sources: Trial Ex. 113-017A at Schedule 1, § 1.2 (SoundX_000106973) (iHeart royalty provisions); Trial Ex. 113-017B at Schedule 1, §§ 3.2, 4.2 (SoundX_000107052, 056) (Pandora royalty provisions); Trial Ex. 113-017B at Schedule 6, § 2 (SoundX_000107105) [[redacted]].

*[

].

Summary of Merlin's Mid-Tier Deals [RESTRICTED][19]

[19] Trial Ex. 272 at Schedule 3 (SoundX_000488916) (iHeart royalty provisions); Trial Ex. 243 at § 3(b) (SoundX_000477169-170) (Pandora royalty provisions); Trial Ex. 243 at § 2(o) (SoundX_000477168-169) [ ].

Summary of The Orchard's Mid-Tier Deals [RESTRICTED][20]

SEPFF357. While a significant number of independent record companies are distributed pursuant to deals executed by the major record companies, by Merlin, or by The Orchard, there are some independent record companies distributed by other groups. For example, independent record companies may be distributed by INgrooves or by Secretly Canadian Distribution. As summarized below, INgrooves executed an agreement to license the mid-tier service offered by Pandora and Secretly Canadian Distribution executed an agreement to license the mid-tier service offered by iHeart. [ ].

[20] Trial Ex. 277 at Service Schedule #1 § 7 (SoundX_000488048) (iHeart royalty provision); Trial Ex. 270 at § 11 (SoundX_000488073-074) (Pandora royalty provision); Trial Ex. 270 at § 8 (SoundX_000488071) [ ].

Summary of INgrooves Mid-Tier Deal with Pandora [RESTRICTED][21]

Summary of SCD's Mid-Tier Deal with iHeart [RESTRICTED][22]

SEPFF358. [ ]. 5/04/17 Tr. 2525:10-21 (Shapiro). [ ], *see* 5/04/17 Tr. 2521:21-2522:9 (Shapiro), [ ].[23] 5/04/17 Tr. 2525:18-21 (Shapiro). Put simply, and in Professor Shapiro's words: [ ].[24] 5/04/17 Tr. 2525:24-2526:3 (Shapiro).

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[21] Trial Ex. 278 at § 3(b) (SoundX_000486578 at 586-587) (Pandora royalty provision); Trial Ex. 278 at § 2(o) (SoundX_000486578 at 58) [ ].

[22] Trial Ex. 271 at Schedule 3 (SoundX_000488119 at 146) (iHeart provisions).

[23] Professor Shapiro also acknowledged that the [ ]. 5/04/17 Tr. 2535:20-2536:11 (Shapiro).

[24] In this regard, Professor Shapiro's conclusory assertion that [ ]. 5/04/17 Tr. 2531:25-2532: (Shapiro). The operative question is whether [ ]. 5/15/17 Tr. 3894:7-11 (Walker).

SEPFF359. At trial, Professor Shapiro casually asserted that rate differences between the Pandora and iHeart agreements are insignificant because the rates fall within the range of [ ] percent of revenue, as do the agreements upon which Mr. Orszag relies for his interactive services benchmark. 5/04/17 Tr. 2537:20-23, 2539:20-2540:5 (Shapiro). [However, t].

SEPFF360. In sum: while the [ ], 4/25/17 Tr. 1053:1-8 (Orszag), unrebutted evidence indicates that the [ ]. 4/25/17 Tr. 1053:13-30 (Orszag). Accordingly, the [ ] adjustment represents the very upper bound of an adjustment that could be made based on the mid-tier deals, and comports with the magnitude of the *Web IV* adjustment predicated on Pandora's deal with Merlin.

iv. Summary of Royalty Rates with Steering Adjustments

SEPFF361. The table below presents Mr. Orszag's two benchmark rates without any adjustment for steering, and with a [ ] steering adjustment. It also provides rates that reflect two other steering adjustments: the 12 percent adjustment, based on *Web IV,* and the [ ] adjustment based on the mid-tier deals.

	Approach One		Approach Two	
Steering Adjustment	Pct of Revenue	Per-Subscriber	Pct of Revenue	Per-Subscriber
None	28.0%	$3.00	25.7%	$2.76
12%	24.6%	$2.64	22.7%	$2.43

H. Mr. Orszag Concluded That No Further Adjustments To The Interactive Services Were Necessary

SEPFF362. Mr. Orszag considered whether any additional adjustments were necessary in order to apply his benchmark analysis to the target satellite radio market. He concluded that no further adjustments were necessary. His reasons for declining to make two of those potential adjustments – those relating to relative elasticity of demand and relative effects of promotion and substitution (that is, whether the benchmark market and the target market differ along these dimensions), warrant elaboration.[25]

1. The Elasticity Of Demand For The Music Input Is Lower, And In Any Event Certainly No Higher, For Sirius XM Compared To The Benchmark Services

SEPFF363. To the extent that demand elasticity constitutes a pertinent measure of comparability, it is not necessary to make an adjustment to account for differences between the market for fully interactive services and the market for satellite radio. No adjustment is needed because downstream elasticity of demand for Sirius XM's music service is lower than elasticity of demand for the fully interactive services, and because Sirius XM's upstream elasticity of demand for the cost of music also is lower than for the fully interactive services. *See* 4/25/17 Tr. 1017:10-1018:1 (Orszag).

i. Downstream Elasticity And Derived Demand

SEPFF364. As the first component of the relative demand elasticity analysis, Mr. Orszag considered the downstream elasticity of demand for Sirius XM's service, which effects

[25] Mr. Orszag considered and rejected the need to make adjustments to account for the treatment of pre-1972 sound recordings in the interactive service agreements, and the need to adjust for "skips." Trial Ex. 26 at ¶¶ 95-96 (Orszag WDT). Sirius XM does not appear to challenge these decisions.

the elasticity of demand for sound recordings by Sirius XM through the concept of derived demand.

SEPFF365. In his written direct testimony, Professor Willig demonstrated empirically that Sirius XM's downstream elasticity of demand is lower than the elasticity of demand for fully interactive services. Based on the Dhar survey, and using Sirius XM's ARPU $[[redacted]], Professor Willig calculated that Sirius XM's price elasticity of demand is 0.8, while the price elasticity of demand for fully interactive services offered by Apple and by Spotify is 1.7. Trial Ex. 28 at ¶ 44 (Willig WDT); *see also* Trial Ex. 28, App. C (Willig WDT) (providing further details about this calculation).

SEPFF366. Professor Willig also undertook a careful econometric study of the downstream elasticity of demand for Sirius XM, and found that the econometrics corroborate calculations predicated on the survey data, with results ranging from an estimated elasticity of demand of 0.3 to 0.9, depending on the time frame of the measured response to a price change. Trial Ex. 28 at ¶ 44 (Willig WDT); *see also* Trial Ex. 28, App. D (Willig WDT) (providing details about the econometric analysis).

SEPFF367. Marketplace evidence further confirms that demand for Sirius XM's service is relatively inelastic. This is reflected in Sirius XM's recent decisions to increase headline rates. Trial Ex. 26 at ¶ 31 (Orszag Am. WDT) (citations omitted). In each of 2014, 2015, and 2016, Sirius XM decided to increase the headline rate for at least one of its packages. Trial Ex. 26 at ¶ 31 n.14 (Orszag Am. WDT).

SEPFF368. Likewise, the inelastic demand for Sirius XM's service is illustrated by the company's ability to impose and increase what it calls the "Music Royalty Fee." Trial Ex. 26 ¶ 31 (Orszag Am. WDT). The Music Royalty Fee is a fee that Sirius XM uses to fund its

existing and anticipated royalty payments to the recording industry, including both writers and artists. Trial Ex. 320 at 1. The fee varies, depending on the package and plan term that a consumer selects, as well as the number of subscriptions on the consumers account. Trial Ex. 320 at 1. The Music Royalty Fee is automatically added to the cost of a consumer's subscription. Trial Ex. 320 at 1. Although the fee has remained at 13% of subscription price since January 5, 2015, subsequent rate have caused Sirius XM to increase the absolute amount of the Music Royalty Fee. Trial Ex. 320 at 1; Trial Ex. 321.

SEPFF369. The price elasticity of demand for music performances distributed through Sirius XM or the fully interactive services – the upstream demand or "derived demand" – is related to the downstream demand for the service. The service's derived demand for sound recordings can be calculated by taking the price elasticity of demand for subscriptions to the service, and multiplying by the music's cost share of the total downstream price, provided that the number of music performances is proportional to the number of subscribers. Trial Ex. 27 at ¶ 44 (Willig WDT).

SEPFF370. Professor Willig's analysis of downstream elasticity of demand, based on both survey data and the corroborating econometrics, supplies the first input. Calculating the relative elasticity of demand (derived demand) also requires assessing elasticity of demand with respect to the price of music. 5/02/17 Tr. 2096:17-23 (Willig).

SEPFF371. Today, the cost of sound recording rights for Sirius XM is very small compared to other modes of distribution. 5/02/17 Tr. 2099:4-5 (Willig). Accordingly, when the elasticity of demand for Sirius XM's service, and for the fully interactive services, is multiplied by the services' respective ratios of consumer-facing price to the cost of musical rights, Sirius

XM's upstream elasticity is either equal to or lower than the upstream elasticity of other distribution channels. 5/02/17 Tr. 2099:6-11.

SEPFF372. Professor Willig performed these calculations in his written direct testimony. Given an estimated price elasticity of demand of 0.8 for Sirius XM subscriptions, and a [redacted] = .09 music's cost share of price, the elasticity of demand for music performances at Sirius XM is .09x.8 = .072. Trial Ex. 27 at ¶ 44 (Willig WDT). In contrast, the corresponding elasticity of demand for music performances at Apple/Spotify is [redacted]. Trial Ex. 27 at ¶ 44 (Willig WDT).

SEPFF373. Thus, "at royalty rates proposed by SoundExchange, the music input would still be a significantly smaller percentage of the downstream price for Sirius," meaning that upstream price elasticity for Sirius XM will be equal to or less than the fully interactive services. 5/02/17 Tr. 2099:21-2100:3 (Willig); *see also* Trial Ex. 27 at ¶ 44 (Willig WDT). And, because the elasticity of derived demand for Sirius XM is equal to or less than the elasticity of derived demand for fully interactive services, no downward adjustment to the interactive services benchmark is warranted.

ii. Upstream Demand And Steering

SEPFF374. Upstream elasticity of demand for the sound recording input might also be affected by the services' ability to steer (or lack thereof). For present purposes, what matters, again, is whether there is any difference in this regard between the benchmark and target markets. Again, Mr. Orszag concluded that there was no relevant difference requiring an adjustment.

SEPFF375. It is worth noting, at the outset, that if the Judges conclude that the interactive services market is not effectively competitive, and apply a competition adjustment to the benchmark rates, in effect such an adjustment would also serve as an adjustment for

differential upstream demand elasticity as well. But if the Judges find that the market for subscription interactive services is effectively competitive, then, as a matter of sound economics, any steering adjustment for this proceeding would be driven by a comparison of the relative steering capabilities of the target and benchmark services. Trial Ex. 43 at ¶ 6 (Orszag WRT). If the evidence demonstrates that Sirius XM has a greater ability and incentive to steer, then benchmark rates drawn from the interactive services realm should receive a downward adjustment corresponding to the magnitude of the steering difference. Trial Ex. 43 at ¶ 6 (Orszag WRT). On the other hand, if the difference in steering capabilities and incentives tilts in favor of the interactive services, or is equivalent (or nearly so) across the two service types, then a steering adjustment is not needed. Trial Ex. 43 at ¶ 66 (Orszag WRT).

SEPFF376. There is no reason to conclude that Sirius XM enjoys a greater ability or incentive to steer relative to the benchmark interactive services. Although Professor Shapiro offered a stylized example purporting to show that Sirius XM's steering capabilities are significant, Trial Ex. 8 at 39-40 (Shapiro WDT), there is no empirical evidence to show that his thought experiment holds true in the real world. For example, Professor Shapiro acknowledged that "[t]here is no quantitative evidence relating to Sirius XM steering or its effect on listener hours." 4/19/17 Tr. 202:12-18 (Shapiro); *see also* 4/19/17 Tr. 204:5-10 (Shapiro).

SEPFF377. Professor Shapiro also suggested that Sirius XM's direct licenses provide evidence of material price competition related to steering. However, the analysis prepared by Professor Lys demonstrates that steering was a minor to nonexistent factor in the consummation of the direct licenses. The reasons why Sirius XM may not have a financial incentive to steer are discussed *infra* in Section VII.

SEPFF378. On the other side of the coin, significant evidence exists regarding the ability of interactive services to steer, and supports the proposition that those capabilities are at least roughly equivalent to the capabilities of Sirius XM. Trial Ex. 43 at ¶ 70 (Orszag WRT).

SEPFF379. Interactive services increasingly can steer because much of the listening is now playlist driven rather than on-demand. Of course, to the extent that a subscriber elects to listen to a playlist that he or she created, the music is chosen based on the listener's preferences instead of price. Trial Ex. 32 at ¶ 28 (Harrison WDT). But subscribers also listen to service-generated playlists, and the use of such playlists is growing. According to data supplied to UMG by Apple and Spotify, Spotify's top playlist reached [[redacted]] percent of its users and Apple's top playlist reached [[redacted]] percent of its users. By 2016, for Spotify as much as [[redacted]] percent of plays come from playlists and algorithmic streams that the service controls.[26] Trial Ex. 32 at ¶ 36 (Harrison WDT). According to Mr. Kushner, for Atlantic [[redacted]]. Trial Ex. 34 at ¶-60 (Kushner WDT).

SEPFF380. The record companies know this. At trial, Mr. Harrison testified that "the services can decide to place more lower cost recordings into prominent areas of their service whether that's earlier on in playlist or higher up . . . in a . . . page in the . . . browsed section of the service." 5/16/17 Tr. 4035:8-13 (Harrison). Mr. Harrison also noted that interactive services can create original content or purchase content. 5/16/17 Tr. 4035:20-4036:1 (Harrison). In short, the interactive services can make decisions about merchandising and about placement of tracks within playlists, based on price. 5/16/17 Tr. 4036:2-4 (Harrison). As Mr. Harrison

[26] At trial, Mr. Harrison indicated that this figure can varies and so may not reach [[redacted]] each month. However, as Mr. Harrison testified, the figure does not vary widely from month to month. 5/16/17 Tr. 4045: 22-24 (Harrison).

acknowledged at trial, Spotify may be trying to feature lesser-priced music in various areas of its service. 5/16/17 Tr. 4036:7-12.

SEPFF381. The effect of service-generated playlists extends well beyond the percentage of a record company's plays that result directly from those playlists. Trial Ex. 32 at ¶ 37 (Harrison WDT). Some subscribers use service-generated playlists to discover new music. Trial Ex. 32 at ¶ 37 (Harrison WDT). People have access to so much music that it is very difficult for them to discover music they like on their own. Trial Ex. 32 at ¶ 37 (Harrison WDT). As a result, consumers often listen to playlists created by others in order to hear new music. Trial Ex. 32 at ¶ 37 (Harrison WDT). As Mr. Harrison explained in his written direct testimony, for Spotify approximately [■] percent of streams are generated by the service through playlists (rather than selected by the subscriber), but close to [■] percent of Spotify's streams of UMG's frontline releases were programmed by the service. Trial Ex. 32 at ¶ 37 (Harrison WDT). In other words, new releases represent a much higher percentage of plays in the service playlists, compared to overall catalogue. Trial Ex. 32 at ¶ 37 (Harrison WDT). This suggests that service playlists are important to music discovery for subscribers. New music discovered on service playlists is added by subscribers to their own playlists, and shared with their friends on the service, who likewise add music to their playlists. Trial Ex. 32 at ¶ 37 (Harrison WDT).

SEPFF382. Once subscribers discover new music on playlists and add it to their own playlists, those recordings tend to be played repeatedly for months or sometimes years. Trial Ex. 32 at ¶ 38 (Harrison WDT). While the on-demand service directly controls less of the choice of which music to play, compared to a non-interactive streaming service, the on-demand service's choice of which music to include on playlists has a significant influence on subscriber choices and therefore record company revenues. Trial Ex. 32 at ¶ 39 (Harrison WDT).

SEPFF383. Services like Spotify recognize the benefits of these playlists to the record companies and use them as a way to "discipline" the record companies. Trial Ex. 39 at ¶ 40 (Blackburn WRT). For example, [ ]. Trial Ex. 39 at ¶ 40 (Blackburn WRT).

SEPFF384. The result is that interactive services not only steer directly by deciding what sound recordings to include on playlists – in so doing, they also actively influence subscribers' requests in a variety of ways that in turn directly affect the relative shares of royalty payments that are split among the record companies. Trial Ex. 32 at ¶ 43 (Harrison WDT). The services therefore have the ability to play one record company off against another in catalogue license negotiations, and they do so. Trial Ex. 32 at ¶ 43 (Harrison WDT). In other words, as interactive services commit to competing on curation, they not only increase their ability to capture users, but also their ability to steer.

SEPFF385. The evidence therefore discloses no reason to conclude that the elasticity of demand for sound recordings is higher for Sirius XM than it is for interactive services, and no adjustment is necessary.

2. No Adjustment To The Rates Derived From Mr. Orszag's Interactive Benchmark Analysis Is Necessary To Address The Alleged Promotional Effect Of Plays On Sirius XM

SEPFF386. Mr. Orszag considered, in his benchmark analysis, whether any adjustment was required to account for a difference – if one was shown to exist – between the

target market (Sirius XM) and the benchmark market (interactive services) with respect to the degree to which they promote or substitute for sales in other markets. Trial Ex. 26 at ¶¶ 97-100 (Orszag Am. WDT). Mr. Orszag correctly concluded that no such adjustment was necessary. Trial Ex. 26 at ¶ 100 (Orszag Am. WDT).

SEPFF387. As we discuss below, the royalty rates negotiated in the interactive market already reflect the promotional or substitutional impact of those services on revenues from other markets. Therefore, the only question for benchmarking purposes is whether there is any reason to believe that Sirius XM has a different promotional or substitutional effect, compared to the interactive services, such that an adjustment to the benchmark market rates is necessary in order to apply them to the target market. In the paragraphs that follow we demonstrate that no evidence supports such an adjustment.

i. Promotion And Substitution Effects Are Baked Into Rates Negotiated In An Unregulated Market And Therefore Any Promotional Or Substitutional Effects of Interactive Services Are Already Reflected In The Benchmark Interactive Service Rates

SEPFF388. The Judges repeatedly have held that any effects of promotion and substitution are "baked in" to marketplace rates, and therefore will be reflected in the royalty rates obtained from record labels from interactive services. For example, in the *Web IV* Decision, the Judges held:

> To the extent that the Judges adopt a rate based on benchmark evidence, it is not necessary to make additional adjustments to benchmarks to reflect the promotion and substitution factors. The Judges hold in this determination, as they have held consistently in the past, that the use of benchmarks "bakes-in" the contracting parties' expectations regarding the promotional and substitutional effects of the agreement.

Web IV, 84 FR at 26326.

SEPFF389. Testimony by economic experts in this case supports and confirms that conclusion. On behalf of SoundExchange, Dr. George Ford analyzed promotion and substitution effects and their possible role in establishing a rate for the compulsory license. *See generally* Trial Ex. 23 (Ford WDT); Trial Ex. 41 (Ford WRT); 5/1/17 Tr. 1827:17-23 (Ford). Dr. Ford's testimony sets forth a simple Nash bargaining model that illustrates a hypothetical negotiation between two rational, profit-maximizing entities bargaining on a license rate in the absence of governmental interference: a record label and a music service seeking the right to use the label's catalog. Trial Ex. 23 at 4-9; 5/1/17 Tr. 1830:19-1834:8 (Ford). Dr. Ford's model demonstrates how promotion and substitution effects are baked into the rates in marketplace agreements.

SEPFF390. The Nash equilibrium license fee can be expressed as $P^* = \frac{1}{2}(A - E)$. In this expression, P is the negotiated license fee for the record label's entire catalog; A is the incremental income the music service earns; and E is the promotional or substitutional effect across music platforms. Trial Ex. 23) at 5-6; 5/1/17 Tr. 1831:23-1833:9 (Ford).

SEPFF391. This expression shows that any promotion or substitution across platforms (E) is internalized in the bargain. If a music service has no effect on the other platform, then $E = 0$ and the equilibrium rate evenly splits the service's incremental income from the use of the label's catalog as before. If the service increases sales on the other platform (i.e., promotion), then E is positive and the license rate P^* is lower than it would be in the absence of promotion. This case reflects the promotion-based discount proposals common in rate-setting proceedings. If, however, the use of music on the service reduces sales on the interdependent platform, then E is negative and the negotiated license fee will be higher than it would be without such an effect. Trial Ex. 23 at 6; Trial Ex. 41 at 1; 5/1/17 Tr. 1832:12-1833:5 (Ford).

SEPFF392. Accordingly, promotion and substitution do not represent externalities that market negotiations are incapable of handling. Trial Ex. 23 at 10 (Ford WDT). That is, promotion and substitution are "baked in to a negotiated license rate." 5/1/17 Tr. 1829:25-1830:6, 1833:6-9, 1834:11-12 (Ford) (bargaining model shows that "promotion and substitution are baked in").

ii. For Benchmarking Purposes, Only A Relative Difference Between The Benchmark And Target Markets Is Relevant, And Sirius XM Has Presented No Evidence That There Is Any Relative Difference In Promotion And Substitution Effects That Would Warrant A Downward Adjustment

SEPFF393. Because the benchmark interactive service rates already reflect the promotional or substitutional impact of those services on revenues from other markets, the relevant issue for the purposes of a benchmark analysis is whether, on the whole, the target market is more or less promotional or substitutional than the chosen benchmark market.

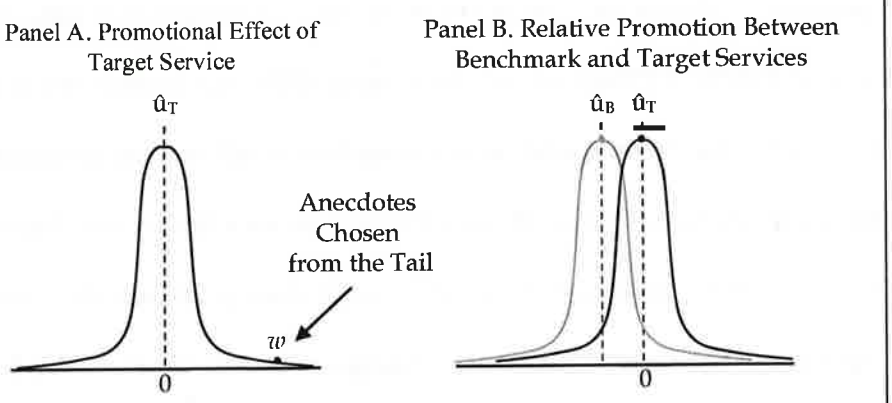
SEPFF394. The Judges have repeatedly found that relative promotion/substitution, not absolute promotion/substitution, is what matters in their consideration of statutory rates. *See SDARS II*, 78 FR at 23066-67 ("Because only the relative difference between the benchmark market and the hypothetical target market would necessitate an adjustment, the absence of solid empirical evidence of such a difference obviates the need for such further adjustment"); *Web IV*, 81 FR at 26327 ("To the extent the Judges rely on SoundExchange's interactive benchmark to set statutory rates in the noninteractive market, the Judges must identify and consider any difference in the promotional/substitutional effects between these markets to determine whether to adjust the interactive benchmark rate.").

SEPFF395. As Mr. Orszag explained, "[f]or purposes of this proceeding . . . what matters is not the balance [promotional and substitutional] effects would strike in hypothetical negotiations between Sirius XM and individual record labels. Rather, the pertinent issue to

examine is whether the balance of the two effects *vis-à-vis* Sirius XM likely differs in a significant way from the balance of the two effects *vis-à-vis* the benchmark service." Trial Ex. 26 at ¶ 98 (Orszag Am. WDT); Trial Ex. 26 at ¶ 99 (Orszag Am. WDT) (defining relevant issue as "not whether satellite radio is, on balance, promotional, but rather whether the balance of promotion and substitution effects on satellite radio as compared to interactive subscription services is sufficiently different so as to justify an adjustment to the interactive subscription services benchmark rates").

SEPFF396. Dr. Ford concurs that analysis of promotional/substitutional effects must focus on the relative promotion and substitution between the benchmark and target services and not merely the absolute effects of the target service. Trial Ex. 23 at 3, 4, 18 (Ford WDT); *see also* 5/1/17 Tr. 1850:9-1853:6 (Ford). Figure A of Dr. Ford's Written Rebuttal Testimony illustrates the analysis that is required.

Figure 1. Anecdote in the Analysis of Relative Promotion



Trial Ex. 41 at 4-5 (Ford WRT); 5/1/17 Tr. 1850:9-1853:6 (Ford).

SEPFF397. Panel A of Figure 1 illustrates a hypothetical distribution of *net* promotional effects for the tracks played by a service. The promotional effects shown in the figure are net of any substitution effects. As illustrated, promotional effects can be positive or

negative. For expositional purposes only, Figure 1 assumes that promotional effects are (1) normally distributed and (2) centered on zero. The average promotional effect of the target service is labeled $\hat{u}_T$. Trial Ex. 41 at 5 (Ford WRT); 5/1/17 Tr. 1850:9-1851:17 (Ford).

SEPFF398. Panel B of Figure 1 illustrates the concept of *relative* promotion. It assumes there are two services: a benchmark ($\hat{u}_B$) and a target service ($\hat{u}_T$). The net promotion distribution of the benchmark service illustrates the promotional effects of a large, random sample of the music played by the benchmark service. Trial Ex. 41 at 5-6 (Ford WRT); 5/1/17 Tr. 1851:18-23 (Ford).

SEPFF399. A distribution of this type might be estimated by calculating the promotional effects of large sample of randomly-selected tracks. As detailed in Dr. Ford's direct testimony, average promotional effect should be measured in terms of income for the record labels and artists, or at least be a value that can be plausibly converted to income. Trial Ex. 41 at n.24 (Ford WRT).

SEPFF400. In Figure 1, Dr. Ford assumes, for illustration purposes alone, that the mean of promotional effects for the benchmark service is lower than that of the target service ($\hat{u}_B < \hat{u}_T$). Ignoring the presence of other music services, the necessary calculation for relative promotion is the difference between the two means, or $\hat{u}_T - \hat{u}_B$. That is, the mere *presence* of a promotional effect does not justify a promotional discount. Rather, in a valid benchmarking analysis, any discount based on promotional effects would be calculated with reference to the monetary value of the *difference* between $\hat{u}_T$ and $\hat{u}_B$. Trial Ex. 41 at 5-6 (Ford WRT); 5/1/17 Tr. 1850:9-1853:6 (Ford).

SEPFF401. Sirius XM's testimony and evidence focuses the absolute (and alleged) effects of its service on revenues from other markets. The record is devoid of any real analysis

that attempts to show that Sirius XM has a *different* impact compared to the benchmark interactive services. As the Judges observed in *SDARS I*, "the absence of solid empirical evidence of such a difference obviates the need for such further adjustment." *SDARS I*, 73 FR at 4095.

iii. The Evidence That Sirius XM Substitutes For Subscriptions To Paid Internet Streaming Services Is Compelling

SEPFF402. As the Judges observed in *Web IV*, promotion and substitution effects can arise in two contexts. The target service might substitute for subscriptions to music streaming services, and separately, the target service might promote or substitute for sales of digital downloads. As the Judges put it: "First, the availability of noninteractive services could cause listeners to substitute noninteractive listening at the expense of interactive services. Second, noninteractive services could substitute for, or promote less, the sale of sound recordings through downloads or otherwise." *Web IV*, 81 FR at 26327; *see also Web IV*, 81 FR at 26326 n.59. ("In prior proceedings, the focus of the question of substitution has been on physical record sales. In the current market, however, digital access through interactive services is a revenue stream that might be affected by consumers choosing the statutory noninteractive streaming services. To evaluate interactive licenses as benchmarks for interactive services, therefore, the judges must look at how the latter might prove a substitute for the former.").

SEPFF403. The first effect can be referred to as "platform substitution." Both internal record label documents and the market behavior of record companies confirm that platform substitution is a significant concern to labels. [ ] Trial Ex. 21 at 19-20 (citations omitted) (Ford WDT)

[ ]; Trial Ex. 32 at ¶ 18 (Harrison WDT).

SEPFF404. More specifically, the record labels' concern about platform substitution focusses on ensuring that music service that pay low royalties do not substitute for distribution platforms that pay higher royalties. In this context, of course, it is important to note that Sirius XM pays royalties far less than those paid by subscription interactive services. Those differing royalties result in a five-fold difference in terms of income from the perspective of the label. Trial Ex. 21 at 18 (Ford WDT) (observing that because of the difference in royalties, "if Sirius XM shut down and only one in [ ] of its listeners subscribed to an interactive service and nothing else changed, then financially the labels would be no worse off (and maybe better off given other income effects between the two services).")

SEPFF405. Given this market dynamic, if on net Sirius XM substitutes for interactive services in any degree, or at least does not promote subscriptions to interactive services, no downward adjustment to the benchmark rates based on platform substitution would be appropriate. SoundExchange's survey evidence, discussed at length in Sections IV.F.2, V.J *infra*, demonstrates that Sirius XM substantially substitutes for subscriptions to interactive services. No evidence was presented by Sirius XM that its service actually promotes subscriptions to interactive services, other than a deeply flawed regression analysis by Professor Shapiro, the results of which even he disavowed. *See* Section IV.H.2, *infra*. Accordingly, no downward adjustment to the benchmark rates based on platform substitution or promotion is warranted.

iv. Sirius XM Presented No Reliable Evidence That On Net It Promotes Sales Of Physical Products Or Digital Downloads

a. Introduction

SEPFF406. The second promotion/substitution effect identified by the Judges in *Web IV* is the effect that a service has with respect to promoting or substituting for sales of downloads. 81 FR at 26327. Again, Sirius XM's evidence on this issue is irrelevant because it does not address the relative difference between the benchmark and target markets. But even if there were some relevance to the impact on download sales of the Sirius XM service standing alone, Sirius XM has entirely failed to provide useful evidence on the point. Sirius XM attempts to show that plays of sound recordings on its service promotes the sale of downloads. *See generally* Trial Ex. 5 (Blatter WDT). But Sirius XM's failings with regard to its evidence on this point are myriad: (1) Sirius XM presents only self-serving anecdotal evidence; (2) Sirius XM presents only selected examples of an alleged promotional effects rather than a random sample based on plays of all sound recordings on Sirius XM; (3) Sirius XM does not prove that play on Sirius XM actually causes sales, rather than simply correlating with increased sales; (4) Sirius XM does not consider how sound recording plays or promotional activities benefit Sirius XM as much or more than the copyright owners; (5) Sirius XM does not consider whether, to the extent it substitutes for other music services (including terrestrial radio) it is diverting subscribers from platforms that are more promotional than Sirius XM; and (6) Sirius XM does not attempt to quantify and any supposed promotional effects, rendering its evidence useless for benchmarking purposes. We discuss each of these issues in turn.

b. Sirius XM Offers Only Self-Serving Anecdotal Evidence That Play On Its Service Promotes Download Sales

SEPFF407. In prior SDARS proceedings, the Judges have consistently rejected anecdotal evidence relating to promotions and the possible promotional effects of plays, and have declined to provide a credit for promotional effects. For example, in *SDARS I*, 73 FR at 4095, the Judges rejected Sirius XM's promotion arguments, which the Judges found rested

largely on "a handful of consumer testimonial emails or anecdotes recounting subjective opinions." Likewise, referring to "the anecdotal nature of Sirius XM's promotional evidence," in their *SDARS II* determination the Judges rejected the testimony of Sirius XM's witness Steven Blatter and found that such testimony did not support a promotional discount:

> Much of the evidence that Sirius XM presented to show the promotional effect of Sirius XM's service on phonorecord sales consists of testimony detailing record labels' efforts to get their artists airplay on Sirius XM and elsewhere. . . . Those facts alone, even if assumed to be true, would not provide the type of substantial empirical evidence that might support a downward adjustment from the rates most strongly suggested by the evidence in the record.

SDARS II, 78 FR at 23066; *see also Web IV*, 81 FR at 26327 (finding the "observational and anecdotal testimony of industry witnesses" to be "unhelpful and essentially self-serving.").

SEPFF408. Sirius XM's primary witness on promotional issues in this case, as in the past, is Steven Blatter. Mr. Blatter's testimony is almost identical to his testimony in *SDARS I* and *SDARS II*. It consists primarily of a number of thank you notes from record labels, a handful of interview quotes, and a few excerpts of sales data for carefully selected recordings and time intervals. Trial Ex. 41 at 9 (Ford WRT). This testimony is wholly insufficient to support Sirius XM's allegations that it has a promotional effect, let alone to support a downward rate adjustment on this basis.

SEPFF409. Much of Mr. Blatter's testimony points to statements of gratitude – in interviews, press releases or emails from record companies and artists – for plays on Sirius XM. *See* Trial Ex. 5 at ¶¶ 6-39 (Blatter WDT); Trial Ex. 41 at 11 (Ford WRT). These statements are largely expressions of common courtesy, which are routine in the industry and extend not only to Sirius XM but also to other outlets, including radio stations, station groups, and interactive and non-interactive Internet services. The Judges so found in the *Web IV* decision, rejecting the Services' claims regarding promotion:

> The NAB and iHeart repeatedly point to evidence that record company promotional personnel thank music services for playing their artists' music to support the conclusion that such "spins" are promotional. The Judges do not find this argument persuasive. It is at least equally plausible that record company executives were merely displaying "common courtesy."

81 FR at 26323 n.41 (citations omitted). Strikingly, Music Choice's witness, Mr. Willians, confirmed the Judges conclusions during this trial. 5/18/17 Tr. 4746:2-4747:7 (Williams) (explaining that emails sent from Music Choice to bands and labels are "just being courteous" and "just a matter of practice of doing business").

SEPFF410. As an economic or statistical matter, such statements do not establish a difference in overall relative promotion that might warrant an adjustment to a benchmark rate. Trial Ex. 41 at 11 (Ford WRT); *see also* 5/1/17 Tr. 1853:7-1855:10 (Ford) (expressions of gratitude are "primarily courtesy" and are "often requested by the Services themselves").

SEPFF411. Moreover, many of the anecdotes Mr. Blatter provides are also unreliable in and of themselves. In preparation for drafting his rebuttal report, Dr. Ford did additional research into the examples detailed in Mr. Blatter's testimony. He did independent research relying on a variety of public and non-public sources, including news articles, sales data, industry data, and artists' websites and social media pages. He also attempted to contact label executives involved in promoting each of the releases discussed in Mr. Blatter's written testimony. 5/1/17 Tr. 1843:12-1844:11 (Ford) (testifying that he made a list of all of the releases cited in Mr. Blatter's testimony and attempted to set up calls with people knowledgeable about each of these releases); *see also* Trial Ex. 41 (Ford WRT) at 2, Appendix A (listing names and labels of those that Dr. Ford was able to interview); 5/1/17 Tr. 1847:8-1848:15 (Ford) (testifying that he conducts field interviews "all the time" as a regular part of his practice in applied economic research and analysis). Based on this research, Dr. Ford concluded that many of the

anecdotes Mr. Blatter provided overstate or misrepresent promotional effects, even with regard to the particular releases discussed. Trial Ex. 41 at 11 (Ford WRT).

SEPFF412. Dr. Ford found that many of Mr. Blatter's specific examples of gratitude misstate or leave out relevant facts. For instance, Mr. Blatter points to a thank you email from [redacted] dated February 20, 2013, which states that Sirius XM's channel Shade 45 was "the 1st station to add" Kid Ink's single "Bad Ass." Trial Ex. 5 at ¶ 22 (Blatter WDT). Mr. Blatter failed to disclose important information about [redacted], the sender of this email. Although the document Mr. Blatter cites identifies [redacted] as an RCA employee, it does not disclose that [redacted] has a close relationship with Sirius XM and has hosted his own show on Shade 45. Trial Ex. 41 at 12 n.46 (Ford WRT) (citing Marisa Pizarro, Joshua White, New York Times (Mar. 30, 2008), *available at* http://www.nytimes.com/2008/03/30/fashion/weddings/30pizarro.html); 5/1/17 Tr. 1845:15-25 (Ford). Mr. Blatter also fails to include any of the following information: Kid Ink is a rap artist who had experienced considerable success long prior to the release Mr. Blatter mentions.[27] The release of "Bad Ass" coincided with several other events, and multiple large radio stations in major markets began playing it as soon as it premiered – and, contrary to the cited email, weeks before Sirius XM began planning the track.[28]

c. Sirius XM Offers Only Self-Selected And Self-Serving Evidence Rather Than An Empirical Study Based On All Plays On Sirius XM

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[27] Kid Ink's first album was released in 2012 on an independent label. That album debuted at #2 on Billboard's rap albums chart without the promotional heft of a major label, and sold 20,000 units in its first week. Trial Ex. 41 at 11 (Ford WRT).

[28] Kid Ink announced that he had signed with RCA on January 3, 2013, the same day he premiered "Bad Ass" on radio station Power 106 in Los Angeles. According to RCA, radio stations HOT97 (New York City), WJMN (Boston) and KKFR (Phoenix) had this track in rotation as of January 4, 2013. However, the track was not released for sale until January 22, 2013, and Sirius XM did not begin playing it on Shade 45 until January 24. Trial Ex. 41 at 11-12 (Ford WRT).

SEPFF413. Mr. Blatter's testimony addresses only a very small number of cherry-picked examples relative to the total number of recordings played on Sirius XM. He provides a discussion of approximately 50 releases, played over a period of approximately four years. *See* Trial Ex. 5 (Blatter WDT). By contrast, Sirius XM's own reports of use of sound recordings under the statutory license show that the service played over [[redacted]] unique recordings in the first 11 months of 2016 alone. Trial Ex. 41 at 2 (Ford WRT). Within this massive pool of recordings, "[t]here is likely to be great variation in the extent and direction of promotion and substitution effects." Trial Ex. 41 at 4 (Ford WRT). It is clear, as Dr. Ford testified, that looking at "a tiny, tiny, tiny sliver of the material used" – in this case less than 0.025% – "is just not helpful" in establishing any promotional effect. 5/1/17 Tr. 1850:7-8 (Ford); *see also* Trial Ex. 41 at 3 (Ford WDT) ("anecdotes provided thus constitute a miniscule sliver of the recordings used").

SEPFF414. Mr. Blatter does not claim the examples he provided represent a random sample of the recordings played on Sirius XM. Mr. Blatter testified that he does not even know the number of releases that Sirius XM played in 2016 or any other year. 5/10/17 Tr. 3393:20-3394:15 (Blatter) (further stating that he has no reason to tabulate such a number in his role). By Mr. Blatter's admission, Sirius XM has never done a comprehensive analysis of how, if at all, songs played on Sirius XM perform in terms of sales after being put into rotation. 5/10/17 Tr. 3380:8-12 (Blatter) ("We have never created a list like that.").

SEPFF415. In fact, the anecdotes provided in Mr. Blatter's testimony are far from representative. His testimony disproportionately focuses on new releases and very popular artists. *See generally* Trial Ex. 5 (Blatter WDT); *see also* 5/1/17 Tr. 1856:14-17 (Ford) (noting that "having Adele show up, give an interview or something like that, that's an entirely different

issue than what we're doing here, which is setting a rate for the play of thousands and thousands of songs"). While Mr. Blatter's testimony purports to show Sirius XM's effect on sales of new releases (*see* Trial Ex. 5 at ¶¶ 46-54 (Blatter WDT); Trial Ex. 41 at 20 (Ford WRT)), the data do not purport to speak to the many older catalog recordings played on Sirius XM. Trial Ex. 41 at 20 (Ford WRT); Trial Ex. 47 at ¶ 30 (Barros WRT) (play of older tracks has little or no impact on sales, but does benefit Sirius XM by widening and deepening its programming and providing diversity to its subscribers).

SEPFF416. Moreover, Mr. Blatter focuses on special promotional events such as in-studio performances, interviews, and pop-up channels. *See* Trial Ex. 5 at ¶¶ 40-45 (Blatter WDT); Trial Ex. 41 at 17 (Ford WRT). Such promotional events demonstrate nothing about the promotional effects of mere play, in either absolute or relative terms, of either these particular artists or the entire playlists of the services. Trial Ex. 41 at 17 (Ford WRT); 5/1/17 Tr. 1856:2-1857:12 (Ford).

SEPFF417. The statutory rate does not apply to some carefully selected list of tracks or artists: it applies to *all* sound recordings subject to the statutory rate. In short, Mr. Blatter's examples are directed to a question different than the one the Judges would have to answer if they were to adjust a benchmark rate based on a promotional effect. Trial Ex. 41 at 6 (Ford WRT); Trial Ex. 23 at 17-18 (Ford WDT); 5/1/17 Tr. 1850:9-1853:6 (Ford).

SEPFF418. The non-representative nature of Mr. Blatter's examples is fatal to any generalized claim that Sirius XM promotes music because catalog-level income, not sales of an individual track, album or artists' work, is what is relevant to an analysis of promotion. Trial Ex. 23 at 15-16 (Ford WDT); Trial Ex. 41 at 4 (Ford WRT) (what matters in analyzing promotional effect "is catalog-level income, not sales of a specific recording or even an individual artist's

sales"); 5/1/17 Tr. 1849:2-18 (Ford). *See generally* 5/1/17 Tr. 1861:7-1864:3 (Ford) (responding to question from J. Strickler about whether relying on a random sample of all recordings played on Sirius XM would be more useful then Blatter's approach).

d. Sirius XM's Evidence Does Not Establish That Sound Recording Plays On Its Service Are Causally Related To An Increase In Sales

SEPFF419. In *SDARS II*, the Judges found Mr. Blatter's discussion of promotional events unpersuasive, explaining that these "examples of on-the-air activities showed only a correlation between airplay and record sales and nothing more. . . . Sufficient and creditable evidence is not present in this record to quantify the promotional/substitutional effect of Sirius XM's service." *SDARS II*, 78 FR at 23092. Mr. Blatter's testimony regarding sales in this case again conflates correlation with causation.

SEPFF420. As Dr. Ford testified based on his research, interviews[29] and knowledge of the music industry, a successful promotional effort requires at least two key components. First, the artist must make music people want to hear. Second, the artist needs to connect with an audience willing to spend money on his or her recordings. With regard to the latter, artists and record labels use a wide range of promotional activities to build an audience for an artist's recordings. In addition to seeking plays on terrestrial and satellite radio and pre-existing subscription services, labels promote music through interactive and noninteractive streaming services, download stores, physical product retailers, special appearances (live and in the studios of radio stations and services), television shows and commercials, music videos,

[29] Dr. Ford conducted interviews with record label executives from nine different labels. Trial Ex. 41 at 2, App. A (Ford WRT); *see also* 5/1/17 Tr. 1843:4-1844:11 (Ford) (testifying that he conducted interviews with labels in addition to reviewing witnesses' written testimony, public sources and non-public sources). This methodology is routine in industrial economics research. 5/1/17 Tr. 1847:8-1848:12 (Ford) (testifying that he personally conducts this type of research "all the time").

concert tours, interviews, news media, reviewers, dance club DJs, Twitter, Instagram, Facebook, YouTube, books, apparel, and even perfumes. Trial Ex. 34 at ¶¶ 53-71 (Kushner WDT); Trial Ex. 41 at 6-7 (Ford WRT); 5/1/17 Tr. 1844:15-1845:8, 1860:22-1861:3 (Ford) (noting that "promotion is multifaceted").

SEPFF421. Although each of these platforms may contribute to the success of a given recording, records become hits (and therefore become significantly profitable for their creators) only when a mix of these varied opportunities expose as many consumers as possible to, and create demand for, a compelling artist and a great recording. Trial Ex. 41 at 6-7 (Ford WRT); *see also* 5/1/17 Tr. 1844:15-1845:8 (Ford). Thus, the causal chain between exposure and artist and label income is multifaceted and nearly impossible to quantify. It is a difficult task even for industry experts *after* the fact; and, determining the *ex ante* success of any particular part of a promotional strategy is impossible. Trial Ex. 41 at 7 (Ford WRT); 5/1/17 Tr. 1854:7-1855:2, 1858:7-1861:3 (Ford) (describing "multiple treatment problem" in assessing promotional effect).

SEPFF422. There are a multitude of reasons for this difficulty, including that: (1) success is an accumulation of interest from multiple promotional activities; (2) what works varies widely among genres of music, recordings and artists; (3) sales are inextricably tied to the quality of the music, and what makes a "great" recording cannot be quantified. Trial Ex. 41 at 7 (Ford WRT); 5/1/17 Tr. 1854:7-1855:2, 1858:7-1861:3 (Ford).

SEPFF423. For a variety of reasons, Sirius XM's evidence falls far short of establishing that Sirius XM, independent of all other promotional activities, caused an increase in sales. As Dr. Ford observed, Sirius XM generally will not play new releases until after they become available for sale; to the extent that data shows a spike in sales once an album is

available, that is far from surprising. 5/1/17 Tr. 1858:18-1859:2 (Ford). Additionally, it is rare for Sirius XM to be the *only* service to play a given release. Trial Ex. 41 at 23 (Ford WRT) (noting that "there would almost always be other promotional activities going on at that time").

SEPFF424. Nonetheless, Mr. Blatter's testimony focuses uncritically on Sirius XM's participation and ignores the numerous other pieces that may contribute to record sales, including outlets through which listeners may be exposed to a release. Trial Ex. 41 at 23 (Ford WRT) (noting with respect to Nathaniel Rateliff & the Night Sweats' "S.O.B.," that prior to Sirius XM's play, the band had already developed a substantial fan base, was touring, had made the track available for streaming, and was getting positive press coverage); *see also* Trial Ex. 47 at ¶¶ 24-27 (Barros WRT) (discussing the numerous factors that led to sales of "S.O.B." including Nathaniel Rateliff's critical acclaim and an appearance on the Tonight Show during which Jimmy Fallon "gushed enthusiastically" about him); 5/16/17 Tr. 4120:3-4126:25 (Barros) (song "went viral" after Jimmy Fallon appearance, which had a greater effect on sales than Sirius XM). Indeed, Mr. Blatter acknowledges that he is not even aware of all of the promotional activities that record labels direct at other services, and he has no basis for determining the volume of the promotional activities that record services direct at streaming services. 5/10/17 Tr. 3389:7-19 (Blatter).

SEPFF425. Tellingly, Sirius XM focuses its evidence largely on successful artists whose popularity cannot plausibly be attributed to any one source – and certainly not to Sirius XM. For instance, Mr. Blatter notes that the artist Adele agreed to be interviewed by Sirius XM about her album "25" in connection with its release in November 2015. *See* Trial Ex. 5 at ¶ 63 (Blatter WDT). At that time, Adele was already a global superstar. Both of her previous albums had won multiple Grammy awards, and gone many times multi-platinum, topping the industry in

terms of sales. Prior to the release of "25," [redacted], and the single "Hello" had been viewed and downloaded online a record-setting number of times. Any suggestion that Sirius XM was somehow responsible for the success of Adele's "25" is simply not credible. Trial Ex. 41 at 15-17 (Ford WRT) (also discussing other events surrounding release of "25," including Adele's NBC telecast concert at Radio City Music Hall). As Dr. Ford put it, "the woman is a phenom. I don't think anything can stop her from selling records other than putting a sock in her mouth." 5/1/17 Tr. 1856:24-1857:2 (Ford); *see also* Trial Ex. 41 at 16 (Ford WRT) (discussing record-breaking success of "25").

SEPFF426. Other examples described in Mr. Blatter's testimony relate to artists like "American Idol" winner Kelly Clarkson, global superstar Billy Joel, and "music legend" James Taylor – who were phenomenally successful by any measure long before the cited events, and whose popularity can hardly be attributed to a single source. Trial Ex. 41 at 18-19 (Ford WRT); Trial Ex. 47 at ¶ 29 (Barros WRT) (discussing multifaceted, major marketing campaign surrounding James Taylor album discussed in Mr. Blatter's testimony, and noting that Mr. Taylor had a "worldwide following" long before this release or Sirius XM's corresponding pop-up channel and town hall).

SEPFF427. Beyond these issues, where Mr. Blatter includes graphs of sales data, the graphs' scale can be misleading and suggest a far greater causal impact than existed in reality. Trial Ex. 41 at 20 (Ford WRT) (noting that Mr. Blatter's selections "generally show a proportionally large spike to a level of sales that nonetheless remains low in absolute terms"). The discussion of Ben Rector's recording "Brand New" is illustrative. Mr. Blatter notes that Sirius XM received an expression of gratitude because its channel The Pulse was "[t]he first station in America" to air "Brand New." Trial Ex. 41 at 20 (Ford WRT) (citing Trial Ex. 5 at ¶ 8

(Blatter WDT)). By looking narrowly at sales data surrounding Sirius XM's play of the track, Mr. Blatter conceals major factors in the trajectory of this release, including Ben Rector's existing audience[30] and events on numerous other music platforms. Using sales data that spans August 2015 through February 2017, Dr. Ford was able to expand the graph and provide a more complete context:

Figure 2. "Brand New" Trajectory [RESTRICTED]

This figure shows several notable spikes in sales including in [ ]. Trial Ex. 41 at 22 (Ford WRT); *see also* 5/1/17 Tr. 1857:13-1861:3 (Ford).

[30] Ben Rector is a successful artist, who had released five previous albums before "Brand New," had success on tour, and had accrued a significant social media following. For instance, at the time that written testimony in this proceeding was being prepared, Mr. Rector had 155,000 followers on Instagram, 117,000 likes on Facebook, and 110,000 followers on Twitter. Trial Ex. 41 at 20 (Ford WRT).

SEPFF428. Any attempt to quantify the purported promotional effects of Sirius XM specifically faces an additional barrier: Although Sirius XM tracks its total number of subscribers, it does not provide record labels with *any* data about how many people are listening to the service at a given time or how many tune in to a given station. By contrast, terrestrial radio stations and streaming services both provide much more of this type of information. For this reason, when a Sirius XM channel adds a recording to its rotation, there is no way to know how many people actually heard it. This lack of data makes it impossible to link any effect of Sirius XM play directly to sales. Based on his conversations with record label executives, Dr. Ford testified that assessing the promotional effect of Sirius XM is largely a speculative endeavor, even for those steeped in the industry. Trial Ex. 41 at 7-8 (Ford WRT); 5/1/17 Tr. 1845:18-21 (Ford) (stating that promotional impact is "questionable in part because they don't know who's listening. There is no audience measurement, unlike radio").

SEPFF429. In short, in an environment of interdependent platforms and services and multi-faceted promotional strategies, it is exceptionally difficult to establish that any particular action actually causes any particular effect on paying consumption. Trial Ex. 41 at 6 (Ford WRT); Trial Ex. 23 at 8-10 (Ford WDT); *see also* 5/16/17 Tr. 4120:3-4121:25 (Barros) (describing multifaceted nature of label's promotional efforts). Sirius XM does not even try.

e. Sound Recordings Promote Sirius XM Just As Much, If Not More, Than Sirius XM Promotes Sound Recordings

SEPFF430. Although promotional effects are often discussed in terms of the income of copyright holders, the impact of music on Sirius XM's income is also a necessary consideration. As Dr. Ford illustrates in connection with his Nash bargaining model, "[t]he income of the music service is also an important input to the negotiation." Trial Ex. 23 at 10 (Ford WDT) (quoting musician Herbie Hancock's observation that "[w]hile there is no question

that radio promotes music, it is also clear that music promotes radio"). In other words, the mere presence of a promotional effect is not alone sufficient to "justif[y] a discounted rate." Trial Ex. 23 at 10 (Ford WDT) (quoting *Web IV*, 81 FR at 26322). The magnitude of the promotional effect must be quantified in incremental income for the record label and then compared to the magnitude of the incremental subscription and/or advertising income the service obtains from playing the label's music. Trial Ex. 23 at 10 (Ford WDT); Trial Ex. 41 at 4-6 (Ford WRT).

SEPFF431. Testimony of Sirius XM's witness, Mr. Blatter, acknowledges that many of his examples of "promotion" are also beneficial to and promotional of Sirius XM itself. Mr. Blatter testified that promotional events, like in-studio performances, are valuable to Sirius XM. Trial Ex. 5 at ¶¶ 56, 61 (Blatter WDT) ("scheduling guests and events . . . improve[s] the listening experience, motivate[s] 'trialers' to subscribe, and reduce[s] our 'churn' rate"). Sirius XM "will continue to invest in these sorts of live events because we believe it adds to the compelling mix of music and non-music content that creates buzz for our service, keeps audiences engaged and drives subscriptions." Trial Ex. 5 at ¶¶ 64, 65 (Blatter WDT) (Sirius XM's broadcasts of out-of-studio performances likewise "provide an excellent opportunity to demonstrate our value to prospective and existing subscribers"); Trial Ex. 5 at ¶ 66 (Blatter WDT) (Sirius XM's "live music events, lead to more passion, excitement, and engagement both for our service and music generally").

SEPFF432. For example, Mr. Blatter touts in-studio appearances like Adele's as giving artists "a unique opportunity to connect with fans." Trial Ex. 5 at ¶ 31 (Blatter WDT). But Adele's appearance was extremely valuable to Sirius XM. As Dr. Ford describes, Sirius XM and every other outlet for music was eager for access to Adele in connection with the release of "25." Trial Ex. 41 at 15, 17 (Ford WRT) ("It should also be clear that being one of very few

audio services with access to a hugely successful artist like Adele was more of a unique opportunity for Sirius XM than it was for Adele."). Sirius XM continues to promote the interview in order to leverage Adele's popularity in order to attract and retain subscribers. Trial Ex. 41 at 17 (Ford WRT).

SEPFF433. Mr. Kushner's testimony confirms this view from an industry perspective. In discussing Atlantic Record artists' in-studio appearances on Sirius XM, he cautioned that:

> It would be a mistake to view such promotions as a favor that Sirius XM is doing for [Atlantic], because they provide benefits for Sirius XM as well as for Atlantic and [its] artist, and Sirius XM is often eager to feature our popular artists. *It is in Sirius XM's interest to have appearances by popular artists*, so that the artist's fans will associate Sirius XM with the artist, and Sirius XM can trade on the fans' loyalty to the artist to build and maintain their subscriber base. While [ ] will [ ], it is not [its] practice to waive the statutory royalties to which [it is] entitled. That is, Sirius XM pays statutory royalties for any subsequent use of the artist's recorded performance on Sirius XM, and [Atlantic] pay[s] nothing to Sirius XM to get our artist on its service.

Trial Ex. 34 at ¶ 67 (Kushner WDT) (emphasis added).

SEPFF434. The terms of a recent agreement between Sony and Sirius XM, which authorizes the service "to record live performances featuring Sony recording artists," provides further evidence that in-studio performances are more valuable to Sirius XM than to the label. As Mr. Walker describes, this agreement requires Sirius XM to shoulder the costs associated with live performance and also pay Sony for broadcasts of subsequent performances:

> Under the terms of that agreement, Sirius XM pays the costs of recording the performances and has the exclusive right to exploit the performances for one year. However, Sony owns the copyrights in the sound recordings, has all rights to exploit the performances after one year, and Sirius XM must pay Sony at the statutory rate for all broadcasts of the performances after the first live performance.

Trial Ex. 50 at 2 n.2 (Walker WRT). Sirius XM's willingness to agree to such terms evidences the value that the service attributes to live music content

SEPFF435. Mr. Blatter also testified that pop-up channels are valuable to Sirius XM. 5/10/17 Tr. 3397:22-25 (Blatter) (agreeing that Sirius XM runs pop-up channels because these channels create a better listening experience for its subscribers); 5/10/17 Tr. 3402:6-3403:12 (Blatter) (Garth Brooks channel benefitted Sirius XM, including by boosting listeners' "passion levels" for the services' content).

SEPFF436. Similarly, DMCA waivers allow Sirius XM to feature multiple tracks from new albums in a short period of time. Mr. Blatter testifies that these waivers are valuable to Sirius XM. Trial Ex. 5 at ¶ 56 (Blatter WDT). Even when a copyright owners agree to such waivers, so that Sirius XM can play artists' tracks more frequently, they typically do *not* waive the right to compensation for such performances. In other words, although DMCA waivers are admittedly valuable to Sirius XM, copyright holders do not see the resulting airplay as so promotional (or otherwise so valuable) that they are willing to forgo royalty payments. 5/10/17 Tr. 3401:19-3402:5 (Blatter); *see also* Trial Ex. 5 at ¶ 56 (Blatter WDT).

SEPFF437. Finally, Mr. Blatter acknowledges that playing the right mix of music – including songs that listeners are familiar and comfortable with – drives Sirius XM subscribers' satisfaction. 5/10/17 Tr. 3408:13-3409:1 (Blatter). To this end, Sirius XM tests the "likability" of songs that it adds to its programming and, afterward, recordings that do not test well are often dropped. Trial Ex. 47 at ¶ 23 (Barros WRT) (Sirius XM only plays label's music if it is "desirable to their customers, which thereby promotes the [service's] business"); *see also* Trial Ex. 34 at ¶ 70 (Kushner WDT) (Sirius XM and other services "are all motivated to use

recordings that will appeal to their listeners . . . . that is how they attract and maintain subscribers and provide a service worth the subscription price").

SEPFF438. SoundExchange witness Bruce Iglauer, who runs an indie blues label called Alligator Records, summed it up: "While I am aware of the argument that performance of our recordings on Sirius XM or other services could help promote the sale of our CDs and downloads, I have seen no evidence that it actually does so. What I do know, however, is that as the number of Sirius XM's subscribers has grown, Alligator's CD and download sales have decreased; that revenue from streaming services has not made up for lost sales; and that as Sirius XM's revenue and profits have been growing dramatically, Alligator's have been shrinking."). Trial Ex. 33 at 17-18 (Iglauer WDT). Thus, the available evidence indicates that music promotes Sirius XM just as much, if not more, than Sirius XM promotes music.

f. Sirius XM's Evidence Does Not Show That It Is More Promotional Than The Services For Which It Substitutes

SEPFF439. As an additional consideration, understanding what promotional or substitutional effect Sirius XM may have requires an assessments of the full array of other music platforms for which Sirius XM substitutes. *See* Trial Ex. 23 at 4 (Ford WDT) ("A broad, inter-platform analysis of promotion and substitution is necessary").

SEPFF440. Thus, Professor Shapiro agreed that if, for example, Sirius XM substitutes for listening on terrestrial radio, one would need to know whether play on Sirius XM is on net more promotional than play in terrestrial radio in order to understand the true promotional value:

> Q. Okay. So if Sirius XM diverts people from terrestrial radio, in order to understand any promotional effect of Sirius XM, you'd also have to understand the net promotional effect of terrestrial radio, right?

> A. If you wanted to work through all the net promotional effects, you would need to account for that as well. I think that is true.

4/24/17 Tr. 559:24-560:6 (Shapiro).

SEPFF441. When seeking a promotion-based discount, it is not enough to discuss the relationship between the service and one platform for which an alleged promotional effect exists. The party seeking a discount must quantify the income effects across *all* interdependent platforms. Given the large number of services and platforms and the varied relationship among them, quantifying a promotion/substitution-based discount is a complex task, which Sirius XM has not attempted. Trial Ex. 23 at 11 (Ford WDT); *see also* Trial Ex. 26 at ¶ 98 (Orszag Am. WDT); 5/1/17 Tr. 1833:10-1834:8 (Ford).

g. Even If Sirius XM Established That It Promotes Sales Of Downloads, It Cannot Quantify the Effect

SEPFF442. In *SDARS I*, the Judges held:

> [T]he SDARS assert that their service is promotional and imply that they should receive credit for this effect. But they present no persuasive evidence that would be useful for quantifying the magnitude of this asserted effect or for deriving a method for translating such magnitudes into a rate adjustment.

SDARS I, 73 FR at 4095.

SEPFF443. In this case, as in *SDARS I*, Sirius XM makes no effort to quantify the supposedly promotional effect of Sirius XM on download sales, rendering it infeasible for the Judges to make an adjustment to the rates derived through Mr. Orszag's benchmark analysis, even if they wanted to.

SEPFF444. Professor Shapiro explained that he did not "attempt to quantify a promotional effect for Sirius XM." 5/24/17 Tr. 559:2-12 (Shapiro).[31] And he does not make any

[31] Professor Shapiro ran a modification of Professor Willig's regression regarding the effect of streaming on downloads. 4/24/17 Tr. 550:24-551:16 (Shapiro). In his Written Rebuttal testimony, Professor Shapiro claims that his "regression indicates that each Sirius XM subscription actually generates $5.45 per month in additional record

such promotional adjustment in support of Sirius XM's rate proposal. In fact, Sirius XM never requests that the Judges apply a promotional discount of any particular size or suggest how one might calculate such a discount. Trial Ex. 8 at 56 (Shapiro WDT) (acknowledging that he has no evidence about promotion). Sirius XM's failure to quantify or otherwise address how any purported promotional effect might bear on statutory rates makes this issue irrelevant to any reasoned calculation of a rate. Trial Ex. 41 at 1 (Ford WRT).

v. Interactive Services Offer Promotional Benefits

SEPFF445. Finally, although Sirius XM offered no evidence to show that it is *relatively* more promotion than interactive services, in the past Sirius XM has argued that interactive services are necessarily less promotional due to the nature of the service they offer. For example, in *SDARS II*, Sirius XM's economic expert argued that interactive services cannot be promotional because the subscriber chooses what to listen to, rather than receiving sound recordings that are "pushed" or recommended by the service. The Judges did not find this argument persuasive, 78 FR 23066, and it is far less so now. SoundExchange's evidence shows that the interactive services increasingly have features that promote sales in other markets and that negate any suggestion that interactive services are necessarily less promotional.

SEPFF446. Interactive services are no longer purely "on demand." Rather, as Mr. Kushner testified, much of the listening on such services is in a "lean back" mode, where the user does not select individual tracks one-by-one, but instead listens to programs or playlists that have been created by the service, by others, or previously by the user. Trial Ex. 34 at ¶ 59

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company revenue." Trial Ex. 9 at 38 (Shapiro Corr. WRT). Professor Shapiro's figure is patently absurd, as demonstrated at trial. Professor Shapiro conceded that his regression results would equate to about 2.1 billion in download sales promoted by Sirius XM in one year, 4/24/17 Tr. 552:11-553:20 (Shapiro), even though this figure is higher than the industry's $1.8 billion in *overall* digital download revenues for 2016. Trial Ex. 1001 at 2; 4/24/17 Tr. 555:11-556:15 (Shapiro). Professor Shapiro explicitly disavowed these results. 4/24/17 Tr. 556:13-23 (Shapiro) 4/24/17 Tr. 554:14-20 (Shapiro); 4/25/17 Tr. 552:11-21 (Shapiro).

(Kushner WDT); Trial Ex. 32 at ¶¶ 28, 36-43 (Harrison WDT). Playlists are becoming an increasingly popular and important facet of interactive services' functionality. For instance, in 2015, WMG estimated that [ ] of all plays on Spotify were playlist plays. Trial Ex. 34 at ¶ 59 (Kushner WDT) (noting that this percentage has likely increased since 2015).

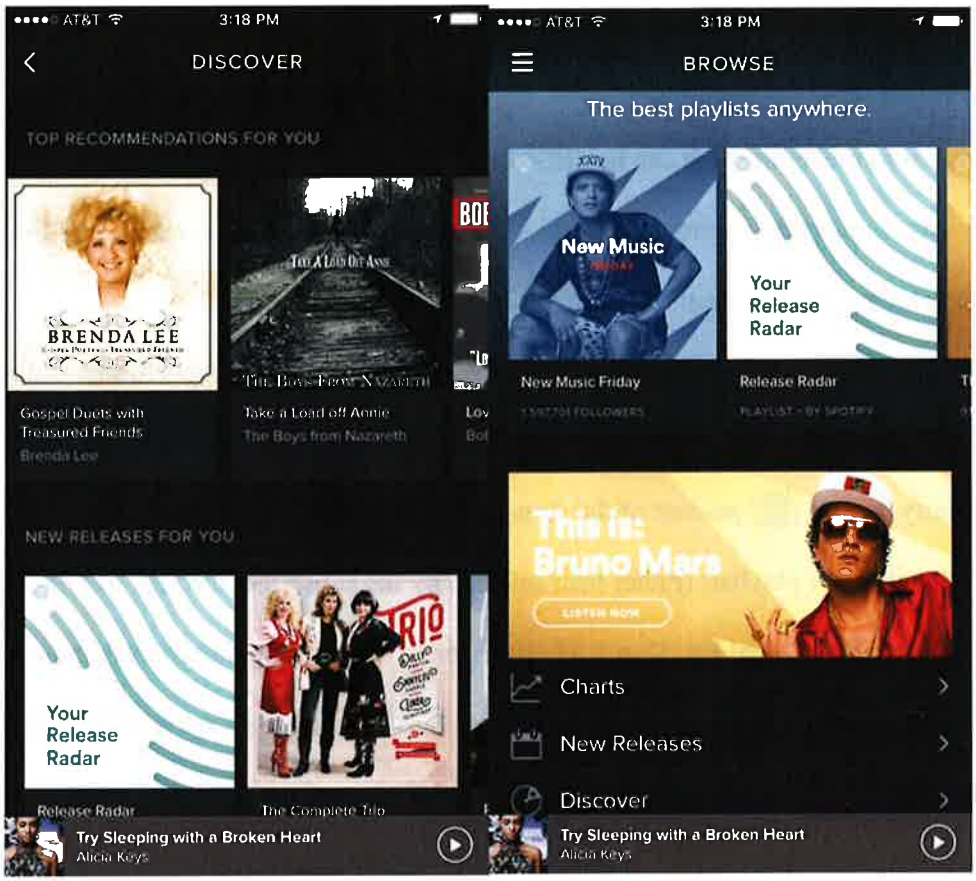
SEPFF447. As Dr. Ford explains, "[S]ubscribers to on-demand services are not simply requesting sound recordings with which they are already familiar or which they first heard about from other sources. Previously unheard music is recommended to them by on-demand services via playlists, web pages and search features specifically aimed at new music discovery." Trial Ex. 23 at 21 (Ford WDT). For example, Spotify has a "Discover Weekly" playlist that the service populates each week with thirty new sound recordings that subscribers use as a tool to discover new music. Apple's on-demand service has similar features. Trial Ex. 32 at ¶ 37 (Harrison WDT) (subscribers use playlists to discover new music); Trial Ex. 34 at ¶ 59 (Kushner WDT) (interactive services are therefore increasingly important to record companies' promotional efforts and to the ultimate success of a recording).

SEPFF448. Record labels view playlists on interactive services as promotional of music. In order to increase their visibility on playlists, record companies themselves create playlists featuring their own music. For instance, Sony offers a playlist called Filtr that it makes available on on-demand services. Trial Ex. 23 at 21 (Ford WDT). As Mr. Kushner notes, promotion through interactive services "is particularly effective and important in genres like pop and hip-hop that are popular on the services and a good fit for the demographics of the services' subscriber bases. It is probably not an overstatement to say that these days, in these genres, a record will not break (achieve commercial success) without being included in the most popular playlists on on-demand subscription services. Trial Ex. 34 at ¶ 64 (Kushner WDT).

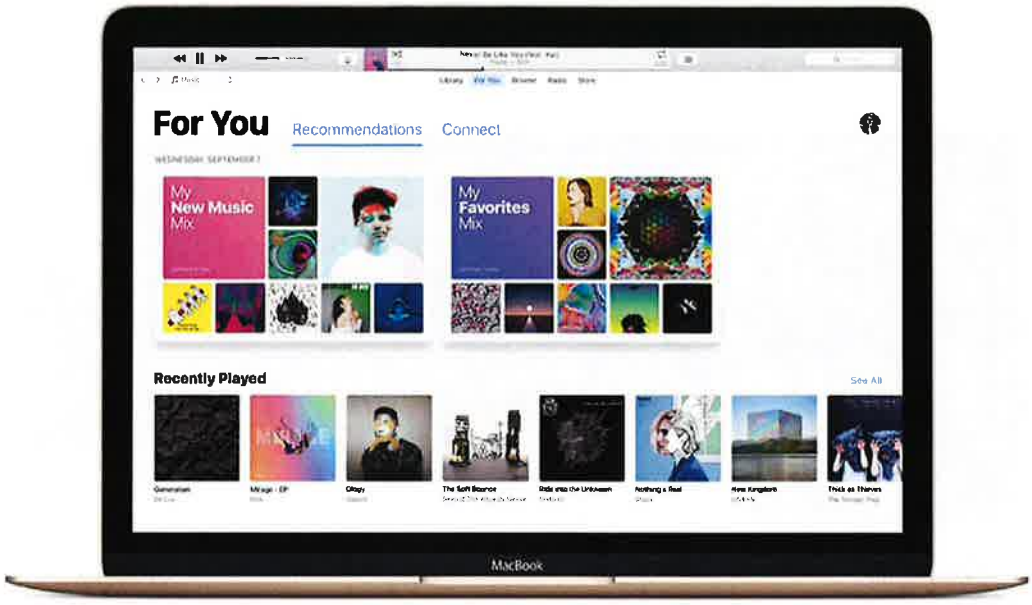
SEPFF449. Playlists have become an especially important source of music discovery as access to music through digital sources has increased. Because many people now have access to so much music, it can be difficult for them to identify new music they like on their own; playlists counteract this problem by allowing people to discover new music by listening to playlists created by others. Trial Ex. 32 at ¶ 37 (Harrison WDT).

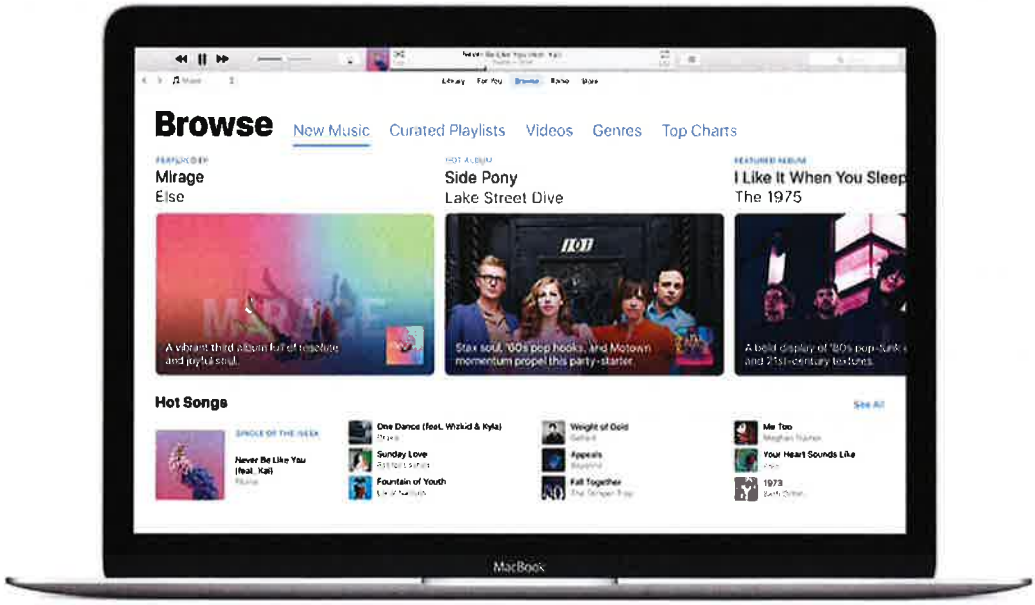
SEPFF450. The type of songs that appear on service playlists further indicates to that these playlists are important source of music discovery. For instance, Mr. Harrison testified that on Spotify, nearly [▇] percent of the streams of UMG's frontline releases were programmed by the service through playlists (rather than selected by the subscriber through traditional on-demand functionality). Trial Ex. 32 at ¶ 37 (Harrison WDT) (noting that overall, approximately [▇] percent of streams are generated by the service through playlists); *see also* Trial Ex. 34 at ¶ 60 (Kushner WDT) (stating that "[▇] of [WMG's] plays on Spotify come from non-personal playlists, and approximately [▇] of those plays are newly discovered music"). In other words, the label's new releases represent a much higher percentage of plays in the service playlists, compared to the label's overall catalogue. Trial Ex. 32 at ¶ 37 (Harrison WDT).

SEPFF451. Apart from playlists, interactive services offer other features that allow subscribers to discover new music. For example, Spotify has a "Browse" option, which steers listeners to music on select charts and certain new releases. Trial Ex. 32 at ¶ 41 (Harrison WDT). The "Browse" option also includes a "Discover" tab, which includes "top recommendations for you," "new releases for you," and "suggested for you based on" artists to which you have recently listened. Screenshots of these Spotify features appear below. Trial Ex. 32 at ¶ 41 (Harrison WDT).



SEPFF452. Similarly, Apple offers a "my new music mix" and a "my favorites mix," in addition to several features that users can browse, including selected new music and curated music. Trial Ex. 32 at ¶ 42 (Harrison WDT). Screenshots of these features appear below. Trial Ex. 32 at ¶ 42 (Harrison WDT). To record companies, it is important that artists are featured in these parts of the service because it is a way that services can introduce artists and tracks to users. Trial Ex. 32 at ¶ 42 (Harrison WDT).





SEPFF453. This cycle of music discovery on interactive services also creates data that is valuable to record companies. By tracking the listeners' plays of music on interactive services, companies are able to garner information that they can use to further promote their music. Other music platforms, like radio stations, also use this data from streaming services to

choose songs for their own rotations. Trial Ex. 23 at 22 (Ford WDT). As Mr. Harrison testified, an

[redacted].

Trial Ex. 32 at ¶ 31(B) (Harrison WDT).

SEPFF454. For a wide variety of reasons, therefore, Sirius XM has offered no evidence that undermines Mr. Orszag's conclusion that no adjustment to his proposed rates is necessary to account for the effects of promotion and substitution. *See* Trial Ex. 26 at ¶¶ 97-100 (Orszag Am. WDT).

I. Conclusion

SEPFF455. Mr. Orszag's benchmark analysis utilizing effective rates paid in the unregulated subscription interactive market offers a reliable method to determine rates for Sirius XM and strongly supports SoundExchange's rate proposal.

V. The Opportunity Cost Associated With Licensing Sirius XM Is $2.55 Per Subscriber Per Month And Provides A Reasonable Measure Of The Appropriate Sound Recording Royalties For Satellite Radio

A. Introduction

SEPFF456. On behalf of SoundExchange, Professor Robert Willig analyzed the opportunity cost incurred by the record companies and artists as a result of licensing to Sirius XM the right to publicly perform their sound recordings.

SEPFF457. As explained below, opportunity cost is relevant because, in an unregulated market, profit-maximizing sellers would not choose to sell at a price that was less than their opportunity cost (although, depending on their market power, the sellers might well bargain for rates above opportunity cost). *See infra* Section V(B). Similarly, the public policy pricing principles discussed by Professor Willig in his testimony (Ramsey Pricing, the Nash Bargaining Solution, and the Efficient Component Pricing Rule) all assume that a seller is entitled to receive at least its opportunity cost — and likely more. *See infra* Section V(K). Whether analyzed under a market-based approach or public policy principles, therefore, opportunity cost establishes a floor for reasonable royalty rates.

SEPFF458. Based on survey research conducted by Professor Ravi Dhar and corroborated by the survey conducted by Professor Itamar Simonson, Professor Willig concluded that the opportunity cost of licensing Sirius XM is $2.55 per subscriber per month. Trial Ex. 28 at ¶ 41 (Willig WDT). Professor Willig's conclusions corroborate the benchmark analysis of Mr. Orszag, who found that marketplace benchmarks imply per subscriber rates of $2.37 to $2.58 per month. Trial Ex. 26 at ¶ 10 (Orszag WDT).

B. Economic Experts Agree That Willing Sellers Price At Or Above Their Opportunity Cost

SEPFF459. Sellers incur an opportunity cost when sales in one market substitute for or diminish sales in other markets. Trial Ex. 8 at 19 (Shapiro WDT). As Professor Willig put it, opportunity costs are incurred when "sales through one distribution channel reduce (substitute for, or "cannibalize") sales through other distribution channels (thereby reducing compensation earned by content creators from those other channels . . .)." Trial Ex. 46 at ¶ 20 (Willig WRT).

SEPFF460. Professor Willig referred to opportunity costs in his written direct testimony as "Creator Compensation Cannibalization" (CCC). Trial Ex. 28 at 25 (Willig WDT); Trial Ex. 46 at ¶ 6 (Willig WRT). Professor Shapiro's "Full Marginal Cost" (FMC) concept is essentially the same thing; Professor Shapiro concluded that the direct marginal costs of distributing additional sound recordings to Sirius XM are "zero or nearly zero," Trial Ex. 8 at 19 (Shapiro WDT), and therefore the principal cost component of Full Marginal Cost is the opportunity cost. Trial Ex. 8 at 19 (Shapiro WDT).

SEPFF461. Regardless of phraseology, all of the economists agreed that opportunity costs represent a floor below which a willing seller in an unregulated market will not price its products. Professor Shapiro put it this way: "Professor Willig and I are in agreement in one very important respect. We both are of the view that a critical factor in determining the rate at which a record company will license its music to a music service is the opportunity cost to that record company of having its music played on that service." Trial Ex. 9 at 34 (Shapiro WRT). Professor Farrell agreed that, in an unregulated market, a record label would not agree to license its catalogue at less than its opportunity cost. 4/24/17 Tr. 662:21-663:1 (Farrell).

SEPFF462. The same is true under public interest pricing principles, according to Professor Willig. *See* 5/02/17 Tr. 2013:9-14 (Willig) ("So I'm going to speak in detail about

what I mean by opportunity cost shortly, but the overview is that the measure of opportunity cost, both quantitative and conceptual, plays a very important role in implementing the public interest pricing principles . . ."); *see also infra* Section V(K).

C. Record Label Executives Are Keenly Aware Of Opportunity Costs And Consider Such Costs In Connection With Their Pricing Decisions

SEPFF463. Opportunity costs are not simply a theoretical concept — they play a very real role in the decisions made by the record label executives responsible for negotiating digital license agreements.

SEPFF464. As Aaron Harrison testified, UMG recognizes that on-demand subscription services such as Apple and Spotify may substitute for sales of digital downloads. For this reason, when UMG licenses fully interactive streaming services, it considers the percentages of revenue it receives from download sales and attempts to maintain the same margin. UMG typically receives approximately 70 percent of revenue from physical sales or download sales, but UMG must pay the publishing royalties out of that amount. [ ]. 5/16/17 Tr. 3930:7-3931:14 (Harrison).

SEPFF465. As a result of this pricing, regardless of whether the Spotify on-demand subscription service or the Apple Music on-demand subscription service are promotional or substitutional of sales, they are now the digital platforms that best monetize the copyright owners' sound recordings and pay the highest royalties. Trial Ex. 32 at ¶ 18 (Harrison WDT).

[

[redacted]. Trial Ex. 32 at ¶ 17 (Harrison WDT).

SEPFF466. [redacted]. 5/16/17 Tr. 3931:15-3932:1 (Harrison); Trial Ex. 32 at ¶ 17 (Harrison WDT). UMG recognizes, however, that many consumers do not care enough about the on-demand functionality of a premium subscription service to pay the (typical) $9.99/month subscription price. UMG therefore sees value in new "mid-tier" or "radio-plus" services, such as the recently launched Pandora Plus and iHeart Radio Plus service, because such services may entice consumers who now listen to free ad-supported services that pay lower royalties, without unduly cannibalizing on-demand services that pay higher royalties. These new mid-tier services offer more functionality than pure noninteractive streaming. For example, they may offer the subscriber the unlimited ability to skip recordings, a limited right to replay a recording just heard, or similar functionality that takes these services out of the statutory license but stops well short of on-demand. The Pandora and iHeart "radio-plus" services are offered as subscription-only services priced at $4.99/month. UMG hopes that consumers who want only a "lean-back" listening experience and are unwilling to pay $9.99/month will consider these services a better option than free streaming services that are burdened with ads and offer more limited functionality. Trial Ex. 32 at ¶ 19 (Harrison WDT).

SEPFF467. Even if mid-tier subscription services succeed in drawing some consumers away from poorly-monetized free ad-supported streaming services, there remains a danger that they could to a degree cannibalize the premium on-demand subscription services. [redacted]

[redacted]. Trial Ex. 32 at ¶ 20 (Harrison WDT); *see also* 5/16/17 Tr. 3960:10-25 (Harrison). For the same reason, [redacted]. Trial Ex. 32 at ¶ 18 (Harrison WDT).

SEPFF468. Last, although UMG does not typically license noninteractive ad-supported services (because such services can and typically do avail themselves of the statutory license), UMG recently signed a license agreement with Pandora that includes an ad-supported tier. Here again, UMG recognized the need to license such a service — because some consumers simply will not pay for a subscription music service, and because the statutory license will allow such services to exist in any event — but UMG took into consideration the opportunity cost that results from the likelihood that free-to-the-consumer services substitute for subscription services to some extent. [redacted]. 5/16/17 Tr. 3970:22-3971:21 (Harrison).

SEPFF469. Thus, opportunity cost plays a substantial role in record label pricing decisions, confirming the economists' testimony that royalty rates in this case should not be set below the opportunity cost of licensing Sirius XM.

D. Professor Willig's Calculation Of Opportunity Cost

1. The Opportunity Cost Of Licensing Sirius XM Is $2.55 Per Subscriber Per Month

SEPFF470. Professor Willig found that the opportunity cost associated with licensing Sirius XM equals $2.55 per subscriber per month. Trial Ex. 28 at ¶ 41 (Willig WDT). Professor Willig's analysis is built up from two principal elements. The first is substitution data or the diversion ratios, which show where Sirius XM subscribers would go if they left Sirius XM, and what other distribution modes they would patronize. 5/02/17 Tr. 2057:21-2058:22 (Willig). Professor Willig obtained this information from the survey conducted for SoundExchange by Dr. Ravi Dhar, who examined how Sirius XM subscribers would choose to acquire music if they left Sirius XM due to an elevated price. 5/02/17 Tr. 2057:21-2058:22 (Willig). In brief, respondents to the Dhar survey were asked if they would discontinue their service with questions that kept moving the price point up. Trial Ex. 28 at ¶ 40 (Willig WDT). Then those respondents who said they would cancel were asked what they would do about access to music as a result of stopping their current service, with a layering of questions about alternatives. Trial Ex. 28 at ¶ 40 (Willig WDT).

SEPFF471. The second element of Professor Willig's opportunity cost analysis is what Professor Willig called creator compensation data; that is, the amount of compensation that flows to the copyright owners from the distribution platforms that Sirius XM subscribers would divert to if they no longer subscribed to Sirius XM. 5/02/17 Tr. 2058:24-2059:9 (Willig).

SEPFF472. The percentage of Sirius XM subscribers who would divert to another mode of distribution, multiplied by the creator compensation per subscriber received by the record companies from that alternative mode of distribution, equals the opportunity cost associated with the diversion of consumers to Sirius XM and away from that distribution mode.

5/02/17 Tr. 2059:16-2060:21 (Willig). For example, the Dhar survey indicates that 31% of the respondents who were paying subscribers to Sirius XM would join a paid interactive service (*e.g.*, Spotify or Apple Music) if they left Sirius XM due to an elevated price. Trial Ex. 28 at ¶ 41 (Willig WDT). The subscription interactive services pay the recording industry $[[redacted]] per subscriber per month, and thus the opportunity cost incurred when Sirius XM diverts consumers from paid interactive services is [[redacted]] or [[redacted]] per subscriber per month. 5/02/17 Tr. 2059:16-2060:21 (Willig); Trial Ex. 28 at ¶ 41 (Willig WDT).

SEPFF473. Of course, different diversions ratios and different creator compensation levels produce different results for other modes of distribution, and a significant number of respondents indicated that they would choose forms of consumption that have no creator compensation (*e.g.*, terrestrial radio, playing their existing collection of owned music, etc.). Trial Ex. 28 at ¶ 41 (Willig WDT).

SEPFF474. The table below, derived from Table 2 in Professor Willig's Written Direct Testimony (Trial Ex. 28 at ¶ 41 (Willig WDT)) shows for each of the destination choices the associated figure for its creator compensation per subscriber per month. The table also shows the weighting of these levels of creator compensation per subscriber per month by the percentage of respondents who said they would leave Sirius XM due to a hypothesized price increase. Trial Ex. 28 at ¶ 41 (Willig WDT). The resulting weighted average level of the creator compensation per subscriber per month represents the opportunity cost of licensing Sirius XM, and across all alternative modes of distribution totals $2.55 per subscriber per month. Trial Ex. 28 at ¶ 41 (Willig WDT).

Sirius XM Opportunity Cost Based on Dhar Survey Responses Summary of Results			
Distribution across alternative modes	**Alt. Mode Mix**	**Unit Creator Comp $/Sub-Mo.**	**Wghtd Creator Comp $/Sub-Mo.**
Paid-Interactive	31%	[redacted]	[redacted]
Paid-Non-Interactive	15%	[redacted]	[redacted]
Purchase CDs/downloads	10%	[redacted]	[redacted]
Ad-supported non-interactive	4%	[redacted]	[redacted]
Ad-supported interactive	3%	[redacted]	[redacted]
Music video	2%	[redacted]	[redacted]
Cable/satellite music channels	2%	0.00	0.00
Other (zero creator comp)	32%	0.00	0.00
Total/Weighted-Average	100%	2.55	[redacted]

SEPFF475. As discussed above, the diversion ratios in Professor Willig's opportunity cost analysis were derived from a survey conducted by Professor Dhar. In Section V.J.1 below, we discuss in detail the methodological approach to and results of the Dhar survey. The Dhar survey results are corroborated by the results of the survey conducted by Professor Itamar Simonson, which we discuss in Section V.J.2 below. The calculation of the creator compensation levels for each mode of distribution is explained below.

2. Creator Compensation Data

SEPFF476. The second element of Professor Willig's opportunity cost calculation — creator compensation — was calculated for each alternative distribution mode based on the structure of customer payments and creator compensation applicable to each form of distribution, as described below. Trial Ex. 28, App. B at B-4 to B-7 (Willig WDT).

i. Subscription Fully Interactive Services

SEPFF477. For subscription fully interactive services, customers pay a monthly fee, and creators receive a portion of that fee. Trial Ex. 28, App. B at B-4 (Willig WDT). Creator compensation is not tied to the amount of usage by the customer (*i.e.*, the number of performances). Trial Ex. 28, App. B at B-4 (Willig WDT). For such services, the creator compensation per unit is set equal to the weighted-average per sub-month rate for the first half of 2016, based on [ ]. Trial Ex. 28, App. B at B-4 (Willig WDT). This comes to [ ].[32] Trial Ex. 28, App. B at B-4 (Willig WDT).

ii. Subscription Noninteractive Services

SEPFF478. To ascertain creator compensation from subscription noninteractive services, Professor Willig used the terms of [ ]. Trial Ex. 28, App. B at B-4 (Willig WDT). Under this agreement, [ ]. Trial Ex. 28, App. B at B-4 (Willig WDT). [ ]. Trial Ex. 28, App. B at B-4 (Willig WDT).

iii. Physical And Digital Sales

SEPFF479. To ascertain creator compensation for purchased CDs and downloads, Professor Willig relied on RIAA data. Trial Ex. 28, App. B at B-5 (Willig WDT). The RIAA

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32 [ ]. Trial Ex. 28, App. B at B-4 (Willig WDT).

reports sales — dollars and units — for physical forms of music (CDs and LPs) as well as downloads, broken down between albums and singles. Trial Ex. 28, App. B at B-5 (Willig WDT). The individual track data is converted to album equivalents — using the industry approach of 10 songs equal one album. Trial Ex. 28, App. B at B-5 (Willig WDT). The physical and digital downloads are then combined, resulting in an overall weighted-average price of $12.13 per album-equivalent for 2015. Trial Ex. 28, App. B at B-5 (Willig WDT). Professor Willig assumed that creator compensation is [[redacted]]% for physical and 70% for permanent downloads,[33] resulting in a weighted-average rate of [[redacted]]% for 2015. Trial Ex. 28, App. B at B-5 (Willig WDT). This resulted in weighted-average creator compensation of $[[redacted]] per album-equivalent. Trial Ex. 28, App. B at B-5 (Willig WDT). Based on the industry standard conversion of 1,500 streams equals one album,[34] this amounts to creator compensation of $[[redacted]] per performance for physical/downloads combined. Trial Ex. 28, App. B at B-5 (Willig WDT). These calculations are broken down in Willig Figure B-1, below.

Figure B-1 – Breakdown of creator compensation calculations for physical and downloads [RESTRICTED]

[33] For physical sales, Professor Willig's creator compensation percentage reflects the weighted-average from RIAA financial data for 1991-2003, a period when essentially all sales were physical. For downloads, Professor Willig's creator compensation percentage was based on standard terms for Apple iTunes sales (70/30 split between content provider and Apple). Trial Ex. 28, App. B at B-5 n.6 (Willig WDT).

[34] *See* Trial Ex. 118 at 7.

SEPFF480. Finally, Professor Willig assumed that the number of albums purchased by the respondent was equal to the equivalent of the average number of songs listened to on Sirius XM, again based on the industry standard conversion of 1,500 streams equals one album. Trial Ex. 28, App. B at B-6 (Willig WDT). Sirius XM users were estimated to listen to an average of [[redacted]] songs per month, *see* Trial Ex. 28, App. A at A-6 (Willig WDT), which is equivalent to [[redacted]] albums. Trial Ex. 28, App. B at B-6 (Willig WDT). This results in creator compensation per subscriber-month equal to $[[redacted]] for physical/downloads combined. Trial Ex. 28, App. B at B-5 (Willig WDT).

iv. Ad-Supported Fully Interactive Services

SEPFF481. Professor Willig set creator compensation to the weighted-average per-performance rate for the first half of 2016 based on [[redacted]]. Trial Ex. 28, App. B at B-6 (Willig WDT). Professor Willig assumed that a respondent listens to the same number of songs on alternative services as he/she did on Sirius XM ([[redacted]] per month). Trial Ex. 28, App. B at B-6 (Willig WDT). As such, creator compensation was calculated as [[redacted]] per sub-month. Trial Ex. 28, App. B at B-6 (Willig WDT).

v. Ad-Supported Noninteractive Services

SEPFF482. Professor Willig relied on the per-performance royalty rate for "non-subscription" webcasting (noninteractive) in the first half of 2016, which was $0.0017 per performance. Trial Ex. 28, App. B at B-6 (Willig WDT). However, such royalties are not paid on pre-'72 recordings, so Professor Willig reduced the rate by 13.3% to $0.0015 per performance. Trial Ex. 28, App. B at B-6 (Willig WDT). Professor Willig again assumed that a respondent listens to the same number of songs on alternative services as he/she did on Sirius XM ([[redacted]] per month, as previously discussed). Trial Ex. 28, App. B at B-6 (Willig WDT). As

such, Professor Willig calculated creator compensation as [[redacted]] per sub-month. Trial Ex. 28, App. B at B-6 (Willig WDT).

vi. Music Videos

SEPFF483. Professor Willig calculated the weighted-average per-performance rate for music videos in the first half of 2016 based on [[redacted]]. Trial Ex. 28, App. B at B-6 (Willig WDT). [[redacted]]. Trial Ex. 28, App. B at B-6 (Willig WDT). It is again assumed that a respondent listens to the same number of songs on alternative services as he/she did on Sirius XM ([[redacted]] per month). Trial Ex. 28, App. B at B-6 to B-7 (Willig WDT). As such, Professor Willig calculated creator compensation at [[redacted]] per sub-month. Trial Ex. 28, App. B at B-7 (Willig WDT).

vii. Cable/Satellite Music Channels

SEPFF484. For this option, Professor Willig assumed that diverting subscribers would use an existing cable/satellite TV subscription. Trial Ex. 28, App. B at B-7 (Willig WDT). Because compensation for music channels on cable/satellite TV is not tied to the amount that the subscriber actually listens to those channels, Professor Willig conservatively assumed that the incremental creator compensation for this option is zero. Trial Ex. 28, App. B at B-7 (Willig WDT).

viii. All Others

SEPFF485. Professor Willig also noted that all other options in the Dhar survey — including terrestrial radio, borrowed or already-owned CDs, etc. — have zero incremental creator compensation, by definition. Trial Ex. 28, App. B at B-7 (Willig WDT). Professor Willig also assumed that creator compensation was zero for any respondent whose response to the relevant question was "none of the above." Trial Ex. 28, App. B at B-5 (Willig WDT).

E. The Relevant Opportunity Cost For Rate-Setting Purposes Is The "Walk-Away" Opportunity Cost And Not, As Professor Shapiro Would Have It, The Marginal Opportunity Cost Of Additional Plays On Sirius XM

SEPFF486. Professor Willig's analysis of opportunity cost was based on what economists on both sides labeled the "walk-away" opportunity cost. As Professor Willig defined it, "walk-away opportunity cost means what if a label were to literally walk away from a distributor . . . If [the label] decided not to use a particular distributor, and not to allow that distributor to play its music, what would the implications be for other royalties or other compensation that it would earn from other sources of distribution." 5/02/17 Tr. 2014:25-2015:9 (Willig).

SEPFF487. Professor Farrell defined walk-away opportunity cost in similar terms. According to Professor Farrell, walk-away opportunity cost "is the profit that a label would realize elsewhere as a result of the movement of subscribers if it refused to provide or didn't end up providing a license for its catalogue to, in this case, Sirius XM." 5/24/17 Tr. 607:6-10 (Farrell); *see also* Trial Ex. 10 at 8 (Farrell WRT) ("The walk-away opportunity cost is the revenue that the hypothetical label would have earned from other music distribution channels if the label did not license Sirius XM"). Succinctly, ". . . the walk-away opportunity cost is do you walk away instead of playing this game at all." 5/24/17 Tr. 609:8-11 (Farrell).

SEPFF488. In other words, a record label approached by a distribution service that wants to license its catalogue must consider, at the outset, whether the service seeking a license will substitute for other services that pay royalties to the label. As Professor Willig put it: "[I]f you don't walk away, as a label, then you're allowing this distributor to make use of your recordings. Cannibalizes takes away, perhaps, from what you could be earning elsewhere. And that's a cannibalization. Which is the other side of what I started defining as walk-away." 5/02/17 Tr. 2016:6-2016:14 (Willig).

SEPFF489. The upshot is that in an unregulated market, a record label would not agree to license access to its catalogue of sound recordings at all unless the royalties it receives under the proposed license at least equal if not exceed the walk-away opportunity cost — that is, the royalties it would receive from other royalty-paying services for which the proposed licensee would substitute. "In an unregulated market, the suppliers, . . . the labels here will not license unless they're compensated or promised to be compensated at or above their walk-away opportunity cost because they can always walk away in an unregulated market, absent the statute, and if the distributor isn't paying enough relative to the opportunity cost, it will be to their financial benefit to leave and collect their opportunity cost instead, which means more plays or more subscribers and, therefore, more compensation from the alternatives in the market because if they don't cooperate with this distributor . . . other distributors will get more business, and that will redound to the labels' benefit because they'll get more royalties from the additional business of the other distributor." 5/02/17 Tr. 2018:25-2019:16 (Willig).

SEPFF490. Sirius XM's economic expert, Professor Farrell, agreed with Professor Willig on this point, readily conceding that a record label operating in an unregulated market would not agree to license its catalogue at less than its walk-away opportunity cost. 4/24/17 Tr. 662:21-663:1 (Farrell).

SEPFF491. Making sure that the royalties set in this proceeding give copyright owners at least their walk-away opportunity cost not only comports with the behavior of willing sellers in an unregulated marketplace — it also promotes efficient competition between distribution services. If a regulated service is allowed to pay a royalty that is less than the walk-away opportunity cost of licensing competing services, a less-efficient regulated service will have an advantage over a more efficient unregulated service. "[T]he need to cover opportunity

cost is part of what assures efficiency in the ultimate choice of the balance of . . . varieties of modes of distribution at the end of the day in the market." 5/02/17 Tr. 2020:7-11 (Willig). Professor Willig further explained: "And that's a good thing from the point of view of economics because there is competition, and we hope there's strong competition among modes of distribution. And the idea that . . . they've got to pay opportunity cost and . . . their inability or ability to meet the opportunity cost of their suppliers is part of what leads to efficiency in the market among the distributors who actually survive their own competition." 5/02/17 Tr. 2019:21-2020:5 (Willig).

SEPFF492. Rather than assessing walk-away opportunity cost (that is, the opportunity cost associated with licensing Sirius XM in the first instance), for the most part Professor Shapiro assumes that a label has agreed to license its catalogue and focuses instead on the opportunity cost of licensing additional plays on the platform, that is, the "per-play" or "marginal" opportunity cost associated with licensing. 5/02/17 Tr. 2021:7-24 (Willig). Thus, Professor Shapiro asserts that the "critical factor governing the royalty that a record company would charge Sirius XM for its music, in the absence of any statutory license, is the opportunity cost to that record company of additional performances of its music on Sirius XM's service." Trial Ex. 9 at 35 (Shapiro WRT); *see also* 4/20/17 Tr. 325:25-326:2 (Shapiro).

SEPFF493. Given that Professor Willig explained — and Professor Farrell unequivocally agreed — that a record label will not license at less than its walk-away opportunity cost, Professor Shapiro's focus on marginal or per-play opportunity cost is puzzling. One possible explanation for Professor Shapiro's insistence on examining marginal opportunity cost is that it allows Professor Shapiro to criticize Professor Willig for failing to consider the potential impact of steering by Sirius XM. *See* Trial Ex. 9 at 34 (Shapiro WRT). But while

steering by Sirius XM might be relevant to marginal opportunity cost, it is utterly irrelevant to walk-away opportunity cost.

SEPFF494. A record label's walk-away opportunity cost is the cost of lost revenues from the *other* distribution services that compete with Sirius XM, rather than the cost of increasing or decreasing the number of plays on Sirius XM. As such, steering on Sirius XM does not affect walk-away opportunity cost. "What steering does, of course, or the potentiality of steering may very well have affected or continu[e] to affect the royalties in the target market, but the opportunity cost is not about what they're getting in the target market; it's what they would get if they were to withdraw their music if they were allowed to[,] from the movement of subscribers to other distribution modes[,] and what they would be getting in creator compensation from the movement of those subscribers to the other modes." 5/02/17 Tr. 2035:2-12 (Willig); *see also* 5/02/17 Tr. 2036:16-19 (Willig) ("So the opportunity cost, as I define it, has nothing to do with the degree of steering in the target market because the opportunity cost is what would they earn elsewhere").

SEPFF495. That is not to say that steering is irrelevant to the issues in this case. As Professors Willig and Farrell agree, a copyright owner in an unregulated market will not agree to license a service at less than the copyright owner's opportunity cost, but how much *above* walk-away opportunity cost the royalty rate is set in a marketplace negotiation may well be determined by the service's ability to steer between the sound recordings of different record labels. *See* Trial Ex. 669 at 5-7 (Shapiro Web IV WDT). Steering in the target market, however, is simply not relevant to the threshold a determination of the walk-away opportunity cost that sets a floor for reasonable rates. 5/02/17 Tr. 2035:2-12 (Willig).

F. Setting Appropriate Royalty Rates Requires Assessing Industry-Wide Walk-Away Opportunity Cost

SEPFF496. Professor Willig's walk-away opportunity cost of $2.55 per subscriber per month represents the opportunity cost for the recording industry as a whole. Any individual copyright owner, of course, would receive only its pro rata share of this amount.

SEPFF497. Sirius XM, through the testimony of Professors Shapiro and Farrell, attacks this industry-wide calculation as purportedly reflecting monopoly (or complementary oligopoly) pricing that is inconsistent with the Section 801(b)(1) objectives and the goal of a royalty rate that comports with effective competition. Essentially, Professors Shapiro and Farrell argue, Professor Willig has assumed that the copyright owners would bargain with Sirius XM as a collective, rather than as individual record labels, and thus would extract monopoly rents. *See* Trial Ex. 9 at 34-35 (Shapiro WRT); Trial Ex. 10 at ¶ 3 (Farrell WRT).

SEPFF498. As explained below, Sirius XM's economic experts are wrong for at least two reasons. First, Professor Willig's analysis does not assume that the copyright owners would bargain as a collective. Instead, as Professor Willig testified, the individual major record labels are "must-haves" for Sirius XM, and even though they would bargain separately, the walk-away opportunity cost for a "must-have" label effectively is the same as the industry-wide opportunity cost. Professors Shapiro and Farrell both concede the truth of this latter point, as they must. 4/24/17 Tr. 665:24-666:9 (Farrell); 5/04/17 Tr. 2563:4-2565:17 (Shapiro). But, they argue, the hypothetical market for rate-setting purposes must be modeled as one in which no label is a must-have, because a market that includes must-have labels cannot be effectively competitive. As discussed below, these assertions by Professors Shapiro and Farrell are wrong as a matter of economic logic, inconsistent with the Judges' ruling in *Web IV*, and inconsistent with Professor Shapiro's own testimony in *Web IV*.

SEPFF499. The attack on Professor Willig's industry-wide opportunity cost is wrong for an additional reason, which has nothing to do with certain labels are "must-haves." As Professor Willig points out, one undisputed characteristic of sound recording digital licenses is a considerable degree of uniformity in the royalty rates among various record labels. This suggests, as Professor Willig explained, that individual labels would bargain with an understanding that a royalty which is not acceptable to that label likely is also not acceptable to other labels. As a result, a label inclined to reject a proposed royalty will expect that other labels will do the same, with the result that the opportunity cost will equate to an industry-wide opportunity cost.

SEPFF500. We will discuss each of these points in more detail below.

1. Professor Willig's Analysis Of Walk-Away Opportunity Cost Is Consistent With The Marketplace Reality That The Major Labels Are Must-Haves For Sirius XM

i. The Walk-Away Opportunity Cost For A Must-Have Label Is The Same As The Industry-Wide Walk-Away Opportunity Cost

SEPFF501. As Professor Willig testified, if a label is must-have, then "the distributor cannot sustainably go forward without the particular catalogue." 5/02/17 Tr. 2023:17-19 (Willig). "If a label is a must-have and if it chooses to walk away, then the activities of that distributor become unsustainable in the marketplace. It doesn't have to be that everybody leaves . . . but enough subscribers are impelled to leave and be unwilling to pay for the service that the Service really can't go forward financially in the marketplace." 5/02/17 Tr. 2023:9-16 (Willig). Professor Shapiro agreed that if a must-have label refuses to license Sirius XM, then all of Sirius XM's subscribers would seek music elsewhere. 5/04/17 Tr. 2563:2-12 (Shapiro).

SEPFF502. It follows logically that if a must-have label declines to license a service and all of that service's subscribers seek music elsewhere, the result in terms of the walk-

away opportunity cost is the same as if all labels refused to license — all subscribers leave and patronize other distribution services. The must-have label's walk-away opportunity cost therefore equals its pro-rata share of the industry-wide opportunity cost. With this proposition, Professor Farrell is in agreement. 4/24/17 Tr. 665:17-21 (Farrell).

SEPFF503. Professors Farrell and Shapiro acknowledged that, in order for a must-have label to recover its walkaway opportunity cost, the industry-wide royalty rate would have to be set at a level at least equal to the industry-wide opportunity cost.[35] 4/24/17 Tr. 665:24-666:9 (Farrell). See 5/04/17 Tr. 2563:4-2565:17 (Shapiro). As Professor Farrell testified:

> Q: . . . [I]f we have got a label that is a must-have, in order for it to recover its walk-away opportunity cost, the industry-wide royalty rate would have to be set at a level that is at least equal to the industry wide opportunity cost, right?
>
> A: With the additional assumption that it is getting only its same pro rata share of the industry-wide royalty that you're talking about.
>
> Q: Yes. So is my statement correct?
>
> A: I think so yes.
>
> 4/24/17 Tr. 665:24-666:9 (Farrell).

SEPFF504. As the foregoing discussion demonstrates, there is agreement among the economists that the walk-away opportunity cost for the must-have label equates to the industry-wide opportunity cost, consistent with Professor Willig's analysis. We turn, then, to the questions of whether a market may be effectively competitive even though some of the participants in the market are must-haves, and whether as a factual matter the major record labels are indeed must-haves for Sirius XM.

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[35] Although Professor Farrell initially asserted that all labels may need to be must-have for Professor Willig's calculation to make sense, 4/24/17 Tr. 597:22-24 (Farrell), he ultimately recognized that if a single label is must have, then Professor Willig's approach to calculating opportunity cost makes sense. 5/24/17 Tr. 613:6-12 (Farrell).

ii. A Market With Must Haves Can Be Effectively Competitive

SEPFF505. Under the circumstances of this case, must-have status is consistent with workable competition. That is because Sirius XM has the *ability* to steer, and the *potential* for steering can induce price competition even among must-have sellers. As Professor Willig testified at trial, "even if a label is a must-have, there's still lots of room for there to be effective competition expressed in the actuality of steering or in the anticipation of it, leading to more favorable terms in the agreement, more favorable from the point of view of the distributor, reflecting the potentiality for steering in the absence of an agreement not to steer." 5/02/17 Tr. 1996:16-23 (Willig).

SEPFF506. Professor Shapiro disagreed (*see, e.g.*, 4/19/17 Tr. 184:20-185:23 (Shapiro) and 5/04/17 Tr. 2549:9-18 (Shapiro)), but was impeached by his deposition testimony in *Web IV*, as follows:

> Q: So what I'm showing you is your deposition from Web IV. Do you see that, Professor Shapiro?
>
> A: I do.
>
> Q. Okay. Let me ask you to turn to page 60. And do you see starting at line 10?
>
> A. I do.
>
> Q. And you were asked: "*So in what situation could Universal be a must-have and the market still be workably competitive?" And your answer was: "It is possible that could happen if the services have substantial ability to steer, although b[y] definition of must-have, could not survive without music entirely.*"

4/24/17 Tr. 539:19-540:8 (Shapiro) (emphasis added).

SEPFF507. Professor Shapiro went on to say, with reference to his *Web IV* deposition testimony, that "I stand by my statement," although he tried without success to explain it away.[36] 4/24/17 Tr. 540:11:19 (Shapiro).

SEPFF508. Moreover, Professor Shapiro acknowledged, in response to questioning from Judge Barnett, that a service may actually find it easier to steer towards or away from the sound recordings of must-have major labels compared to smaller labels that were concentrated in one niche or genre: "With the Majors, while they are must have, because they are spread in so many genres, it does make steering easier than if they were specialists and in different genres." 4/19/17 Tr. 190:23-192:16 (Shapiro).

SEPFF509. In any event, the arguments of Professors Shapiro and Farrell that a market with must-have record labels cannot be effectively competitive, even when steering is possible, flies in the face of the Judges' holding in *Web IV*. There, the Judges concluded:

> It is important to emphasize the limited nature of this sort of effective competition. Price competition through steering does not diminish the stand-alone monopoly value of any one sound recording. Further, effective competition through steering does not diminish the firm-specific monopoly value of each Major's repertoire taken as a whole. Although Dr. Katz urged the Judges to reduce the statutory rate to eliminate that market power as well . . . the Judges decline to do so. There is absolutely no record evidence to suggest that the market power that a Major enjoys individually by ownership of its collective repertoire is in any sense the consequence of improper activity or that it is being used *individually* by a Major to diminish competition. That is, the Judges have no evidence before them to demonstrate that the Majors' size and *individual* market power is not the result of the efficiencies and economies of scale and/or their superior operations. . . . In the absence of evidence that the Majors' market shares preclude effective competition, the Judges have no basis on this record to adjust rates lower to reflect that market concentration. *Web IV*, 81 FR at 26368.

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[36] Professor Shapiro's explanation asserted that "what was important in *Web IV*, at issue here was if you assume that the price is linear, effectively, let's say, a per play rate that's linear, without fixed fees, then the average price and the marginal price are the same and so that fits perfectly with my previous answer here." 4/24/17 Tr. 540:12-21 (Shapiro). What "linear" prices have to do with effective competition, or how the marketplace at issue in *Web IV* was somehow distinguishable from the marketplace at issue here, or why competition would take place differently for satellite radio, were all left entirely unexplained.

SEPFF510. The conclusions of the Judges in *Web IV* are fully applicable here. Here, as in *Web IV*, there is no evidence that the major labels' size and individual market power is not the result of the efficiencies and economies of scale and/or superior operations. And as Professor Willig testified, the size of the majors' catalogues and scale of their operations may create positive economic efficiencies: "[T]he portfolio, the catalogue of them, also has intrinsic value built up from the values of the individual recordings but also magnified because here's a portfolio which could be made available on a load transaction cost basis, you get the whole . . . catalogue instead of having to select individual titles one at a time and make the assemblage yourself. So there may be economies of scale and economies of scope, both in the creation of the catalogue and also in its distribution. And that's part of the intrinsic value because it comes from genuine supply-side efficiencies of moving from the individual to the catalogue." 5/02/17 Tr. 1995:5-19 (Willig).

SEPFF511. In short, where steering is possible, there is no reason to conclude that effective competition cannot exist, and no reason to deprive the major labels of the benefits of the economies of scale.

SEPFF512. Last, for Sirius XM, steering is in fact possible.[37] Professor Shapiro, for example, testified that "I do believe that Sirius XM has the . . . technical ability to steer." 4/20/17 Tr. 451:1-2 (Shapiro). [

[37] That Sirius XM has the technical ability to steer does not mean that it has the financial incentive to steer, or that it does in fact steer at the present time. As explained in Section IV(G)(2)(ii), *supra*, the current statutory rate is low and the potential cost of losing valuable subscribers is high, reducing Sirius XM's incentive to steer. As Professor Shapiro agrees, where the statutory rate is below the rate that would exist in an effectively competitive, unregulated market, sellers will not likely offer steering-related discounts. *See* Trial Ex. 669 at 36 (Shapiro *Web IV* WDT). Where the ability to steer exists, however, it remains available as a tool to induce competition if rates rise above effectively competitive levels, and the market therefore should be considered effectively competitive.

[redacted]]. 4/20/17 Tr. 451:11-18 (Shapiro). *See also* 5/10/17 Tr. 3374:21-3375:12 (Blatter); 5/17/17 Tr. 4276:18-4277:10 (White).

SEPFF513. Because Sirius XM has the ability to steer, therefore, the target market may be considered workably competitive even if certain record labels are must-haves for Sirius XM.

iii. The Major Record Labels Are, In Fact, Must-Haves For Sirius XM

SEPFF514. Contrary to the assumptions made by Sirius XM's experts, the evidence strongly supports Professor Willig's treatment of the major labels as must-haves for Sirius XM.

SEPFF515. Professor Shapiro testified that he made "a working assumption" that the Majors are not must-have for Sirius XM, although ultimately he could not offer an opinion on this subject because "it is not completely clear, in fact." 4/19/17 Tr. 228:21-23 (Shapiro). Professor Shapiro seemed to have greater certainty with respect to other streaming services, however, and asserted that the Majors are must-have for the mid-tier services, even though they lack on-demand functionality. *See, e.g.*, 5/04/17 Tr. 2600:3-10 (Shapiro); 5/04/17 Tr. 2598:18-21 (Shapiro); 5/04/17 Tr. 2599:24-2600:2 (Shapiro).

SEPFF516. Despite his uncertainty, for purposes of critiquing Professor Willig's opportunity cost calculation, Professor Shapiro assumed that no label is a must-have for Sirius XM. 4/24/17 Tr. 536:10-13 (Shapiro).

SEPFF517. Contrary to Professor Shapiro's mere assumption, unrebutted testimony demonstrates that the major labels are must-haves for Sirius XM. For example Mr. Harrison testified:

[redacted]

5/16/17 Tr. 3941:13:3942:6 (Harrison); *see also* 5/16/17 Tr. 4030:17-20; 5/16/17 Tr. 3940:19-21 (Harrison).

SEPFF518. The facts and figures bear out Mr. Harrison's testimony. UMG's owned content now represents 29% of the market for sound recordings, and UMG's owned and distributed content represents 36% of the market for sound recordings. 5/16/17 Tr. 3915:15-21 (Harrison). UMG recorded music holdings span an extensive and diverse collection of record labels, including A&M Records, Blue Note Records, Capitol Records, Capitol Christian Music Group, Decca, Def Jam Recordings, Deutsche Grammophon, Geffen Records, Interscope Records, Island Records, MCA Nashville, Motown Records, Republic Records, UMG Music Latin Entertainment, Verve Music Group, and Virgin Records. Trial Ex. 32 at ¶ 6 (Harrison WDT). The artists who record for UMG labels include some of the best known and most popular recording artists in the world, including, among others, U2, Maroon 5, Katy Perry, The Weeknd, Drake, Bon Jovi, Mariah Carey, Ariana Grande, Dr. Dre, Kanye West, Alan Jackson, Tim McGraw, Keith Urban, Norah Jones, The Killers, Lady Gaga, Madonna, Lorde, Sting, and George Strait. Trial Ex. 32 at ¶ 6 (Harrison WDT). Indeed, at the time of trial, UMG held all

five top spots on the Billboard Top 200. 5/16/17 Tr. 3917:12-16 (Harrison). UMG's catalog of sound recordings also includes music by some of the most influential and legendary artists in the history of music, including Louis Armstrong, The Beach Boys, The Beatles, James Brown, Patsy Cline, Ella Fitzgerald, Marvin Gaye, Guns N' Roses, The Jackson Five, Lynyrd Skynyrd, Bob Marley, The Rolling Stones, Frank Sinatra, The Who, and Stevie Wonder. Trial Ex. 32 at ¶ 6 (Harrison WDT).

SEPFF519. Sony, while somewhat smaller than UMG, is similar. Mr. Walker testified that Sony's owned content now represents between 25-30% of the market for sound recordings. 5/16/17 Tr. 3812:8-13 (Walker). Sony Music is home to well-known labels, including Arista Nashville, Columbia Records, Epic Records, Kemosabe Records, Legacy Recordings, Masterworks, RCA Records, RCA Nashville, RCA Inspiration, Sony Classical, Sony Music Latin, and Syco Music. Trial Ex. 38 at 1 (Walker WDT). Sony's labels create and distribute music across every genre. Trial Ex. 38 at 1 (Walker WDT). Together, they boast a wide variety of artists, including international and domestic superstars like Aerosmith, Beyoncé, Kenny Chesney, Kelly Clarkson, Bob Dylan, Billy Joel, Alicia Keys, Ricky Martin, Yo-Yo Ma, Carlos Santana, Barbara Streisand, Justin Timberlake, Usher, Michael Jackson, Elvis Presley, Adele, Bruce Springsteen, Fifth Harmony, Meghan Trainor, Future, and many more. Trial Ex. 38 at 1 (Walker WDT); 5/15/17 Tr. 3812:18-23 (Walker). Sony's deep catalog contains some of the most important sound recordings ever made. Miles Davis, John Denver, Carole King, Johnny Cash, Frank Sinatra, Rosemary Clooney, Bing Crosby, Benny Goodman, Janis Joplin, Louis Armstrong, Dolly Parton, Vladimir Horowitz, Stevie Ray Vaughn, Glenn Miller, and Whitney Houston are just a few of the artists represented in Sony's catalog. Trial Ex. 38 at 1-2 (Walker WDT).

SEPFF520. Warner likewise boasts prominent labels including Atlantic, Warner Bros., Parlophone, Rhino, Warner Music Nashville, and Warner Classics. Trial Ex. 34 at ¶ 5 (Kushner WDT). Some of the current artists on the Atlantic label include Bruno Mars, Twenty One Pilots, Paramore, Wiz Khalifa, and Slipknot. Trial Ex. 34 at ¶ 6 (Kushner WDT). And Atlantic's catalog includes legends like Ray Charles, Aretha Franklin, Bobby Darin, and Led Zeppelin. Trial Ex. 34 at ¶ 5 (Kushner WDT).

SEPFF521. Put simply, the Majors comprise a substantial majority of the market, whether by ownership or by distribution. In 2015, the Majors by ownership had a combined market share of more than 64%. By distribution, the Majors' market share was more than 86%. Trial Ex. 26, Fig. 1 (Orszag WDT). And Majors were responsible for distributing about 63% of albums owned by independent record companies. Trial Ex. 37 at 3 (Van Arman WDT).

SEPFF522. Professor Shapiro's own data confirms the conclusion that the Majors are must-haves for Sirius XM. Most significantly, Table 2 to Professor Shapiro's Written Direct Testimony indicates that, for the month of July 2016, more than 80% of plays on Sirius XM's popular Hits One Channel came from the Majors, and more than 66% came from UMG and Sony alone. Trial Ex. 8, Table 2 (Shapiro WDT).

SEPFF523. Because each of the Majors' catalogs contains contemporary superstars, as well as music legends, the Majors offer many of the artists with whom listeners are comfortable and familiar. And this matters: As Mr. Blatter testified, when Sirius XM plays new songs, it needs to surround them with songs that the audience might be familiar and comfortable with:

[redacted]

[redacted]

5/10/17 Tr. 3408:15-3409:1 (Blatter).

SEPFF524. [redacted] (*see* 5/15/17 Tr. 3775:17-3776:15 (Meyer)) [redacted] Addressing the question of "Why People Pay Us," one survey finds that "there is no question that the right kind of variety is motivating the choice to pay for Sirius XM." Trial Ex. 242 at 10 (Odyssey Presentation, January 31, 2014); 5/15/17 Tr. 3804:2-10 (Meyer) (Sirius XM CEO agreeing that is consistent with why people pay Sirius XM). And variety "needs to be focused first on music . . . Music is much more important to listen to than other sources for both Self-Pay Customers and Recent Rejectors." Trial Ex. 242 at 48 (Odyssey Presentation, January 31, 2014); *see also* Trial Ex. 130 at 5 (Odyssey Presentation, September 16, 2015) ("Being able to find enough of the kind of music they like is what most separates those who convert from those who don't"); 5/15/17 Tr. 3777:16-3778:5 (Meyer) (agreeing that that finding is part of the information Sirius XM considers in its business strategy). Although Sirius XM touts the importance of its exclusive non-music content, the research presented to Sirius XM states that this is a "myth" — exclusive content is "helpful" but "by no means a primary driver of subscriptions today." Trial Ex. 242 at 19 (Odyssey Presentation, January 31, 2014). The fact that Sirius XM has been told by its research firm that variety in music offerings is of critical importance to Sirius XM's subscribers, and explicitly considers that data as part of its business strategy, suggests that Sirius XM would view it as particularly important to avoid losing the catalogs of important labels.

SEPFF525. Given the evidence that the major labels are must-haves, the walk-away opportunity cost for a Major effectively is the same as the industry-wide walk-away

opportunity cost, and that is what Professor Willig calculated. Professor Willig summarized the analysis this way: "[I]f the labels are must-haves, then if one walks away, the Service[] collapses commercially, and then all of the subscribers or 70 percent of the subscribers desert the Service because the music isn't sufficient for their preferences, and they will do something else. They will choose other ways to listen to music. And what I do . . . is I quantify what their movements, their substitution away from the collapsing Service, where do they go and what are the consequences for creator compensation as a result of those subs? So they go to a different Service. That Service pays royalties. There's more business for the other modes, and that redounds to additional creator compensation. And so that's the opportunity cost, the walk-away opportunity cost. And if the label is a must-have, it's automatic. If the label leaves, then the Service[] is going down, and all the music lovers leave. And so this is the pertinent measure." 5/02/17 Tr. 2023:21-2024:16 (Willig).

2. Because Marketplace Rates Are Relatively Uniform Across Labels, Rational Labels Respond To Price Offers In The Same Way And Industry-Wide Walk-Away Opportunity Cost Therefore Is The Appropriate Measure Of Individual Label Away Opportunity Cost

SEPFF526. Even if the Majors are not must-haves, uniformity of rates in the marketplace suggests that all labels would respond to price offers in the same way, making an industry-wide approach appropriate. Individual labels would bargain with an understanding that a royalty that is not acceptable to that label likely is also not acceptable to other labels. As a result, a label inclined to reject a proposed royalty will expect that other labels will do the same, with the result that the opportunity cost will equate to an industry-wide opportunity cost.

SEPFF527. As a factual matter, the economic experts in this case agree that royalty rates tend to be relatively uniform in the marketplace across different labels. 5/02/17 Tr. 2026:10-11 (Willig); 5/02/17 Tr. 541:22-542-12 (Shapiro). For example, Professor Shapiro

testified in *Web IV* that, in his opinion, these relatively uniform rates emerge for two reasons: (1) because major and independent record labels (sellers) have similar opportunity costs; and, (2) because services (buyers) have similar elasticity of demand. 5/02/17 Tr. 545:3-23 (Shapiro).

SEPFF528. Moreover, considering uniform rates is appropriate if the regulatory task is to set a uniform rate. 5/02/17 Tr. 2026:7-9 (Willig).

SEPFF529. Where royalty rates are uniform, "each label's view of the adequacy of that uniform royalty rate is the same." 5/02/17 Tr. 2026:12-16 (Willig). In terms of the comparison of whether the opportunity to go elsewhere is better than the opportunity to stay behind, the "yes" or "no" is the same for all the labels. 5/02/17 Tr. 2026:21-25 (Willig). As a result, the decision-making is unilateral, but parallel, across the record labels. 5/02/17 Tr. 2027:22-23 (Willig). The labels each reach the same decision because "the decision one label would make in terms of comparing what it's getting at the target market with what its opportunity costs are, that comparison is likely to be the same comparison in terms of plus or minus as the comparison being considered by the other labels." 5/02/17 Tr. 2030:4-10 (Willig).

SEPFF530. That is not to say the decision to license has the same financial effect for each label. Labels have different market shares and therefore receive different pro rata shares of a uniform royalty rate. Thus, the decision to license "may have different consequences for the bottom line of each label, depending upon their market share." 5/02/17 Tr. 2026:17-21 (Willig). But that does not alter the dynamic that each label will understand that a royalty rate viewed as too low by one will be viewed as too low by all. The comparison of which is better — licensing or walking away — is the same for each of the labels because they each are comparing their pro rata share of the royalties from Sirius XM against their pro rata share of the added compensation

they would each receive from the services for which Sirius XM substitutes. 5/02/17 Tr. 2026:25-2027:10 (Willig); 5/02/17 Tr. 2030:16-21 (Willig).

SEPFF531. At trial, Professor Willig provided an example to illustrate this point.

Label	Sirius SXM Royalty Rate	Compensation from Diversion to Destination Markets	Ratio of SXM Royalties to Compensation from Diversion	Label Calculus
Industry Compensation	$5.00 Per Sub	$10.00 Per Sub	1:2	Both labels realize that opportunity cost is double what they could earn from SXM. As a result, they decide not to license SXM.
Label A (50% Share)	$2.50 Per Sub	$5.00 Per Sub	1:2	
Label B (10% Share)	$0.50	$1.00	1:2	

Source: 5/2/17 Tr. 2031:15-2034:8 (Willig).

SEPFF532. Professor Shapiro argues that this uniform approach to licensing decisions amounts to a group boycott or cartel arrangement. 5/4/17 Tr. 2565:13-2567:2 (Shapiro).

SEPFF533. As Professor Willig points out, however, a cartel would not seek simply the walk-away opportunity cost of the cartel members; it would seek substantially more. "[T]here's a range that runs from what a true cartel monopoly would be attempting to extract, and it might have a shot at it; the other end of that range is the opportunity cost." 5/04/17 Tr. 2615:5-9 (Willig). "And that opportunity cost is the bottom end of the range because without

exercising or attempting to exercise any monopolization over the entire service that the agreement enables to be in business . . . the opportunity cost is the fallback for even the must-have label. And so more a competitive non-monopoly, non-cartel circumstance would create that opportunity cost as the bottom end of the range." 5/04/17 Tr. 2615:12-20 (Willig). A cartel "would be aiming to extract all of the available extra value to the entire service that its contribution to the agreement helps to bring about . . . A group boycott or real cartel would be shooting to extract the entire top of that bargaining range because they would agree that they would be holding out for that, so it would be the hold-out value of an input that is essentially cartelized by a group of players who were trying to extract the entire value for themselves." 5/04/17 Tr. 2614:16-2615:2. (Willig).

SEPFF534. At trial, Professor Shapiro conceded that record labels engaged in a group boycott would seek compensation in excess of industry-wide opportunity cost:

> Q: . . . If you had labels acting in sort of coordinated fashion in, let's say, a group boycott, wouldn't you expect them to be seeking a lot more than just their opportunity cost?
>
> . . .
>
> A: . . . I think if you are now talking about a group boycott or cartel, yes, I think they would seek more than if there were no antitrust limits or other legal limitations, or, you know, other things such as public relations issues, yes, they would want to have a higher price than the opportunity cost, the monopoly opportunity cost. That would be the cartel objective.
>
> 5/04/17 Tr. 2591:7-23 (Shapiro).
>
> Q: . . . [Y]ou would certainly expect the group to be seeking more than its opportunity cost, right?
>
> A: Yes, I think I agreed to that already.

5/04/17 Tr. 2592:12-15 (Shapiro).

SEPFF535. In short, the answer to Sirius XM's complaint that Professor Willig seeks cartel-like returns for the record labels is that, in fact, seeking simply to recover opportunity cost is the opposite of what a cartel would do: "And the group boycott would be at the upper end of the range in what they're seeking, and a more competitive circumstance would be pushing returns down toward the opportunity cost at the bottom end of that range." 5/04/17 Tr. 2615:21-2616:4 (Willig).

SEPFF536. Nor, contrary to Sirius XM's arguments, do the marketplace outcomes suggested by Professor Willig require real or tacit collusion. Where the record labels face a proposed common royalty, they are all aware of their analogous reaction to that same offer. That affects their decision-making, not because they have an agreement, but because they are aware of the market impact on each of them individually. Their expectations about what is going to happen inform what they decide to do unilaterally in reaction the proposed royalty. 5/04/17 Tr. 2617:6-25 (Willig).

G. Sirius XM's Remaining Criticisms of Professor Willig's Opportunity Cost Analysis Have No Merit

SEPFF537. Sirius XM's economic experts argued at trial that Professor Willig's calculated walk-away opportunity cost of $2.55 per subscriber per month is too high because it imports into the satellite radio market the allegedly non-competitive rates of the interactive services market, and that Professor Willig ignored the potential promotional effects of Sirius XM. Neither of these contentions is correct.

1. Professor Willig's Opportunity Cost Calculation Does Not Improperly Import Non-Competitive Rates Into The Satellite Radio Market

SEPFF538. According to Professors Shapiro and Farrell, Professor Willig's assessment of opportunity cost is improper because it fails to account for the lack of effective competition in the market for fully interactive services. Trial Ex. 10 at 2 (Farrell WRT); 4/24/17

Tr. 641:18-642:11 (Farrell); Trial Ex. 9 at 34-35 (Shapiro WRT). More specifically, Professors Shapiro and Farrell argue that rates negotiated between the major record labels and the interactive services are inflated by the complementary oligopoly power of the Majors, and to the extent that Sirius XM substitutes for interactive streaming services, Professor Willig's walk-away opportunity cost includes these allegedly inflated rates as its most significant component. Therefore, Professors Shapiro and Farrell contend, using Professor Willig's walk-away opportunity cost as a floor to set rates in this case would bring non-competitive rates into the satellite market by the back door.

SEPFF539. As Professor Willig points out, however, in calculating opportunity cost it is important to take markets for different distribution channels as they are. 5/02/17 Tr. 2040:20-25 (Willig). Doing so ensures that the record companies receive at least their actual, real-world opportunity cost. Although "each market has its own fallible elements to it . . . we're talking about the actual opportunity cost, the real opportunity cost from the point of view of labels" if they could walk away. 5/02/17 Tr. 2041:1-13 (Willig). In other words, evaluating opportunity costs does not involve "importing those royalty rates or seeking to into the target market." 5/02/17 Tr. 2046:15-21 (Willig). Rather, the other markets are simply components of opportunity cost. Ignoring or adjusting those components would result in the copyright owners receiving less than their actual, real-world costs of licensing Sirius XM, and impose on the record companies rates that they would not willingly agree to in an unregulated market. 5/02/17 Tr. 2046:4-2047:7 (Willig).

SEPFF540. If one were to conclude that creator compensation from the interactive market should be adjusted downward to reflect the alleged absence of effective competition in that market, the Judges could do so by applying the 12% steering adjustment deployed in *Web*

IV. *Web IV*, 81 FR at 26405. As Professor Willig notes, however, if the Judges were to take the approach of perfecting the markets that contribute to the opportunity cost of licensing Sirius XM by adjusting the rates in those markets for the purposes of the opportunity cost calculation, there is no analytical reason why the interactive services market should be the only market so perfected. 5/02/17 Tr. 2048:7-2049:14.

SEPFF541. For example, survey evidence indicates that "[t]here is some movement of the subscribers from Sirius to terrestrial radio if the labels were to walk away from Sirius, but that contributes zero to the opportunity cost because terrestrial radio pays nothing for its use of the recordings to the creators." 5/02/17 Tr. 2048:22-2049:4 (Willig). "[A]n economist might say, that's not consistent with today's situation in the market, so terrestrial radio perhaps — if we're fixing different portions of the opportunity cost, we ought to fix that portion also," by assuming that terrestrial radio would pay a reasonable royalty. 5/02/17 Tr. 2049:6-10 (Willig).

SEPFF542. Perfecting each destination market would require making "adjustments for the purpose of estimating, deciding on, calibrating, what the creator compensation would be for each of the alternative distribution modes that are the destinations of the subscribers who would be leaving Sirius." 5/02/17 Tr. 2055:16-21 (Willig). That does not only mean adjusting the level of creator compensation derived from the interactive services and terrestrial radio. It also means adjusting the level of creator compensation in other destination markets, like YouTube, which is affected by regulation and royalties which might need to be adjusted upward. 5/02/17 Tr. 2055:16-21; 2056:13-15; 2057:1-3 (Willig).

SEPFF543. Moreover, each destination market reflects legislative decisions. Terrestrial radio pays zero royalties because Congress has exempted terrestrial radio from making royalty payments. [

[redacted] 5/16/17 Tr. 3926:9-11 (Harrison), [redacted]. 5/16/17 Tr. 3926:12-16 (Harrison); 5/16/17 Tr. 3949:6-11 (Harrison). Congress's decision to refrain from intervening in the market for fully interactive services is no different: "And so you might say, well, look, Congress has decided zero royalties from terrestrial, but Congress has also decided that there's no regulatory responsibility that you have over the rates that are actually paid in interactive services." 5/02/17 Tr. 2051:11-22 (Willig). The Judges should not selectively accept some of these legislative decisions and not others.

SEPFF544. Ultimately, Professor Willig advised against trying to perfect all of the markets that contributed to opportunity cost: "If you were trying to perfect the world, you would push some of them down. If you're trying to perfect the world, you might also be pushing others of them up, like YouTube and terrestrial radio. And it's a morass. And maybe you should take the fork in the road that says take those markets as they are because that's what drives honest-to-goodness opportunity costs." 5/02/17 Tr. 2057:1-7 (Willig).

2. Professor Willig's Walk-Away Opportunity Cost Calculation Does Not Ignore Promotion

SEPFF545. Both Professor Shapiro and Professor Farrell faulted Professor Willig for allegedly considering only whether Sirius XM substitutes for other royalty-paying music services, and not whether Sirius XM promotes sales or subscriptions in other markets. Trial Ex. 10 at 15-16 (Farrell WRT); Trial Ex. 9 at 38-39 (Shapiro WRT). The simple answer to Sirius XM's complaint is that no one has produced any reliable evidence demonstrating, much less quantifying, any significant net promotional effect by Sirius XM.

SEPFF546. For his part, Professor Farrell conducts no analysis to determine whether there is any promotional effect on revenues in other markets that benefit copyright owners when they license their sound recordings to Sirius XM. Instead, Professor Farrell merely raises promotion as a theoretical issue, and uncritically accepts the testimony of Sirius XM's Steven Blatter that such a promotional effect exists with respect to Sirius XM. Trial Ex. 10 at 16 (Farrell WRT). We have already addressed the issue of promotion extensively in Section IV.H.2, and will simply repeat here that Sirius XM's evidence of promotion consists of self-selected anecdotes that reflect nothing more than the common courtesies extended by record label promotions personnel to all services. *See, e.g.,* 5/18/17 Tr. 4746:14-17 (Williams) ("This is just normal -- it is the same thing as the record label saying, hey, thank you. We're just being courteous.").

SEPFF547. Moreover, Sirius XM's evidence of promotion, even accepted at face value, appears to relate to sales of downloads, and not promotion of subscription streaming services. *See* Trial Ex. 5 at ¶¶ 46-54 (Blatter WDT). Yet download sales represent only $.27 of the $2.55 per subscriber per month opportunity cost calculated by Professor Willig. Trial Ex. 28 at ¶ 41, Table 2 (Willig WDT). The fact is that download sales are dropping precipitously (5/16/17 Tr. 3918:5-10 (Harrison)), and any alleged promotion of download sales resulting from licensing Sirius XM would not likely change the walk-away opportunity cost calculation in any material way.

SEPFF548. Professor Shapiro, like Professor Farrell, challenges Professor Willig's opportunity cost analysis on the ground that Professor Willig does not consider the alleged promotional effect of Sirius XM. Unlike Professor Farrell, Professor Shapiro offers a regression analysis that he claims proves a dramatic promotional effect for Sirius XM. But Professor

Shapiro's regression results are patently unreliable — indeed impossible — and confronted with evidence that his results could not possibly be correct, Professor Shapiro beat a hasty retreat.

SEPFF549. By way of background, in his Written Direct Testimony, Professor Willig conducted a regression analysis that looked at all streaming services together and concluded that streaming, in the aggregate, has cannibalized download sales. Trial Ex. 28 at 16-18 (Willig WDT). Professor Willig cautioned, however, that one could not analyze each category of streaming service separately, due to issues of multi-collinearity and the absence of instrumental variables[38] necessary to separate out interactions between the services. Trial Ex. 28 at 16 n.12 (Willig WDT). Ignoring Professor Willig's caution, Professor Shapiro did what Professor Willig said could not reliably be done — he ran a separate regression for each of Sirius XM, noninteractive services and interactive services. Trial Ex. 9 at 30-31 (Shapiro WRT); 4/24/17 Tr. 551:12-16 (Shapiro).

SEPFF550. Based on this regression analysis, Professor Shapiro concluded that Sirius XM causes its subscribers to spend $5.45 buying downloads each month and $3.16 buying subscriptions to paid streaming services each month. 4/24/17 Tr. 551:12-552:16 (Shapiro). Professor Shapiro presented the results of his regression analysis without qualification in his written rebuttal testimony, Trial Ex. 9 at 38 (Shapiro WRT).

SEPFF551. Professor Shapiro's regression produces patently absurd results. Simple arithmetic demonstrates that if each Sirius XM subscriber spent $5.45 per month buying

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[38] "So, econometrically, there's this thing called instrumental variables. And the idea is that—and you'll hear more about this later if we're all still here—that these subscribership levels, activity levels, all are interrelated with each other. There are substitutional relationships in all directions, and there's other forces operating on this market that are hard to identify as to their particular impacts on different levels of subscribership of different distribution modes. It's a bit of a morass, which makes it all the more important to find what we call instrumental variables, which are more exogenous in their generation, and then use them inside the econometrics to substitute for things like the level of Sirius subscribership." 5/02/17 Tr. 2076:17-2077:7 (Willig).

downloads, the amount spent by the 32 million-plus Sirius XM subscribers in a year would exceed $2 billion. 4/24/17 Tr. 552:22-553:20 (Shapiro). According to RIAA data, however, the total dollar volume of domestic download sales in 2015 was only $1.8 billion. Trial Ex. 1001 at 2; 4/24/17 Tr. At 555:11-556:23 (Shapiro). Unless every single download purchased in 2016 was acquired by a Sirius XM subscriber, and unless the RIAA managed to undercount download sales by a three hundred million dollars in that year, Professor Shapiro's results are simply impossible, as Professor Shapiro admits. 4/24/17 Tr. 556:16-23 (Shapiro).

SEPFF552. Confronted with this evidence at trial, Professor Shapiro quickly distanced himself from the results he had earlier presented to the Judges as reliable in his written testimony.[39] Trial Ex. 9 at 38 (Shapiro WRT). "I don't really put weight on these high level regressions." 4/24/17 Tr. 554:2-3 (Shapiro). "I just don't — I don't think it's reliable, this whole methodology here." 4/24/17 Tr. 554:9-10 (Shapiro). "I don't put any weight on that number. It just indicates that it's squirrely and doesn't work as a methodology."[40] 4/24/17 Tr. 554:18-20 (Shapiro).

SEPFF553. Moreover, Professor Willig explained at trial precisely why he had been right all along. As noted above, Professor Willig did not analyze each category of service separately because "I recognized that if I just strung out that whole list of variables, there would be nothing that would come out of that reliably, because all of those variable interact with one

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[39] Professor Shapiro disavowed the regression results with respect to the alleged promotion effect of Sirius XM on subscription to interactive services, as well as the download results, acknowledging that all of the issues associated with his assertion that Sirius XM promoted downloads in the amount of $5.45 per subscriber per month were equally applicable to his calculation of the extent to which Sirius XM promotes sale of subscription interactive services. 4/24/17 Tr. 558:23-559:1 (Shapiro).

[40] Professor Shapiro then tried to spin his regression exercise as simply an effort to show that Professor Willig's regression approach was flawed, 4/24/17 Tr. 554:11-20 (Shapiro), blithely ignoring the fact that Professor Willig had said all along that one could not run regressions separately for Sirius XM, noninteractive services and interactive services. *See* Trial Ex. 28 at 16 n.12 (Willig WDT).

another. One causes the other. The other causes the first one. It is sort of a tangle of where the causality lies. Moreover, they are all moving in opposition to what is going on with paid downloads, and there [are] forces that are affecting all of them in relatively unknown ways, like the people, perhaps, moving away from piracy or the enormously fast spread of smart devices that can listen to music." 5/02/17 Tr. 2089:1-13 (Willig).

SEPFF554. Professor Willig would have been able to examine each service separately had he been able to identify appropriate instrumental variables sufficient to shed light on the individual impact of each. 5/02/17 Tr. 2089:24-2090:1 (Willig). Although strong instrumental variables exist for Sirius XM, they do not exist for other services. 5/02/17 Tr. 2077:8-13 (Willig). Therefore, Professor Willig analyzed noninteractive streaming services, interactive streaming services and Sirius XM as a group to determine their overall impact on download sales. *See* 5/02/17 Tr. 2090:4-8 (Willig) ("Still there is some endogenous things running around, but I have managed to avoid the entanglement of all of the interactions among the categories by aggregating together.").

SEPFF555. Professor Shapiro simply ignored the interactions among the categories of services and the absence of instrumental variables that would separate out the impact of each, and in Professor Willig's words, "he did what I deliberately avoided." 5/02/17 Tr. 2090:9-14 (Willig). The result, as Professor Willig predicted, was unreliable to put it mildly.

SEPFF556. There is a further complication to Sirius XM's promotion argument that its experts acknowledge but never grapple with. Suppose it were true that subscribers to Sirius XM are in some cases moved to purchase downloads after hearing a sound recording played on Sirius XM. But suppose further that if those subscribers had not been listening to Sirius XM, they would have been listening to some other service with an equally promotional

effect on download sales (AM/FM radio, for example). In that case, as Professor Shapiro admits, in order to calculate a promotion effect one would need to know whether Sirius XM is more or less promotional than each of the services for which it substitutes. 4/24/17 Tr. 559:19-560:24 (Shapiro).

SEPFF557. Professor Willig made this point in his testimony. "When it comes, and what I emphasized in my deposition properly, I think, that when it comes to a decision about whether or not a proposed royalty rate is worthwhile compared to an opportunity cost rate, what matters is the comparison between the amounts [of] promotional value available or anticipated by the labels in those two different situations, either with the target distribution mode or with the assemblage of alternative distribution modes to which those subscribers would go." 5/02/17 Tr. 2159:9-18 (Willig).

SEPFF558. In short, as Professor Willig explained, a record label in an unregulated marketplace would compare the walk-away opportunity cost of licensing a service to the royalty rate offered by that service. It might separately consider the comparative promotional value of the target service compared to all of the other services for which the target service might substitute. But Sirius XM has offered no evidence quantifying a promotional effect by Sirius XM, *see, e.g.,* 4/24/17 Tr. 559:2-5 (Shapiro), and it certainly has not shown that it is on net more promotional than the services for which it substitutes. There simply is no reliable evidence of a net promotional effect that would persuade a record label to accept a royalty rate less than the walk-away opportunity cost calculated by Professor Willig.

H. While Criticizing Professor Willig's Opportunity Cost Calculation, Sirius XM Never Proposes An Alternative Calculation On Which A Rate Might Be Based

SEPFF559. Tellingly, while Sirius XM's experts devote considerable energy to their attacks on Professor Willig's opportunity cost analysis, neither Professor Shapiro nor

Professor Farrell ever assayed to provide an alternative opportunity cost calculation for rate setting purposes. At most, they offered models filled with Greek letters and assumptions for illustrative purposes.

SEPFF560. Professor Farrell never attempted to calculate opportunity cost in any way that the Judges could rely on for rate-setting purposes. In Appendix D to his Written Rebuttal Testimony, Professor Farrell modeled the walk-away opportunity cost for a label that was *not* a must-have. Trial Ex. 10 at D-1-3 (Farrell WRT). But he admittedly has never studied whether any of the record labels are must-haves for Sirius XM, and he did not know whether in the actual marketplace the labels are or are not must-haves. 4/24/17 Tr. 665:13-16 (Farrell). Moreover, for the purposes of his model, Professor Farrell assumed that the fraction of Sirius XM subscribers who would leave Sirius XM if a label withdrew its content was equal or related to that label's share of plays on Sirius XM, but he was clear that his assumption was just that; it was intended to be "illustrative" and "not designed to produce a reliable number." 4/24/17 Tr. 677:18-678:9 (Farrell).

SEPFF561. Professor Farrell also revised Professor Willig's opportunity cost calculations to show what the industry-wide opportunity cost would be if one used diversion ratios from the Hauser and Lenski surveys. Trial Ex. 10 at 17-21 (Farrell WRT); 4/24/17 Tr. 636:2-7 (Farrell). It is not clear what the point of this exercise was — neither the Lenksi nor the Hauser survey can reliably be used to calculate opportunity costs, as Sirius XM's own experts admit.

SEPFF562. With respect to the Lenski survey, Professor Farrell agreed that it asked only how Sirius XM subscribers would spend their time — not their money — if Sirius XM were not available. 4/25/17 Tr. 666:16-20 (Farrell). The Lenski survey therefore provides

no empirical basis to calculate the opportunity cost to the extent that Sirius XM substitutes for subscription streaming services:

> Q. Okay. And then more generally for subscription services, you can't actually calculate from the Lenski survey what the opportunity cost is because you don't know how many people are actually buying new subscriptions, right?
>
> A. Well, I think that's right.[41]

4/25/17 Tr. 669:19-24 (Farrell).

SEPFF563. Professor Willig punctuated this point: "Whereas the Professor Dhar survey and the Professor Simonson survey asked deliberately about how many — what subscriptions would you take? And they're paid subscriptions. So these numbers go directly to money, go directly to creator compensation, whereas Mr. Lenski was focused on listening time, for whatever reason, and that just doesn't map into dollars of creator compensation." 5/02/17 Tr. 2063:6-13 (Willig). Professor Willig pointed out other ways in which the Lenski survey failed as a basis to measure opportunity cost, including: (1) the Lenski survey does not distinguish between the use of existing subscriptions and the purchase of new ones; (2) the Lenksi survey does not distinguish between paid and ad-supported services; and (3) the Lenski survey looks only at replacement listening time, rather than all listening time.[42] 5/02/17 Tr. 2063:23-2065:23.

SEPFF564. Similarly, Professor Farrell's re-calculation of opportunity costs using Professor Hauser's revisions to the Dhar survey provides no useful result, because Professor Hauser conceded that he is not holding out his two surveys — as a whole or as to the switching/substitution questions — as scientifically valid. 5/9/17 Tr. 3146:5-3147:8 (Hauser).

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[41] Professor Farrell then hedged and said "I don't mean to convey the impression that you know nothing," but agreed that the Lenski survey provides no empirical evidence from which to calculate an actual opportunity cost for subscription services. 4/25/17 Tr. 670:2-13 (Farrell).

[42] Crippling methodological flaws in the Lenski survey, explained by Professors Dhar and Simonson, are described *infra* at Section VII.G.2.

Professor Hauser testified that he would *not* advise economists to take the results of either of his two surveys as representing the true population or marketplace. 5/9/17 Tr. 3149:14-18; 5/9/17 Tr. 3147:9-25 (Hauser).

SEPFF565. Professor Shapiro likewise made no effort to calculate an actual opportunity cost: "I have not — that's correct, I have not measured the absolute value of the opportunity cost." 4/24/17 Tr. 535:7-8 (Shapiro).

SEPFF566. Like Professor Farrell, Professor Shapiro offered models based on assumptions. Three of his models examined the marginal or per-play opportunity costs for a record label (*see* Trial Ex. 9 at 36 (Shapiro WRT)), which as discussed previously simply are not relevant. *See supra* Section V(E).

SEPFF567. Professor Shapiro's fourth model examined the walk-away opportunity cost. Trial Ex. 9 at 36 (Shapiro WRT). In this model Professor Shapiro assumed that no record label is a must-have, 4/24/17 Tr. 536:10-13 (Shapiro), even though he considered this issue "not completely clear," 4/19/17 Tr. 228:21-23 (Shapiro), and even though he regarded the Majors as must-haves for the mid-tier services despite the fact that such services lack on-demand functionality. *See, e.g.*, 5/04/17 Tr. 2600:3-10 (Shapiro); 5/04/17 Tr. 2598:18-21 (Shapiro); 5/04/17 Tr. 2599:24-2600:2 (Shapiro).

SEPFF568. Professor Shapiro's assumption that the Majors are not must-haves flies in the face of considerable evidence. *See* Section V(F)(1)(iii) *supra*. But again, Professor Shapiro was not trying to calculate an actual opportunity cost (4/24/17 Tr. 535:7-8 (Shapiro)); he was making a theoretical point. What is plain is that only SoundExchange has offered evidence from which opportunity cost can be calculated — Sirius XM does not.

I. Professor Willig's Calculation Of Walk-Away Opportunity Cost Is Conservative

SEPFF569. Far from being overstated, as Sirius XM's economists argue, Professor Willig's calculation of opportunity cost is conservative for two reasons. First, Professor Willig calculated opportunity costs using only the actual royalty payments received from other modes of distribution, without including any of the valuable non-monetary compensation that record labels receive from distribution services other than Sirius XM. Professor Willig did not attempt to quantify the value of other, non-price benefits that record companies receive when consumers divert from Sirius XM to other distribution modes. *See* Trial Ex. 28 at ¶¶ 40-41 (Willig WDT). Second, there is general agreement that subscription streaming services are likely to become even more easily available in the automobile during the upcoming rate term. This likely will increase the opportunity cost as such services become even more substitutable for Sirius XM than they are currently.

1. Professor Willig's Calculation Of Walk-Away Opportunity Cost Did Not Include The Value Of Non-Royalty Benefits Received From Subscription Streaming Services

SEPFF570. There is no question that record companies receive other benefits apart from royalty compensation when consumers divert from Sirius XM to other distribution modes, and that these benefits have significant value. UMG's Aaron Harrison identified a number of these benefits, Trial Ex. 32 at ¶ 31 (Harrison WDT), some of which are discussed below.

SEPFF571. [

]. Trial Ex. 32 at ¶ 31 (Harrison WDT).

SEPFF572. [ ]. Trial Ex. 32 at ¶ 31 (Harrison WDT). [ ]. 5/16/17 Tr. 3937:6-20 (Harrison).

SEPFF573. [ ]. Trial Ex. 32 at ¶ 31 (Harrison WDT).

SEPFF574. [

[redacted]. Trial Ex. 32 at ¶ 31 (Harrison WDT).

SEPFF575. The non-royalty benefits that Mr. Harrison describes are not available under the statutory license with Sirius XM. To the extent that Sirius XM substitutes for services that agree to provide such benefits to the record labels, those benefits are not reflected in Professor Willig's opportunity cost analysis, rendering his results conservative.

2. The Copyright Owners' Walk-Away Opportunity Cost Of Licensing Sirius XM Is Likely To Grow During The Upcoming Rate Period

SEPFF576. The opportunity cost to creators of Sirius XM's distribution of the sound recordings is apt to grow significantly during the next few years. Trial Ex. 28 at ¶ 46 (Willig WDT). Most of the current opportunity cost arises from cannibalization of interactive streaming services — namely $1.78 out of the total $2.55, or 70%. Trial Ex. 28 at ¶ 46 (Willig WDT); *see also* Willig Table 2, *supra*.

SEPFF577. Listening to these services in the car is growing easier. As Mr. Harrison testified at trial, [redacted].[43] 5/16/17 Tr. 3989:1-6 (Harrison). [redacted]. 5/16/17 Tr. 3994:15-18 (Harrison). [redacted]

[43] There is more record evidence to support Mr. Harrison's conclusion. "A [redacted'] According to [redacted]. [See Trial Ex. 118.] And [redacted]." Trial Ex. 26 at ¶ 39 (Orszag WDT) (footnotes omitted).

[redacted]. 5/16/17 Tr. 3994:3-5 (Harrison). "[M]ore and more newer cars are connected cars. That is, [interactive services] are offering streaming options side-by-side with satellite and terrestrial radio options; bringing the products closer together so that to many people it is a seamless choice now between switching between a streaming service, a terrestrial service, and a satellite service inside the car making those products more competitive with each other." 4/25/17 Tr. 972:16-25 (Orszag).

SEPFF578. These trends have translated into growing use of streaming services, including interactive streaming services, in the car. The [redacted]. Trial Ex. 123 at 2 (SoundX_000034822). Similarly, [redacted]. Trial Ex. 117 at 22 (SoundX_000034493). And a [redacted]. Trial Ex. 26 at ¶ 39 (Orszag WDT) (footnotes omitted).

SEPFF579. [redacted]. 5/15/17 Tr. 3782:16-23 (Meyer). Indeed, Android Auto and CarPlay are just beginning to roll out in bigger numbers, and of the cars that will be sold in 2017, 50 or 60 percent will have this new software in them. 5/15/17 Tr. 3724:18-25 (Meyer). Mr. Meyer agrees

that by the end of this decade, the vast majority of new cars being sold will have software that is even more seamless. 5/15/17 Tr. 3727:5-18 (Meyer).

SEPFF580. [redacted]. 5/15/17 Tr. 3782:24-3783:2 (Meyer). And Mr. Meyer admits that he is concerned about increased competition from paid interactive services as a result:

> JUDGE STRICKLER: In that regard, are you concerned about the future competition from interactive services, paid services that have prepackaged playlists that also have that sort of ease so people don't have to fumble in the car to try to select the songs but they will have playlists that are either playlists that they have packaged for themselves or a record label has packaged or has been packaged by some other third party?
>
> THE WITNESS: Yes, sir. Yes, sir.

5/15/17 Tr. 3735:1-10 (Meyer).

SEPFF581. The increasing ease of access to streaming in the car is reflected in Sirius XM's 10-K filings with the SEC. Describing its competition, in its 2013 10-K Sirius XM warned investors that "[t]hese services may become integrated into connected cars in the future." Trial Ex. 353 at 5 (Sirius XM 2013 10-K). In its 2014 10-K Sirius XM revised that language to note that streaming services "are increasingly becoming integrated into vehicles." Trial Ex. 354 at 5 (Sirius XM 2014 10-K). And in its recent 10-K filings, Sirius XM now says that "[t]hese services are easily integrated into vehicles." Trial Ex. 356 at 6 (Sirius XM 2015 10-K).

SEPFF582. As the growth rate for paid interactive streaming services continues, the opportunity cost of licensing Sirius XM will grow apace. Trial Ex. 28 at ¶ 46 (Willig WDT). For example, if the diversion ratio from Sirius XM to paid interactive streaming services were to grow from its current level of 31% to 45%, with the rise coming from the current diversion to modes with zero creator compensation, then the opportunity cost would rise from $2.55 to $3.36.

Trial Ex. 27 at ¶ 46 (Willig WDT). Increases like this would not be surprising since the share of paid interactive streaming, among compensatory modes, has doubled in each of the last two years. Trial Ex. 28 at ¶ 46 (Willig WDT).

J. Substantial Evidence Supports Professor Willig's Calculation Of Walk-Away Opportunity Cost, Including Two Surveys, Econometric Analysis, And Marketplace Evidence Of Competition Between Sirius SM And Subscription Streaming Services

SEPFF583. Professor Willig's opportunity cost analysis relied in the first instance on a survey conducted by Professor Ravi Dhar, buttressed by econometric analysis conducted by Professor Willig. The Dhar survey was later corroborated by a second survey presented in SoundExchange's rebuttal case by Professor Itamar Simonson, the results of which suggest an opportunity cost somewhat higher than that calculated using the Dhar survey results. Finally, while Sirius XM pretends in this case that it does not compete in any significant way with subscription streaming services that pay far more than Sirius XM, the marketplace evidence is strongly to the contrary. Our review of this evidence will begin with a discussion of the Dhar survey.

1. Professor Dhar Conducted A Reliable Survey That Assessed How Consumers Would Obtain Music If They No longer Subscribed To Sirius XM

i. Professor Dhar's Qualifications

SEPFF584. The Judges qualified Professor Dhar as an expert in marketing, marketing research, consumer psychology, surveys, and survey methodology. 5/8/17 Tr. 2727:24-2728:6 (Dhar). His background, experience, and qualifications are discussed further in Section II.B.1.i, *supra*, and Trial Ex. 22 ¶¶ 1-8 (Dhar Corr. WDT).

ii. The Results of Professor Dhar's Survey

SEPFF585. The survey results demonstrate that 76% of Sirius XM Select subscribers would cancel their subscriptions to Sirius XM at various prices between $11.49 and $20.49 per month. Of the 76% who would cancel their subscription to Sirius XM Select at any of the price levels examined, the data show that 28% of Sirius XM Select subscribers said they would switch to a paid on-demand music streaming subscription, and 14% would switch to a paid not-on-demand music streaming subscription. 5/8/17 Tr. 2761:18-2762:8 (Dhar). To calculate these simple percentages, Professor Dhar took the number of respondents who said they would switch to On-Demand or Not-On-Demand music streaming subscriptions, and divided those figures by the 388 respondents who would cancel their Sirius XM subscription at various price points). 5/8/17 Tr. 2761:18-2762:8 (Dhar); Trial Ex. 22 at 37 Table 8 (Dhar Corr. WDT).[44]

iii. Methodology

a. Professor Dhar Conducted His Survey Using A Reliable Methodology

SEPFF586. Professor Dhar conducted an online survey to measure the preferences of subscribers to certain music services who would choose to cancel their subscriptions at a given price. The survey measures whether those subscribers would instead prefer to subscribe to another music subscription service. Trial Ex. 22 at ¶ 10 (Dhar Corr. WDT); 5/8/17 Tr. 2728:11-16 (Dhar). Sirius XM subscribers surveyed consisted of current paid subscribers who stated they

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[44] Paragraph 92 of Professor Dhar's Corr. WDT states the percentages as a portion of the entire population of the Sirius XM respondents in his survey, rather than as a portion of those who would choose to cancel their Sirius XM subscription. For purposes of a substitution/cannibalization analysis, there is no dispute that the relevant denominator is the number of respondents who would choose to cancel their Sirius XM subscription, not the entire survey population. *See supra* Section V(D)(1). There were 388 respondents who stated they would cancel their Sirius XM subscription at various price points (Trial Ex. 22, Table 8 at 37 (Dhar Corr. WDT)), which is the denominator Professor Dhar used in his trial testimony to arrive at the 28% and 14% figures cited above. Professor Willig excluded 33 respondents who answered "Don't Know/Unsure" to the switching question (Question 210), and thus determined that 31% of the relevant universe would switch to a paid on-demand service and 15% to a paid not-on-demand service. Trial Ex. 28, App. B at B-2 (Willig WDT).

have the Sirius Select package and current users of a free trial subscription to Sirius XM (typically available with certain new or used car purchases).[45] Trial Ex. 22 at ¶ 10 (Dhar Corr. WDT).

SEPFF587. An Internet survey was conducted under Professor Dhar's direction between September 14 and September 22, 2016. The survey was carefully designed and executed, adhering to scientific principles of survey research to ensure reliability and validity of the results. In total, 2,602 respondents completed the survey. Trial Ex. 22 at ¶¶ 18-19 (Dhar Corr. WDT).

SEPFF588. In implementing the survey, Professor Dhar was assisted by the Brattle Group, an economic consulting firm, and the Target Research Group, a marketing research company with extensive experience in conducting surveys. Both the Brattle Group and Target Research Group worked under Professor Dhar's direction to implement the online survey, including the management and coordination of the data collection, and to conduct the empirical analysis supporting the opinions in his report. Trial Ex. 22 at ¶ 24 (Dhar Corr. WDT). The survey was conducted under double-blind conditions. Trial Ex. 22 at ¶ 25 (Dhar Corr. WDT).

SEPFF589. A bootstrapping procedure was used to estimate the precision of, and create a confidence interval around, each one of the reported survey results. Trial Ex. 22 ¶ 90 (Dhar Corr. WDT). Mr. Lenski agreed that the bootstrapping method is an appropriate way to calculate confidence intervals for such Internet surveys, and has himself reported confidence intervals around the results of online surveys. 5/4/17 Tr. 2683:6-11, 2684:24-2685:20 (Lenski).

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[45] Purchasers and lessees of new cars or trucks with satellite radio-enabled radios generally receive trial subscriptions of between three and twelve months. *See* Trial Ex. 356 at 22, 40.

SEPFF590. The survey questions were pretested to ensure that respondents understood and could respond accurately to the questions. Trial Ex. 22 at ¶ 26 (Dhar Corr. WDT); 5/8/17 Tr. 2816:24-2817:2 (Dhar). In conducting a pretest of the survey questions, Professor Dhar followed his standard practice of testing the questions, based on his years of experience in designing surveys. 5/8/17 Tr. 2893:1-2894:1 (Dhar). This involved walking respondents through the set of questions and interviewing them about whether they understood each question and whether the questions were suggestive. 5/8/17 Tr. 2894:8-14 (Dhar).

SEPFF591. A properly designed Internet survey, like Professor Dhar's, is representative of the target population and can be used to draw valid statistical inferences of the target population. Trial Ex. 22 at ¶ 34 (Dhar Corr. WDT); 5/8/17 Tr. 2729:24-2730:5, 2732:11-23 (Dhar); *see also* Trial Ex. 21 at ¶¶ 24-30 (Boedeker WDT); 5/8/17 Tr. 2934:21-2935:25 (Boedeker); 5/8/17 Tr. 2937:9-2938:7 (Boedeker) (telephone surveys not truly random samples). Professor Simonson testified to not being aware of any serious debate in the past five years about whether Internet survey respondents can properly represent the population as a whole. 5/11/17 Tr. 3518:14-22 (Simonson). Moreover, Professor Dhar concluded that because the target population in this survey included respondents who are users of Internet-based services, an Internet survey was the natural venue. Trial Ex. 22 at ¶ 34 (Dhar Corr. WDT).

SEPFF592. Internet surveys are a widely accepted form of market research. Trial Ex. 22 at ¶ 33-34 (Dhar Corr. WDT) (citing Blumberg, Stephen J., and Luke, Julian V. "Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July–December 2015," National Center for Health Statistics, May 2016, p. 2.); Trial Ex. 21 at ¶ 26-27 (Boedeker WDT) (citation omitted); 5/8/17 Tr. 2729:12-2730:5 (Dhar); 5/11/17 Tr. 3427:6-8

(Simonson).[46] Courts have accepted the findings of Internet surveys in a broad range of cases, including surveys that Professor Dhar personally designed. Trial Ex. 22 at ¶ 33 & App. B (Dhar Corr. WDT); Trial Ex. 21 at ¶ 25 (Boedeker WDT) (citing Bruce Isaacson et al., *Why Online Surveys Can Be a Smart Choice in Intellectual Property Litigation*, 26 IPL Newsletter (2008) (ABA Section of Intellectual Property Law); *see also, e.g., In re NJOY, Inc. Consumer Class Action Litig.*, 120 F. Supp. 3d 1050, 1080-81 (C.D. Cal. 2015) (accepting expert contention that Internet panel surveys are a "well-accepted approach in the field of consumer advertising and consumer research"); *see also, e.g., GoSMiLE, Inc. v. Dr. Jonathan Levine, D.M.D. P.C.*, 769 F. Supp. 2d 630, 643-44 (S.D.N.Y. 2011).

SEPFF593. Professor Dhar testified that in the past ten years a very large percentage (over 80%) of the surveys he has conducted have been online surveys. 5/8/17 Tr. 2730:22-2731:2 (Dhar); *see also* Tr. 5/8/17 2934:12-20 (Boedeker) ("Internet surveys over the last five to ten years, are the most frequently conducted surveys."). Professor Dhar further testified that in the cases he has been involved in, he is not aware of a court ever having rejected a survey or discounted its results on the ground that online surveys as a methodology are not reliable. 5/8/17 Tr. 2731:3-2732:10 (Dhar). For his part, Professor Hauser testified that of the approximately 150 surveys that he has conducted in the past five years, not a single one was a random digit dial (RDD) telephone survey. 5/9/17 Tr. 3115:2-3116:20 (Hauser). And Mr. Lenski's firm, Edison Research, routinely conducts online surveys for paying clients; in fact, as a proportion of all surveys that Edison conducts, the percentage of online surveys has increased in

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[46] *See also* Ex. 22 at ¶ 33 n.22 (Dhar Corr. WDT) (citing Trial Ex. 279 at 401 (Shari Seidman Diamond, "Reference Guide on Survey Research," *Reference Manual on Scientific Evidence*, Third Edition, Federal Judicial Center, 2011; Gelb, G., and Gelb, B., "Internet Surveys for Trademark Litigation: Ready or Not, Here They Come," *The Trademark Reporter*. Vol. 97, 2007; Poret, H., "A Comparative Empirical Analysis of Online versus Mall and Phone Methodologies for Trademark Surveys," *The Trademark Reporter*. Vol. 100, 2010; Simonson, A., "Online Interviewing for Use in Lanham Act Litigation," *Intellectual Property Strategist* Vol. 14, 2007).

recent years. 5/4/17 Tr. 2680:14-2682:4 (Lenski). It is noteworthy that Sirius XM uses online surveys internally, and that one of its experts conducted an online survey in a previous CRB proceeding. *See, e.g.*, Trial Ex. 246 at 2 (SXM_DIR_00024169). Consistent with this trend in practice, researchers have concluded that, for many types of surveys, online data collection is more reliable than data collection by telephone. Trial Ex. 44 at ¶ 19 (Simonson WRT); 5/11/17 Tr. 3430:17-3431:12 (Simonson); *see also* Trial Ex. 21 at ¶ 25 (Boedeker WDT) (less random measurement error in online surveys relative to telephone and mall intercept).

SEPFF594. In contrast to Internet surveys, which are on the rise, there is a declining reliance on telephone surveys (with the possible exception of simple political polls).[47] Cellphones are used in a wide range of environments, including many that involve various distractions and are likely to limit the respondents' ability and motivation to carefully consider survey questions.[48] This growing problem indicates that telephone surveys should not be used when survey questions are more complex or require respondents to predict behaviors under unfamiliar conditions. In this context, respondents are highly unlikely to spend the cognitive effort and take the time to thoughtfully consider their answers; instead, they are likely to provide their top-of-mind or oversimplified and unreliable answers. Trial Ex. 44 at ¶¶ 18-19 (Simonson WRT); 5/11/17 Tr. 3427:17-3428:10 (Simonson); 5/11/17 Tr. 3428:11-19 (Simonson); 5/11/17 Tr. 3436:18-3427:4 (Simonson); *see also* Trial Ex. 40 at ¶ 23 (Dhar WRT); 5/8/17 Tr. 2730:18-21 (Dhar).

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[47] At present, 88.5% of U.S. households have Internet access; by contrast, 52% of households have a landline telephone. Trial Ex. 22 at ¶ 33 & n.23 (Dhar Corr. WDT); 5/8/17 Tr. 2729:15-23 (Dhar); 5/11/17 Tr. 3427:1-8 (Simonson).

[48] Although the limitations of telephone surveys are more pronounced due to the increase in cell phone usage, the challenges of this methodology are certainly not limited to cellphones. Regardless of whether potential respondents are contacted on cellphones or landlines, telephone surveys are not an appropriate methodology for complex, time-consuming surveys. Trial Ex. 44 at ¶ 20 (Simonson WRT).

SEPFF595. Consider, for example, a consumer who is watching a television program or is having dinner when the survey firm contacts him/her. That consumer may be willing to try to help the interviewer and answer some questions, but such a consumer is unlikely to invest the cognitive effort necessary for more complex questions. Trial Ex. 44 at ¶ 20 (Simonson WRT); 5/11/17 Tr. 3427:17-3428:19 (Simonson). In contrast, Internet surveys allow respondents to review instructions or a list of alternatives, enabling respondents to process information at their own speed. Trial Ex. 22 at ¶ 33 (Dhar Corr. WDT); 5/8/17 Tr. 2730:6-21 (Dhar).

SEPFF596. The limitations of telephone surveys are less severe for short and simple interviews that merely ask respondents to retrieve what they already know, as opposed to asking them for speculations and predictions that, at the very least, call for a careful consideration and analysis. Thus, telephone surveys are suitable to many political and public opinion polls, because most people have already determined and know their opinions and can simply retrieve them to generate the answers. Trial Ex. 44 at ¶ 21 (Simonson WRT); 5/11/17 Tr. 3428:11-19 (Simonson).

SEPFF597. For these reasons, a telephone RDD survey would not have been appropriate for the survey that Professor Dhar conducted in this case because it would have been difficult for respondents to process the information. 5/8/17 Tr. 2732:24-2733:7 (Dhar); *see also* 5/11/17 Tr. 3427:8-3429:2 (Simonson) (explaining that he conducted an Internet survey for reasons similar to Professor Dhar's); 5/8/17 Tr. 2936:4-2937:8 (Boedeker) (same).

SEPFF598. Finally, it is worth noting that an RDD telephone survey, despite its name, is not a true random sample. Although the telephone numbers are randomly generated, those numbers may not exist, or may not be assigned to current users. In addition, no survey is

likely to have a 100% response rate. Therefore, using the purest definition of probability sampling, Mr. Boedeker (the only survey expert in this proceeding qualified as an expert in statistics) explained that a telephone survey with anything less than a 100% response rate is not technically a random sample. 5/8/17 Tr. 2937:9-2938:7 (Boedeker).

b. Professor Dhar's Survey Included Instructions To Prevent Respondents From Guessing Or Choosing Options They Did Not Want

SEPFF599. As noted above, Professor Dhar's survey questions were pretested to ensure that respondents understood and could respond accurately to the questions.

SEPFF600. Respondents were also instructed, "If you don't know an answer to a question or if you are unsure, please indicate this in your response. It is very important that you do not guess" (underline in original). Trial Ex. 22 at ¶ 27 (Dhar Corr. WDT).

SEPFF601. In addition, the Dhar survey used quasi-filters (*i.e.*, it included the response option of "Don't know/unsure") in order to decrease any potential concern that the respondent will feel pressure to provide an answer when they are unsure. Trial Ex. 22 at ¶ 28 (Dhar Corr. WDT); Trial Ex. 279 at 390 (Shari Seidman Diamond, "Reference Guide on Survey Research," *Reference Manual on Scientific Evidence*, Third Edition, Federal Judicial Center, 2011).

SEPFF602. Respondents were also given an option to choose "Other" when the options provided might not include their specific response to a number of questions, including Question 210.1, which asked respondents who said they would cancel Sirius XM at a certain price but responded that they would not subscribe to a paid music service "What, if anything, you would do instead of paying for a subscription to Sirius XM." Those who chose "Other" were asked to specify an answer to the question in a free-response text box. Trial Ex. 22 at ¶ 29 & App. D at 69 (Dhar Corr. WDT).

c. Professor Dhar Determined Whether A Respondent Would Or Would Not Purchase A Streaming Subscription If They Chose To Cancel Sirius XM Because Of An Increase In Price

SEPFF603. As noted above, one aspect of Professor Dhar's survey was to measure the preferences of subscribers to certain music services who would choose to cancel their subscriptions at a given price. One section of the survey asks respondents whether or not they would subscribe to another music subscription service in place of Sirius XM and, if so, what service. Trial Ex. 22 at ¶ 10 (Dhar Corr. WDT); 5/8/17 Tr. 2728:11-16 (Dhar).

SEPFF604. Respondents who were Sirius XM subscribers were asked a set of up to seven questions about whether they would continue their current subscription to Sirius XM at certain monthly subscription prices. Trial Ex. 22 at ¶ 56 (Dhar Corr. WDT).[49]

SEPFF605. Respondents who said they would cancel their current subscription to Sirius XM at any of the prices provided were asked the next question (Question 210). Question 210 asked each respondent who said he or she would cancel his or her service at a given price whether he or she would purchase, or not purchase, a streaming service subscription. Specifically, for the price level at which a respondent selected "Cancel your subscription" option, a respondent was then asked, "You mentioned that you would cancel your subscription to **Sirius XM** if you were charged **[PRICE AT WHICH THE RESPONDENT CHOSE TO CANCEL THE SERVICE]** per month. Keeping in mind all other music services you subscribe to, would you or would you not subscribe to a paid music service in place of **Sirius XM**? This would only include a new subscription, and would not include a music service that you currently subscribe to." The response options were randomized and included the following: "Yes, I

[49] The portion of the survey that measures the price points at which respondents would continue or cancel their subscription is discussed in Section V.K.4.ii.b, below.

would subscribe to an **On-Demand** music streaming service like Apple Music or Spotify at **$9.99** per month," "Yes, I would subscribe to a **Not-On-Demand** music streaming service like Pandora One at **$4.99** per month," "No, I would not subscribe to a paid music service in place of **Sirius XM**," and "Don't know/unsure" (Q210, bold and underline in original).[50] Trial Ex. 22 at ¶ 58 (Dhar Corr. WDT).

SEPFF606. This question (Question 210) reflected a realistic marketplace context, in which price is always a consideration for a customer. As Professor Dhar testified, "when you're buying something, price is so fundamental [I need] to know the price of something before I can tell you whether or not I want to buy something." 5/8/17 Tr. 2748:15-17 (Dhar); *see also* 5/8/17 Tr. 2835:15-16 (Dhar) (criticizing Mr. Lenski for not including prices). Indeed, Professor Hauser agrees that it was good survey practice for Professor Dhar to inform respondents about the costs of alternative services and that doing so creates a more realistic scenario for consumers. 5/9/17 Tr. 3125:24-3126:11 (Hauser).

d. Professor Dhar's Survey Was Designed To Ensure It Did Not Lead Respondents To A Particular Answer

SEPFF607. Professor Dhar's survey did not lead respondents to particular responses. When respondents reached the switching questions, they were explicitly given the option of "No, I would not subscribe to a paid music service in place of **Sirius XM**" (emphasis in original), in addition to providing a "Don't know/unsure" option. Importantly, the "No" option is rotated, so half the respondents would see "No" first. Trial Ex. 22 at App. D p.69 (Q210) (Dhar Corr. WDT); 5/8/17 Tr. 2743:24-2745:6; 2809:15-2811:8 (Dhar). In addition, the survey clearly explained — twice — that a "yes" response should be given only if the respondent

[50] When answering this question, respondents could click on a link that said **"Click here if you want to review the music services definitions"** (bold in original). Trial Ex. 22 at ¶ 58 & n.37 (Dhar Corr. WDT).

would switch to a *new* subscription service and not a service the respondent already subscribes to. 5/8/17 Tr. 2744:24-2745:6 (Dhar) (explaining the direction was given twice because "I just wanted to be conservative").

SEPFF608. Those who said they would not subscribe to a paid music service in place of Sirius XM, in response to Question 210, above, were asked "You mentioned that you **would not subscribe** to a paid music service in place of **Sirius XM**. What else, if anything, would you do instead of paying for a subscription to **Sirius XM**?" (Q210.1, bold and underline in original.)[51] Their options included the selection of all that apply from the following: "I would purchase CDs and/or music downloads," "I would listen to free music," "Other (Please specify — you will not be constrained by the size of the box)." Trial Ex. 22 at ¶ 59 (Corr. Dhar WDT).

SEPFF609. Lastly, those who said they would listen to free music were asked "How would you listen to free music instead of Sirius XM Satellite Radio" (Q210.2), and asked to pick all that apply from the following answer options, which were presented in randomized order.

- Free Not-On-Demand internet radio with ads (*e.g.*, Pandora; or AM/FM radio stations over the internet)
- Free On-Demand music services with ads (*e.g.*, free, ad-supported Spotify)
- Free On-Demand music video sites with ads (*e.g.*, YouTube)
- Music channels included in an existing cable or satellite TV subscription (*e.g.*, Music Choice)[52]

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[51] Respondents who said they would subscribe to an on-demand service, or a noninteractive service (as well as those who said they were unsure or did not know) were thanked for their time and completed the survey. Trial Ex. 22 at ¶ 59 & n.38 (Dhar Corr. WDT).

[52] Services like Music Choice were included among the free music options both here and below, even though one might view the service as paid for as a small part of the respondent's cable or satellite television subscription payment, because these services could be accessed by the respondent for no incremental charge. Trial Ex. 22 at ¶ 60 & n.39 (Dhar Corr. WDT).

- AM/FM radio or AM/FM HD radio
- Music obtained through Peer-to-Peer file sharing or free download sites
- Borrow CDs, vinyl or tapes from friends or a library
- Continue listening to the music collection I already own
- Other (Please specify — you will not be constrained by the size of the box) _____
- Don't know/unsure

Trial Ex. 22 at ¶ 60 (Dhar Corr. WDT).

SEPFF610. Sirius XM free trial period subscribers, paid on-demand music streaming service subscribers, paid not-on-demand subscribers, and free ad-supported users were asked equivalent questions. Trial Ex. 22 at ¶¶ 61-68 (Dhar Corr. WDT) (trial subscribers), ¶¶ 69-75 (paid on-demand), ¶¶ 76-82 (not-on demand), ¶¶ 83-87 (free, ad-supported).

iv. Professor Hauser's Criticism Of Professor Dhar's Substitution Questions Is Without Merit

a. Professor Hauser's Critique Is Based On A Blatantly Misleading And Poorly Phrased Change To Professor Dhar's "Switching" Question

SEPFF611. Professor Hauser contends that Professor Dhar's "switching" question (regarding whether or not respondents who would cancel their Sirius XM service would switch to a new streaming service) was incomplete because respondents in pretesting wanted the explicit option to switch to a streaming service they already subscribe to. Trial Ex. 11 at ¶¶ 79, 84 (Hauser WRT). Professor Hauser further claims that when he added such an option to his "Modified Dhar Survey" it proved that some respondents in Professor Dhar's survey who indicated they would sign up for a new streaming service must have meant they would sign up for a streaming service they already subscribe to. Trial Ex. 11 at ¶¶ 102-104 (Hauser WRT). Professor Hauser is wrong on all counts.

SEPFF612. *First,* despite having supposedly conducted nine days of pretesting, Professor Hauser never bothered to ask his pre-test subjects whether there was anything the least bit confusing about Professor Dhar's switching questions *as originally phrased by Professor Dhar.* 5/9/17 Tr. 3123:14-20 (Hauser). And for good reason. Professor Dhar could not have been more clear in his survey: when asking whether or not respondents would subscribe to a paid music service in place of Sirius XM, he instructed respondents that they should "only include a new subscription," and for redundancy stated they should "not include a music service that you currently subscribe to." Trial Ex. 22, App. D at 69 (Dhar Corr. WDT). There is nothing ambiguous in that instruction.

SEPFF613. Professor Hauser's assertion that, based on pretesting, "respondents wanted the option to switch to music services for which they already had a subscription," Trial Ex. 11 at ¶ 84 (Hauser WRT) is both misleading and incomplete. In addition to the fact that Professor Hauser never tested Professor Dhar's switching question as originally phrased in the Dhar survey, 5/9/17 Tr. 3123:14-20, 3125:3-10 (Hauser), *not a single one of the Sirius XM subscribers in Professor Hauser's pretest* even stated that they wanted to add such an option to Professor Hauser's survey. Trial Ex. 11, App. H at 2 (Hauser WRT) (top of page summarizing comments on the *Sirius XM* part of the survey); 5/9/17 Tr. 3124:8-19 (Hauser). As for the on-demand section of the survey (not the Sirius XM part), Professor Hauser acknowledged there may have been only one on-demand subscriber who made such a comment. 5/9/17 Tr. 3124:20-3125:2 (Hauser).

SEPFF614. In short, based on a *non-existent concern* in pretesting as it relates to Sirius XM subscribers, Professor Hauser trumped up a reason to abandon Professor Dhar's unambiguous switching question, in favor of a hopelessly vague and poorly worded response

option which entirely nullifies any conclusions from Professor Hauser's survey. Thus, in Professor Hauser's Modified Dhar survey, he added the following response option (option #2) to Question 210: "I would listen to Apple Music, Spotify, Amazon Music, Google Play or another On-Demand music streaming service that I already pay to subscribe to." Trial Ex. 11, App. I at 10 (Hauser WRT). As Professor Dhar explained (and as most high-school English-class students would readily recognize), the clause "that I already pay to subscribe to" is *misplaced.* Because of the misplaced clause, answer option #2 in Question 210 could readily be understood by a respondent to include four **new services** the respondent does not already subscribe to (Apple Music, Spotify, Amazon Music, and Google Play), and one existing service option ("another [O]n-[D]emand music streaming service that I already pay to subscribe to"). 5/8/17 Tr. 2814:15-2816:15 (Dhar).

SEPFF615. As Professor Dhar explained, had Professor Hauser really wanted to test whether adding an explicit "existing subscription" option would make any difference, he could have phrased option #2 correctly in Question 210, *i.e.*, "I would listen to an [O]n-[D]emand music streaming [service] *that I already subscribe to*, *such as* Apple Music, Spotify, Amazon." 5/8/17 Tr. 2816:8-15 (Dhar) (emphasis added).

SEPFF616. Thus, because respondents selecting option #2 in response to Question 210 in Professor Hauser's survey (which is supposed to measure only those who would choose *existing* services they already subscribe to) could clearly have intended to choose a "new" service option (*i.e.*, interpreting Apple Music, Spotify, Amazon Music, and Google Play as new services), Professor Hauser's *entire conclusion is invalid* — *i.e.*, that his survey shows more people would subscribe to an existing service had they been given the explicit option. Respondents who do *not* have Apple Music, Spotify, Amazon Music, or Google Play, and

decided they would want one of those services if Sirius XM were canceled, and selected answer option #2, would be mistakenly categorized by Professor Hauser as wanting to subscribe only to an *existing* service — all because of the basic mistake of misplacing the clause "that I already pay to subscribe to."

SEPFF617. The identical flaw exists as to not-on-demand alternatives. That is, answer option #4 misplaces the "that I already pay to subscribe to" modifier as to not-on-demand services, creating the identical problem. Trial Ex. 11, App. I at 10 (Hauser WRT). Respondents could understand the "Pandora One" choice in option #4 to be a new service they do not already subscribe to, since the modifier is again misplaced at the end of the answer option ("or another Not-On-Demand music streaming service that I already pay to subscribe to," *i.e.*, an existing subscription *other than* Pandora One).

SEPFF618. Although this obviously flawed phrasing would be enough standing alone to invalidate Professor Hauser's "Modified Dhar" survey, there is evidence and data demonstrating that the incorrect phrasing *in fact* confused respondents. As Professor Dhar explained, *42%* of those in Professor Hauser's survey who chose option #2 (and thus were characterized by Professor Hauser as persons who would listen to an On-Demand service they already pay to subscribe to) *do not actually have such a service.* 5/8/17 Tr. 2817:8-2818:11 (Dhar); Trial Ex. 293 at Table 1. And *60%* of those in Professor Hauser's survey who chose answer option #4 as to a Not-On-Demand service (and thus were characterized by Professor Hauser as persons who would listen to a Not-On-Demand service they already pay to subscribe to) *do not actually have such a service*. 5/8/17 Tr. 2817:8-2818:11 (Dhar); Trial Ex. 293 at Table 1. We know this because Professor Hauser separately asked in his survey (Question 54) what music streaming services the respondents currently have. 5/8/17 Tr. 2819:14-2822:13

(Dhar explanation of inconsistency in Hauser survey); Trial Ex. 293 (Table 1 and notes) (showing inconsistent results and methodology); Trial Ex. 11, App. I at 4 (showing Hauser Q54). The 24 respondents who said they would listen to an On-Demand service that they already subscribe to (but who have no such service) must have intended to state they would subscribe to a *new* On-Demand service; when their responses to Question 210 are correctly categorized, this change increases the percentage of respondents who would choose a new On-Demand service from 15% to 19%. 5/8/17 Tr. 2822:1-2823:10 (Dhar).[53]

SEPFF619. It is telling that even though Professor Hauser sat through Professor Dhar's trial testimony, 5/9/17 Tr. 3030:23-3031:2 (Hauser), nowhere in his own trial testimony the next day does Professor Hauser even attempt to argue that his re-phrasing of these answer options was properly worded or clear to respondents. Professor Hauser also conceded that he checked all the numbers in Trial Ex. 293 (in which Professor Dhar tabulated the inconsistent answers in Professor Hauser's survey and listed the sources for the data) and found them to be correct. 5/9/17 Tr. 3143:18-3144:7 (Hauser).

SEPFF620. Rather than defend the flawed phrasing of his survey, Professor Hauser acknowledged "there is confusion" in his own survey. 5/9/17 Tr. 3104:21-23 (Hauser). Having also conceded the accuracy of the raw survey data compilation by Professor Dhar in Trial Ex. 293, 5/9/17 Tr. 3143:18-3144:7 (Hauser), Professor Hauser can only muster a half-hearted argument that the number of inconsistent responses in Professor Hauser's survey might be lower than Professor Dhar concludes. 5/9/17 Tr. 3104:18-3105:12 (Hauser). But even that assertion is flawed. Trial Exhibit 293 shows, for example, that of the 57 respondents Professor

[53] As discussed below, Professor Hauser also fundamentally changed the survey population, which could also account for the difference in results between his survey and Professor Dhar's.

Hauser categorized as having chosen an on-demand service they already subscribe to, 24 do not even have such a service (as determined by Professor Hauser's Question 54). Professor Hauser speculates that perhaps some of those 24 people could have an existing paid interactive service *other than* Apple Music or Spotify (two of the on-demand options listed in Question 54), such as Amazon Prime Music or Google Play, so that the number of inconsistent responses may not be as high as indicated on Trial Ex. 293. 5/9/17 Tr. 3104:18-3105:12 (Hauser). But this explanation does not hold water. As Professor Hauser acknowledged in response to a question from Judge Strickler, Hauser Question 54 allowed respondents to choose "other," so it is *not* the case that they were limited to listing Apple Music or Spotify, 5/9/17 Tr. 3103:9-14 (Hauser).[54]

SEPFF621. In sum, Professor Hauser's core attack — that respondents wanted a response option for "pre-existing streaming service," and that adding that option showed Professor Dhar's responses overstate the percentage of respondents who choose a new subscription — is wrong. Professor Hauser never tested Professor Dhar's question as originally (and clearly) framed; none of his pre-test Sirius XM subscriber respondents even voiced a concern that an additional option was needed; and the new answer option Professor Hauser nevertheless added was improperly phrased, inflating the number of people Professor Hauser claims would choose an existing streaming service.

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[54] In fact, Professor Hauser's results showed that of the 24 respondents who chose option #2 and were thus categorized as choosing an existing on-demand service, ten had no music streaming service at all (Q51), 5 had only free not-on-demand, 1 had free on-demand, 6 had free on-demand and free not-on-demand, and two respondents left Q54 blank. Trial Ex. 288, Tab "Modified Dhar Sirius XM Survey." And of the 18 inconsistent answers as to not-on-demand in Trial Ex. 293, 5 had no music streaming service (Q51); the responses to Q54 showed 2 had a paid on-demand service; 2 had a paid on-demand and free not-on-demand; 3 had free not-on-demand; 4 had both free on-demand and free not-on-demand; and 2 had paid on-demand, free on-demand, and free not-on-demand. Trial Ex. 288, Tab "Modified Dhar Sirius XM Survey." That is, none of the 18 who said they would subscribe to an existing not-on-demand service actually had one.

SEPFF622. Finally, it should also be noted that Professor Hauser does not contend that his criticisms of the pricing part of Professor Dhar's survey would have affected the validity of the responses to the switching questions. 5/9/17 Tr. 3065:14-22 (Hauser).

b. There Is No Merit To Professor Hauser's Argument That Professor Dhar's Switching Questions Are Biased Toward Paid Music Services Or Result In Inconsistent Answers

SEPFF623. Professor Hauser next argues that, beyond the arguments already addressed above, Professor Dhar's switching questions excessively focused on new paid music services and did not provide a comprehensive list of other options to which respondents might switch. Trial Ex. 11 at ¶¶ 13-14, 65-70. This argument also ignores the original phrasing of Question 210 in several important respects.

SEPFF624. *First,* Dhar Question 210 advises respondents to "keep[] in mind all other music services you subscribe to," so there is in fact an explicit reminder that respondents should consider their existing subscriptions when they decide whether or not they would subscribe to a new streaming service. *Second,* as noted above, the Dhar survey twice reminds respondents that the "yes" response option includes only new services. *Third,* Professor Dhar very clearly presents, in a succinct, easy-to-follow question and response, the option of "No, I would <u>not</u> subscribe to a paid music service in place of **Sirius XM**" (emphasis in original), in addition to providing a "Don't know/unsure" option. Importantly, *the "No" option is rotated, so half the respondents would see "No" first.* Thus, there is nothing the least bit leading about the question and it is not biased to favor a "yes" response. Trial Ex. 22, App. D at 69 (Q210) (Dhar Corr. WDT); 5/8/17 Tr. 2743:24-2745:6, 2809:15-2811:8 (Dhar).

SEPFF625. Professor Dhar, a consumer psychologist, explained that staggering the responses as he did (*i.e.*, asking about free music options only after a respondent answered "no"

to the "new subscription" question) is consistent with marketplace reality and how consumers would approach the issue. That is, faced with the loss of Sirius XM (and its subscription price no longer being paid), a consumer would first consider **whether or not** to subscribe to a different service. 5/8/17 Tr. 2751:14-2752:6, 2810:14-2811:8 (Dhar); *see also* 5/8/17 Tr. 2726:11-19, 2727:9-2728:6 (Dhar) (outlining expertise in consumer psychology). Respondents who would choose not to purchase a new subscription, and instead exclusively use other services, such as AM/FM, would choose the option "No, I would not subscribe to a paid music service in place of **Sirius XM**." Trial Ex. 40 at ¶ 59 (emphasis in original); 5/8/17 Tr. 2755:18-25 (Dhar).[55]

SEPFF626. Professor Dhar's understanding that the expert witness economists were interested in whether or not respondents would subscribe to a new service, as opposed to measuring AM/FM, means simply that if a respondent stated they would subscribe to a new streaming service, the Dhar survey terminates — it does not go on to measure the extent of alternative services *in addition to* a paid streaming service, should a respondent choose "yes" to a paid streaming service. 5/8/17 Tr. 2909:21-2910:4 (Dhar). That is, the Dhar survey reliably indicates *whether or not* a consumer would choose a new paid streaming service if he or she canceled a Sirius XM subscription, but does not purport to measure how many free services the consumer might also use *in addition* to a paid music service. (As noted above, Professor Simonson *does* provide multiple options in a single question and obtained results very similar to Professor Dhar's as to paid on-demand switching, and an even higher percentage as to paid not-on-demand switching.)

[55] Professor Hauser's decision to move the "free" options into the first phase of questions in his "Modified Dhar" survey was not the result of pretesting feedback; he had already decided to change the survey that way before conducting the pretest. 5/9/17 Tr. 3050:21-3052:24 (Hauser).

SEPFF627. Professor Hauser next contends that Professor Dhar's survey is unreliable because of allegedly inconsistent responses — namely, that 63 Sirius XM respondents who already have one on-demand service would sign up for an additional on-demand service if they canceled their Sirius XM subscriptions. Trial Ex. 11 ¶¶ 71, 73 (Hauser WRT). But these responses are not inconsistent. It is entirely reasonable that in the context of a household with more than one user, upon the loss of Sirius XM the household would want an additional streaming service. 5/8/17 Tr. 2811:9-2812:11 (Dhar). While it might be somewhat less likely to have more than three or more users in a family, *only 27* respondents indicated they would purchase another streaming subscription when they already had two, which is also reasonable (and a relatively small percentage of the survey universe) when considering the household. Trial Ex. 11 at ¶ 71 (Hauser WRT); 5/8/17 Tr. 2812:12-2813:6 (Hauser). And the fact that of the 12 on-demand subscribers asked the switching question, a mere 4 would purchase a second Sirius XM subscription upon cancelling their Apple Music or Spotify subscriptions, Trial Ex. 11 at ¶ 73 (Hauser WRT), is hardly surprising or inconsistent given that one household member who had used those services in the car would now need to replace it. 5/8/17 Tr. 2813:7-2814:8 (Dhar); *see also* 5/11/17 Tr. 3512:15-3515:10 (Simonson) ("As we know, many household have two cars or more, and they listen to music in all kinds of places, and there are multiple members, so" some answers that indicate respondents would subscribe to multiple services, including services of the same type is "exactly what you would expect").

SEPFF628. In his zeal to attack Professor Dhar, Professor Hauser even criticizes Professor Dhar for providing definitions of Satellite Radio, On-Demand, and Not-on-Demand, apparently because Professor Dhar did not also define free services. Trial Ex. 11 at ¶ 67 (Hauser

WRT). It is absurd, however, to suggest that respondents would need a definition of free music choices such as AM/FM radio. 5/8/17 Tr. 2892:6-12 (Dhar).

c. Professor Hauser's Criticism Of Professor Dhar's Survey Universe Is Without Merit

SEPFF629. Professor Hauser next contends that Professor Dhar's survey may not fully represent the full Sirius XM subscriber universe because Professor Dhar limited the Sirius XM portion of his survey to respondents who indicated they have the Select package. Professor Hauser asserts that Professor Dhar screened out 73% of the population because respondents stated that they do not have Sirius XM Select service. Trial Ex. 11 at ¶ 124 (Hauser WRT). As Professor Dhar explained, however, and as Sirius XM's own data shows, the Select package is [ ] Sirius XM paid subscription base in the most recent months for which Sirius XM produced data. Trial Ex. 22 at ¶ 10 (Dhar Corr. WDT); Trial Ex. 265 at 6; Trial Ex. 146 at Tab "Subscribers by Package," Heading "Selfpay" [ ] (native file); *see also* 5/8/17 Tr. 2827:1-2830:11 (Dhar); 5/8/17 Tr. 2736:24-2738:17 (Dhar).

SEPFF630. Professor Dhar's survey had a very large sample size of approximately 500 Sirius XM subscribers, Trial Ex. 22 at 18-19 & Table 1 (Dhar Corr. WDT), [ ] and one that contains a mix of music and non-music. Professor Dhar also had to avoid creating an overly complex survey. Had he attempted to tailor his pricing questions to every possible package, he would have needed to include [ ], — and even more if he were to break those

packages out further according to whether a subscriber had an XM or Sirius radio. 5/8/17 Tr. 2736:24-2738:12, 2747:20-2748:3 (Dhar).[56] Moreover, the survey respondents obviously already know what they listen to on Sirius XM and what they like about the service, making them fully capable of answering questions as to their willingness to pay and what substitutes they might choose, regardless whether they know the correct *name* of their package. 5/8/17 Tr. 2923:14-25 (Dhar).

SEPFF631. Ultimately, Professor Hauser acknowledged at trial that it is possible that Professor Dhar's survey is in fact representative of the entire Sirius XM population, and Professor Hauser acknowledged that he did not and could not actually test whether that is the case. 5/9/17 Tr. 3130:6-11 (Hauser). The validity of Professor Dhar's choice, and representative nature of the Select package, is in fact corroborated by Professor Simonson's results. Professor Simonson's survey (based on Mr. Lenski's construct) does not have a willingness-to-pay portion, so there was no concern about creating confusion and complexity by including all kinds of Sirius XM packages. Professor Simonson's survey universe includes any Sirius XM package *and his results are very similar to Professor Dhar's. See infra* Section V.J.2. This suggests that the dominant Select package is appropriately representative of the larger Sirius XM user population.

d. Professor Hauser's Suggestion That Professor Dhar Should Have Created An "Incentive-Aligned" Survey Is Unsupported And Without Merit

[56] With respect to the pricing cancellation section of the survey, addressed in Section V(K)(4)(ii)(b)(3), below, Professor Hauser asserts that if Professor Dhar had included All Access, those respondents might be *less* likely to switch at prices below $19.99 (*i.e.*, elasticity would be even lower than reported), and had Professor Dhar included the Mostly Music package, respondents might be more likely to cancel at lower prices. [[redacted]]. In the end, Professor Hauser acknowledges that "the overall effect could go either way." 5/9/17 Tr. 3036:16-3037:5 (Hauser). This further demonstrates that Professor Dhar appropriately chose the "sweet spot" of the [[redacted]], when taking into account the importance of avoiding an overly complex and confusing survey.

SEPFF632. As part of his shotgun attack on Professor Dhar's survey (without even putting forth a survey of his own that he holds out as reliable), Professor Hauser next argued that Professor Dhar should have, in some unspecified way, created an "incentive aligned" survey. Professor Hauser made no attempt to suggest how Professor Dhar could have done so (*e.g.*, by giving respondents the opportunity to win a free streaming service, without biasing the survey responses in favor of that service?), and all but abandoned this criticism at trial. Professor Hauser acknowledged at trial that "incentive alignment" is a relatively new phenomenon, 5/9/17 Tr. 3047:5-6 (Hauser); that it would be "difficult" and "challenging" to implement for this type of survey, 5/9/17 Tr. 3046:24, 3047:17 (Hauser); that it is not common in litigation surveys, 5/9/17 Tr. 3047:23 (Hauser); that he did not incentive align the survey he personally designed in *SDARS II*, 5/9/17 Tr. 3127:2-5 (Hauser); and that many courts accept into evidence surveys that are not incentive-aligned, 5/9/17 Tr. 3126:15-20 (Hauser). *See also* 5/8/17 Tr. 2823:23-2825:15 (Dhar) (incentive-aligned surveys are uncommon and would not be feasible in this context).

e. Professor Hauser Does Not Hold Out Either Of His Own Surveys As Reliable Or Scientifically Valid

SEPFF633. Although Professor Hauser criticized Professor Dhar's and Mr. Boedeker's surveys, he was unable or unwilling to conduct a reliable survey of his own. Instead, Professor Hauser conceded unequivocally that he is not holding out his two surveys — as a whole or as to the switching/substitution questions — as scientifically valid because he believes there were additional biases in Professor Dhar's survey he did not correct. 5/9/17 Tr. 3146:5-3147:8 (Hauser). Professor Hauser further testified that he would *not* advise economists to take the results of *either* of his two surveys as representing the true population or marketplace. 5/9/17 Tr. 3149:14-18, 3147:9-25 (Hauser).

SEPFF634. Beyond these fatal concessions, there are independent reasons why Professor Hauser's survey results are unreliable, as discussed in the "switching" section above, and the "pricing" section below. As explained in those sections, Professor Hauser's surveys are unreliable for the independent reasons that he eliminated anyone who had taken any music or radio survey in the six months preceding his survey (*i.e.*, he removed a large group of consumers who likely had a significant interest in music); used a far too small sample size in the "Dhar Reproduction" Survey, a problem exacerbated by the paltry 1.3% response rate; and changed the switching/substitution question from clear to hopelessly vague by misplacing the clause purportedly describing the category.

2. The Simonson Survey Provides Powerful Evidence Corroborating The Dhar Survey

i. Professor Simonson's Qualifications And Assignment

SEPFF635. Professor Itamar Simonson is an expert in consumer decision-making and survey methodology. 5/11/17 Tr. 3425:1-6 (Simonson). His background, experience, and qualifications are discussed in Trial Ex. 44 at ¶¶ 1-8 & App. A (Simonson WRT).

SEPFF636. Professor Simonson was asked (a) to evaluate the survey conducted by Mr. Lenski on behalf of Sirius XM, and if he determined that the survey suffered from serious flaws, (b) to conduct a survey that corrects key flaws of the Lenski survey and provides an estimate of consumers' music-source choices if Sirius XM service was no longer available. Trial Ex. 44 at ¶ 9 (Simonson WRT); 5/11/17 Tr. 3426:11-17 (Simonson).

SEPFF637. The survey conducted by Mr. Lenski purports "to provide information about what current SiriusXM listeners listened to before they began listening to SiriusXM and what they would listen to if SiriusXM were no longer available, and about what current Pandora listeners listened to before they began listening to Pandora and what they would listen to if

Pandora were no longer available." Trial Ex. 7 at 2 (Lenski WDT); *see also* Trial Ex. 44 ¶ 13 (Simonson WRT). The Lenski survey also purports to measure how Sirius XM listeners would divide their listening to other types of audio if Sirius XM were no longer available and how Pandora listeners would divide their listening to other types of audio if Pandora were no longer available. Trial Ex. 7 at 6-7 (Lenski WDT). Mr. Lenski explained that he was "asked to conduct a survey to measure among . . . a representative sample of current Sirius XM listeners what they listened to before they listened to Sirius XM and what they would divide their time in terms of listening if Sirius XM no longer existed." 5/4/17 Tr. 2633:6-14 (Lenski).

SEPFF638. With respect to the first part of his assignment, Professor Simonson evaluated the Lenski survey and determined that it suffered from a number of serious flaws, Trial Ex. 44 at ¶¶ 17, 28-46 (Simonson WRT), and those flaws are discussed in Section VII.G.2, *infra*. In the paragraphs immediately below we will discuss Professor Simonson's conclusions with respect to the second part of his assignment to provide, based on a survey that corrected Mr. Lenski's methodology, an estimate of consumers' music-source choices if Sirius XM service was no longer available.

ii. Results Of The Simonson Survey

SEPFF639. As Professor Willig noted in his written rebuttal testimony, results of the survey conducted by Professor Simonson confirm that Professor Willig's opportunity cost is, if anything, conservative. Trial Ex. 46 at ¶ 76 (Willig WRT). Indeed, as Professor Willig testified at trial, "although I started out relying on Professor Dhar's survey, there's also the Simonson survey, which is consistent with or actually leads to a somewhat larger opportunity cost." 5/2/17 Tr. 2058:12-16 (Willig).

SEPFF640. For Professor Willig, the most important aspect of the Simonson survey results is the extent to which Sirius XM subscribers would choose paid subscriptions to

interactive and noninteractive services if they did not have their Sirius XM subscription. Trial Ex. 46 at ¶ 76 (Willig WRT).

SEPFF641. The Simonson survey shows that 31% of the respondents would choose a paid interactive subscription service and 33% would choose a paid noninteractive subscription service. Trial Ex. 46 at ¶ 76 (Willig WRT). The corresponding percentages from the Dhar survey were the same or lower: 31% and 15%, respectively. Trial Ex. 46 at ¶ 76 (Willig WRT). Thus, with respect to subscription interactive services, Professor Simonson's survey produced diversion figures identical to the Dhar survey. Trial Ex. 46 at ¶ 76 (Willig WRT); 5/02/17 Tr. 2061:23-25 (Willig). With respect to subscription noninteractive services, the Simonson survey produced diversion figures that exceeded diversion figures in the Dhar survey. Trial Ex. 46 at ¶ 76 (Willig WRT); 5/2/17 Tr. 2061:23-2062:5 (Willig).

SEPFF642. Based on just these two components — subscription fully interactive and subscription noninteractive services — the Simonson survey produces an opportunity cost for Sirius XM of $2.65 per subscriber-month. Trial Ex. 46 at ¶ 76 (Willig WRT).

SEPFF643. More detailed results are presented in Table 12 (Appendix F) of Trial Ex. 44 (Simonson WRT). The key response categories and corresponding percent answers are as follows and in the chart below:[57]

a. Subscribe to an interactive, commercial-free, streaming music service that you do not currently subscribe to (for example, Apple Music, Google Play, Spotify Premium, or Rhapsody, where you can choose the music you want to listen to on-demand over the

[57] *See* Trial Ex. 44 at ¶69 (Simonson WRT). Estimates are associated with a confidence interval of between +/- 1% and +/- 3%. Most percentage estimates for the music response categories are associated with a confidence interval of +/- 2%. In addition to Professor Simonson's own calculations, he asked the Brattle Group to conduct a "bootstrapping" procedure (pursuant to American Association for Public Opinion Research recommendations) to estimate the precision of, and create a confidence interval around, each one of the reported survey results. A set of 1,000 independent "resamples" were generated by the Brattle Group by randomly selecting respondents with replacement from the original, full-sample of survey respondents. Sampling weights were adjusted by age, gender, and Census region for the resampling. The variation in these 1,000 weighted estimates derived from each of the 1,000 "resamples" forms the basis of standard error calculations attached as Appendix C to Trial Exhibit 44 (Simonson WRT). *See* Trial Ex. 44 at ¶ 69 n. 33 (Simonson WRT).

Internet, at a price of approximately $9.99 per month):
31%

b. Listen to a free interactive streaming music service, along with commercials, more than you currently do (for example, the free version of Spotify, where you can choose the music you want to listen to on-demand over the Internet):
26%

c. Subscribe to a noninteractive, commercial-free, streaming music service that you do not currently subscribe to (for example, Pandora One or Pandora Plus, where you can listen to music customized to your tastes over the Internet, at a price of approximately $4.99 per month):
33%

d. Listen to a free noninteractive streaming music service, along with commercials, more than you currently do (for example, the free version of Pandora, where you can listen to music customized to your tastes over the Internet):
29%

e. Listen to AM/FM radio more than you currently do:
59%

f. Buy more music CDs or downloads than you currently do:
19%

g. Listen to music or watch music videos on YouTube more than you currently do:
17%

h. None of the above:
4%

SEPFF644. On average, respondents selected 2.2 music sources that would have been added or consumed at a higher rate if the Sirius XM service were no longer available. Trial Ex. 44 at ¶ 69 (Simonson WRT). This average is similar to that obtained in the Lenski survey (2.3; *see* Trial Ex. 7 at 5 (Lenski WDT)), though the distribution across music sources was quite different. Not surprisingly, music categories presented in the Lenski survey that failed to mention key services (for example, Apple Music) were much less likely to be chosen by the Lenski survey respondents. The unjustified and unexplained omission of key music options was corrected in Professor Simonson's survey. Trial Ex. 44 at ¶ 69 (Simonson WRT). The results of the Simonson survey showed that, by not presenting key music source options (and their prices)

that are in fact available to consumers in reality (and by focusing on future hypothetical listening time), the Lenski survey failed to provide reliable estimates of the choices that consumers would make if Sirius XM were not available. By contrast, Professor Simonson's survey *does* provide reliable data about the sources of music that Sirius XM users would likely subscribe to or consume at a higher rate in case their current Sirius XM service were no longer available. Trial Ex. 44 ¶ 74 (Simonson WRT).

SEPFF645. Professor Simonson's findings are consistent with prior research regarding consumer behavior; for example, research shows that consumers have a mental budget for entertainment, so discontinuing payments for the Sirius XM service is likely to lead to subscription to other paid services. *See* Section VIII.G.2.iii, *supra*. Trial Ex. 44 at ¶ 12 (Simonson WRT). In addition, Professor Simonson's results are consistent with consumer loss aversion, meaning that consumers tend not to give up a certain level of quality once they have obtained it. *See* Section V.J.2.iv.a, *supra*. These individuals, who are currently paying for Sirius XM, are "willing to pay a price to get a higher quality product . . . better music and so on," and if Sirius XM were not available one would expect them to purchase another premium product in addition to "enjoying whatever they can get from AM/FM." 5/11/17 Tr. 3438:2-8 (Simonson).

iii. Professor Simonson's Survey Methodology

a. General Survey Methodology

SEPFF646. Because Professor Simonson concluded that the Lenski survey suffered from significant flaws, he designed a survey that paralleled the Lenski survey but made changes necessary to correct Mr. Lenski's violation of basic survey principles. Trial Ex. 44 at ¶¶ 11, 47, 49 (Simonson WRT). With these changes, Professor Simonson testified that the results of his survey are reliable. Trial Ex. 44 at ¶ 78 (Simonson WRT); 5/11/17 Tr. 3446:19-24 (Simonson). Professor Simonson's principal changes to the Lenski survey are discussed below.

SEPFF647. Consistent with the Lenski survey, Professor Simonson's survey was designed to learn about the music choices Sirius XM (paid) subscribers would make in case Sirius XM were no longer available. Furthermore, similar to the Lenski survey, both Sirius XM subscribers and Pandora subscribers were included; but unlike the Lenski survey, only subscribers to the paid Pandora service (*i.e.*, Pandora One or Pandora Plus) were included. For those who were subscribers of both music services, the questions pertaining to Sirius XM were asked before the questions pertaining to Pandora. Trial Ex. 44 at ¶¶ 11.b, 48.b, 50 (Simonson WRT).

SEPFF648. Instead of using an unsuitable telephone survey methodology, *see supra* Section VII.G.2.i, Professor Simonson conducted his survey using an online panel. 5/11/17 Tr. 3426:24-25 (Simonson); 5/11/17 Tr. 3436:4-12 (Simonson). Internet surveys are particularly well-suited for the types of questions used in Professor Simonson's survey because they allow the consumer a better opportunity to review and carefully consider the questions, definitions, options, and other information included in the survey. Trial Ex. 44 at ¶¶ 11.a, 48.a, 51 (Simonson WRT); 5/11/17 Tr. 3427:1-3429:2 (Simonson). *See supra* Section V.J.1.iii.a.

SEPFF649. To draw statistical inferences for the target population, the representativeness of the survey population was ensured by "click-balancing" the inbound sample (*i.e.*, targeting a representative sample from the market research panel based on the distribution of individuals by validated demographics) to the U.S. Census data. The demographic variables used for balancing were gender, age, and Census region, and the resulting survey population was within 3% of the U.S. Census.[58] The final sample also reflects the

[58] The Census population estimates were the same as those applied for the Dhar survey. For related data, see Trial Ex. 44 at ¶ 52 n. 27 (Simonson WRT) (citing U.S. Census Bureau, "Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2016," Population Division, accessed January, 2017. http://www.census.gov/programs-surveys/popest/data/tables.html.) Reweighting responses by age and gender would not alter Professor Simonson's

screening criteria (for example, whether the respondents were Sirius XM and/or Pandora subscribers). The survey was double-blind and respondents were not told who sponsored the survey. Prior to launching the survey, Professor Simonson tested the links, skip logic, and randomization instructions. Trial Ex. 44 at ¶ 52 (Simonson WRT).

SEPFF650. A total of 1,351 respondents completed the survey, including those qualified as Sirius XM-only users, those who qualified as Pandora-only users, and those qualified as users of both services.[59] The survey data were collected between January 20, 2017 and January 30, 2017. The study's implementation was managed and supervised by Target Research Group, a highly experienced survey research firm. Trial Ex. 44 at ¶ 62 (Simonson WRT).

SEPFF651. Professor Simonson validated his results. Respondents were asked (though not required) to provide their name and telephone number, and 1,319 of them did. These respondents were subsequently contacted by an independent research firm, Field Solutions (located in Delray Beach, Florida), which contacted them after they completed the survey to validate that they were in fact the individuals who had completed it. The research firm was able to reach 1,150 of these respondents (87%). Based on these validation interviews (in which Field Solutions representatives again asked respondents to verify their current music service subscriptions), 17 respondents were removed from the final data set. Eight out of these 17 were removed because they were Pandora respondents who indicated on the validation call that they

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conclusions. Although Professor Simonson believed reweighting responses was unnecessary here, he stated that he understood that the Brattle Group performed this calculation and found that his results before and after weighting are not materially different (within 0.3%). Trial Ex. 44 at ¶ 52 n. 27 (Simonson WRT).

[59] Consistent with common practice, a total of 93 respondents were excluded from the final sample because they completed the survey too fast (less than three minutes) or took too long (over 40 minutes). Trial Ex. 44 at ¶ 63 (Simonson WRT).

had not listened to Pandora during the past month. Six of the 17 removed respondents were removed because they were Sirius XM respondents who said on the validation call that they did not have Sirius XM subscriptions. The three additional respondents were removed because they said that they did not participate in a survey about Sirius XM/Pandora. (The data for the respondents that were excluded from the final results tabulations are available.) Thus, the final, tabulated sample is based on 1,241 interviews (1,351 – 93 – 17 = 1,241). Trial Ex. 44 at ¶ 64 (Simonson WRT).

b. Professor Simonson's Survey Questions

SEPFF652. Professor Simonson made a number of changes to the flawed questions from Mr. Lenski's survey. Professor Simonson removed the biasing question — Lenski Question 8B — regarding the music source that Sirius XM primarily replaced. Trial Ex. 44 at ¶¶ 11.c, 48.c (Simonson WRT); 5/11/17 Tr. 3437:5-24, 3444:23-25 (Simonson). He also deleted a redundant question, which was included in the screener section of the questionnaire but was not used to screen out respondents, regarding whether respondents kept up with the latest music. Trial Ex. 44 at ¶ 48.c (Simonson WRT).

SEPFF653. Instead of asking the biasing question about previously used music types, Professor Simonson asked respondents an open-ended question, with no predetermined response options, about what led them to subscribe to Sirius XM and/or Pandora Plus/One. Trial Ex. 44 at ¶ 48.c (Simonson WRT); 5/11/17 Tr. 3447:13-3448:10 (Simonson). Specifically, in the first part of the Main Questionnaire, Sirius XM respondents were asked an open-ended question: "If you remember, why did you decide to subscribe to the SiriusXM service? Please type your answer below. Please be specific and include details." 5/11/17 Tr. 3447:13-19 (Simonson). (This was followed by a probe regarding any other reasons.) This open-ended question, which did not suggest any particular answers and allowed respondents to mention whatever they chose

to, helped place the respondents in the mindset of what they like about Sirius XM when they are considering other sources of music if Sirius XM were no longer available.[60] In particular, prior research indicates that, assuming respondents are capable of answering questions reliably, prior mindsets tend to correspond to future mindsets pertaining to comparable decisions.[61] Trial Ex. 44 at ¶ 58 (Simonson WRT); 5/11/17 Tr. 3448:4-10 (Simonson).

SEPFF654. In another improvement over the Lenski survey, Professor Simonson gave respondents pricing information about the options they could choose from if Sirius XM service were no longer available. Trial Ex. 44 at ¶ 11.d (Simonson WRT); 5/11/17 Tr. 3440:24-3441:16 (Simonson). In the Simonson survey, respondents received the following instructions (Q240) and asked the following question (Q250):

> <u>(QUESTION 240)</u>
>
> "Now imagine that SiriusXM were no longer available, and as a result, you no longer have your paid SiriusXM subscription.
>
> We would like you to think about what, if anything, you would do if you no longer had your SiriusXM subscription.

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[60] Unlike the Lenski survey, the respondents in Professor Simonson's survey were not asked sequentially about what they used before Sirius XM and what they would use under the hypothetical future without Sirius XM. Thus, in addition to being an open-ended question (rather than the Lenski survey's repeated multiple choice question), the question included in Professor Simonson's survey could not have created any order effect because it was on a different subject, namely, the mindset that led respondents to subscribe to Sirius XM in the first place. The role of consumer mindsets has been demonstrated extensively in the consumer behavior and psychological literatures; see, for example, Trial Ex. 44 at ¶ 58 n. 29 (citing Leilei Gao and Itamar Simonson (2016), "The positive effect of assortment size on purchase likelihood: The moderating influence of decision order," *Journal of Consumer Psychology*, 26, 542-549; Chezy Ofir and Itamar Simonson (2001), "In Search of Negative Customer Feedback: The Effect of Expecting to Evaluate on Satisfaction Evaluations," *Journal of Marketing Research*, 38 (May), 170-82; S. Malkoc et al. (2010), "Unstuck from the concrete: Carryover effects of abstract mindsets in intertemporal preferences," *OBHDP*, 113, 112-126; Alison Jing Xu and Robert S. Wyer, Jr. (2007), "The Effect of Mindsets on Consumer Decision Strategies," in NA - Advances in Consumer Research Volume 34, eds. Gavan Fitzsimons and Vicki Morwitz, Duluth, MN: Association for Consumer Research, page 631).

[61] *See*, for example, Trial Ex. 44 at ¶ 58 n.30 (Simonson WRT) (citing Robert S. Wyer, Alison Jing Xu and Hao Shen (2012), "The Effects of Past Behavior on Future Goal-Directed Activity," in James M. Olson and Mark P. Zanna, editors: *Advances in Experimental Social Psychology*, Vol. 46, Burlington: Academic Press, 2012, pp. 237-283).

First, please CAREFULLY REVIEW options available to you that are shown below on this page (After reviewing the options, you will make your selections on the next page):

a. Subscribe to an interactive, commercial-free, streaming music service that you do not currently subscribe to (for example, Apple Music, Google Play, Spotify Premium, or Rhapsody, where you can choose the music you want to listen to on-demand over the Internet, at a price of approximately $9.99 per month)?

b. Listen to a free interactive streaming music service, along with commercials, more than you currently do (for example, the free version of Spotify, where you can choose the music you want to listen to on-demand over the Internet)?

c. Subscribe to a non-interactive, commercial-free, streaming music service that you do not currently subscribe to (for example, Pandora One or Pandora Plus, where you can listen to music customized to your tastes over the Internet, at a price of approximately $4.99 per month)?

d. Listen to a free non-interactive streaming music service, along with commercials, more than you currently do (for example, the free version of Pandora, where you can listen to music customized to your tastes over the Internet)?

e. Listen to AM/FM radio more than you currently do?

f. Buy more music CDs or downloads than you currently do?

g. Listen to music or watch music videos on YouTube more than you currently do?

h. None of the above

(QUESTION 250)

Now, if you no longer had your SiriusXM XM subscription, which, if any, of these options would you choose? You may choose none or any number of these options. (Select all that apply) (the above options were then repeated)

Trial Ex. 44 at ¶ 60 (Simonson WRT). Respondents who were paid Pandora subscribers received a comparable question for Pandora. Trial Ex. 44 at ¶ 61 (Simonson WRT).

SEPFF655. Including pricing information in the Simonson survey yielded more reliable results than those from the Lenski survey because it more accurately mimics consumer behavior in the real world. *See supra* Section VIII.G.2.iii. In addition, if anything, the results are conservative in terms of use of paid streaming services. Providing pricing information could

deter people from choosing options with prices, because it reminds them that these services actually cost money. Thus, the pricing information for the streaming services, next to the listing of AM/FM radio, could lead a respondent to choose the free option over those that require a new payment. 5/11/17 Tr. 3461:10-24 (Simonson); 5/11/17 Tr. 3501:6-25 (Simonson).

SEPFF656. Professor Simonson corrected another major flaw in the Lenski survey, and gave respondents a more complete and representative set of alternative options they could choose from if Sirius XM service were no longer available (Lenski Question 8D). The Simonson survey included Apple Music, Google Play, and YouTube in the response options, as shown above. Trial Ex. 44 ¶ 11.d (Simonson WRT); 5/11/17 Tr. 3449:1-3450:7 (Simonson).

SEPFF657. Professor Simonson also corrected the Lenski survey by separating the paid and free tiers of the music services in the survey's answer options, and by removing ambiguity from the answer options. Trial Ex 44 ¶ 46.c (Simonson).

iv. Sirius XM's Critiques Of The Simonson Survey Have No Merit

a. Professor Simonson's List Of Answer Options Was Proper

SEPFF658. Sirius XM appears to criticize Professor Simonson for not including an explicit answer choice to Question 240/250 to listen *more* to an existing paid, interactive music service. *See* 5/11/17 Tr. 3485:12-16 (Simonson). This critique is meritless. *First*, as Professor Simonson testified, there is value in survey design in not including more options than necessary. Not counting the "none of the above" option, Professor Simonson already listed seven answer options. Having conducted significant research on the cognitive load associated with having too many options, Professor Simonson did not want to include more options than seven. 5/11/17 Tr. 3485:17-3486:4 (Simonson); 5/11/17 Tr. 3493:15-20 (Simonson); *see also* 5/9/17 Tr. 3063:2-10

(Hauser) (Professor Hauser recognizing that too much text in answer choices could lead to unreliable results).

SEPFF659. *Second*, the "none of the above" option was explicitly and clearly presented. If a respondent wanted to choose something other than the seven choices (such as an existing streaming subscription), the "none of the above" option was clearly available. 5/11/17 Tr. 3487:20-3488:17 (Simonson); 5/11/17 Tr. 3507:20-3508:4 (Simonson).

SEPFF660. *Third*, Professor Simonson also explained that it is likely that respondents would choose a music alternative beyond what they already have. As explained above, consumers have a mental budget for certain items, including music. Additionally, consumers are loss averse when it comes to quality, meaning that "if they're used to a certain level of quality, they don't like to give it up." 5/11/17 Tr. 3462:4-9 (Simonson). These individuals, who are currently paying for Sirius XM are "willing to pay a price to get a higher quality product . . . better music and so on," and, if Sirius XM were not available, one would expect them to purchase another premium product in addition to "enjoying whatever they can get from AM/FM." 5/11/17 Tr. 3438:2-8 (Simonson). Respondents who were Sirius XM users but who *also* already subscribed to a streaming service had — by definition — decided that they want to spend the money for both. Their behavior tells us that their subscription to the streaming service did not fulfill all the benefits that they were looking for, which is why they decided to also subscribe to Sirius XM. 5/11/17 Tr. 3486:5-3487:2 (Simonson); 5/11/17 Tr. 3488:16-3489:21 (Simonson). Thus, it would be rational for them to subscribe to another streaming service if Sirius XM became unavailable. 5/11/17 Tr. 3490:3-3492:1 (Simonson).

SEPFF661. Finally, it bears noting that Mr. Lenski's survey did not separate out paid streaming services that a respondent already subscribes to from a new subscription to such a

service. *See* Trial Ex. 7 at B-4 (Lenski WDT). Indeed, the number of alternative sources listed by Professor Simonson is greater, and more detailed, than in Mr. Lenski's survey. *Compare* Trial Ex. 7 at B-4 (Lenski WDT) *with* Trial Ex. 44 at ¶ 60 (Simonson WRT).

b. There Are No Inconsistencies In The Simonson Survey Results

SEPFF662. Sirius XM also seems to suggest that Professor Simonson's survey yielded a significant number of inconsistent responses. That is not the case.

SEPFF663. At the hearing, Sirius XM noted that some survey respondents who said they would replace Sirius XM with a new subscription to an interactive, commercial-free streaming music service already subscribe to a commercial-free interactive service. 5/11/17 Tr. 3508:16-25 (Simonson). Professor Simonson explained that if a vehicle no longer had a Sirius XM subscription, it is perfectly reasonable that one family member would use an existing interactive subscription while another would obtain his or her own interactive subscription. Having multiple subscriptions allows multiple people to listen to music simultaneously in different places, 5/11/17 Tr. 3512:6-3513:3 (Simonson); 5/11/17 Tr. 3514:1-4 (Simonson), and tailor their personal subscription to their own tastes. The same logic holds true for individuals who already subscribe to a paid service and reported that, if Sirius XM were not available, they would replace their Sirius XM listening with a free service, 5/11/17 Tr. 3514:13-3515:10 (Simonson); or to Pandora subscribers who are also Sirius XM subscribers, who report that they would get a second Sirius XM subscription if Pandora was no longer available, 5/11/17 Tr. 3516:17-3517:4 (Simonson). In each case, the responses are entirely rational when viewed in the context of decisions for the household.

c. No Pretest Was Necessary

SEPFF664. As Professor Simonson explained, it was not necessary to pretest his questions in this case. Professor Simonson testified that he did not pretest in this case because he has used similar questions to these in the past. He testified that it is his normal practice not to pretest questions that are similar to questions he has used many times before. 5/11/17 Tr. 3473:8-3475:4 (Simonson). Professor Simonson also explained that pretesting has its limitations. 5/11/17 Tr. 3509:4-21 (Simonson).

SEPFF665. Finally, Sirius XM cannot contend that pretesting is a requirement in every case; Mr. Lenski did not pretest his survey either. 5/4/17 Tr. 2658:25-2659:5 (Lenski); 5/11/17 Tr. 3518:8-13 (Simonson).

SEPFF666. Professor Simonson's survey — following the construct of the Lenski survey but correcting its clear flaws — produces reliable results that further confirm the Dhar survey results and further support Professor Willig's opportunity cost calculation.

3. Professor Willig Conducted An Econometric Study That Provides Further Corroborating Evidence

SEPFF667. Professor Willig also tested and confirmed his opportunity cost figure using an econometric analysis. Trial Ex. 28 at ¶ 42 (Willig WDT). "So I asked the question, econometrically, what would happen if there were more or less subscribers to Sirius, what would the impact of that be on the utilization of other subscription services aggregated, both interactive and non-interactive[.]" 5/02/17 Tr. 2075:17-22 (Willig).

SEPFF668. To ensure his econometric analysis could reliably sort out the various two-way relationships among the various streaming services, Professor Willig first needed to identify instrumental variables that relate to the supply or demand of each separate service. Trial Ex. 28 at ¶ 42 (Willig WDT). The only streaming service in this case for which proper instrumental variables were available was Sirius XM. Trial Ex. 28 at ¶ 42 (Willig WDT). As

discussed in Professor Willig's written direct testimony and at trial, the number of Sirius XM subscribers is impacted by *(i)* the price of the service and by *(ii)* the number of car purchasers granted promotional trial service. Trial Ex. 28 at ¶ 42 (Willig WDT); 5/2/17 Tr. 2077:14-20 (Willig). Both of these could be and were employed as instrumental variables reliably to determine how paid Sirius XM subscribership affects the extent of use of other paid streaming services. Trial Ex. 28 at ¶ 42 (Willig WDT).

SEPFF669. To complete his econometric analysis, Professor Willig regressed the aggregate use of all paid streaming services except Sirius XM as the dependent variable and the use of paid Sirius XM as the explanatory variable, instrumented by Sirius XM price and the average number of promotional Sirius XM subscribers over the last 6 months (both lagged by one quarter). Trial Ex. 28 at ¶ 43 (Willig WDT). Professor Willig also included as controls a time trend and GDP. Ex. 28 at ¶ 43 (Willig WDT). Both of the instruments obtained the expected signs: price reduces the number of paid Sirius XM subscribers and the number of promotional Sirius XM subscribers increases it. Ex. 28 at ¶ 43 (Willig WDT).

SEPFF670. The estimated coefficient on the use of Sirius XM was -1.259, implying that one paid Sirius XM performance substitutes for 1.259 other paid streaming performances. Ex. 28 at ¶ 43 (Willig WDT). The lower bound of the confidence interval was -0.743, implying that with 95% level of confidence, the Sirius XM substitution effect is at least 74.3%.[62] Ex. 28 at ¶ 43 (Willig WDT). "You look at the 95 percent confidence interval. But the survey results were not exactly in the middle of the confidence interval but not far off and well within that range." 5/2/17 Tr. 2076:4-7 (Willig). Thus, the econometrics confirmed the key result of the survey that the creator compensation opportunity cost of Sirius XM access to the

[62] *See* Appendix F for further details of this econometric analysis. Trial Ex. 28 at App. F (Willing WDT).

music is substantial, largely arising from cannibalization of paid streaming services which have the largest level of creator compensation. Ex. 28 at ¶ 43 (Willig WDT); *see also* Trial Ex. 28, App. F (Willig WDT) (providing further details about this econometric analysis).

SEPFF671. Professor Shapiro purports to modify the econometric analysis in a fashion that overturns the corroborating result. Trial Ex. 9 at 33 (Shapiro WRT). Professor Shapiro modified the econometrics by disaggregating streaming services, and by introducing a dummy variable to account for Spotify's entry into the market. Trial Ex. 9 at 33 (Shapiro WRT).

SEPFF672. Professor Shapiro's Spotify dummy variable interacted with the time trend. Trial Ex. 9 at 33 (Shapiro WRT); *see also* 4/24/17 Tr. 548:2-7 (Shapiro). This methodology creates two time trends in the econometric analysis. 4/24/17 Tr. 548:8-20 (Shapiro). Professor Shapiro's approach to introducing a dummy variable is unwarranted and out of step with conventional econometric modeling. 5/2/17 Tr. 2079:10-15 (Willig) ("And to me, that's an unwarranted way in econometrics to account for entry. It's unusual. The literature doesn't do that.").

SEPFF673. As Professor Willig testified, Professor Shapiro's approach fails standard econometric tests. "And I tested where he put his structural break, and it doesn't conform with the test. And the extra variable that he put in, this exogenous second time trend, fails the test of overidentifying restrictions, which is an econometric test for the accuracy or the appropriateness of a specification in the face of a bunch of exogenous or instrumental variables." 5/2/17 Tr. 2079:21-2080:7 (Willig). In contrast, Professor Willig's econometrics pass that test. 5/2/17 Tr. 2079:23-2080:7 (Willig).

SEPFF674. Moreover, Professor Shapiro's approach introduces at least one result that illustrates that his approach is unreliable: it results in a negative coefficient for GDP, an

instrumental variable designed to indicate whether the regression properly controls for exogenous factors. Trial Ex. 9, App. B at B-9 (Shapiro WRT). Asked whether it made any sense that the coefficient for GDP would be negative, Professor Shapiro could only say he would have to think about it and "[y]ou often get things that are anomalous in these regressions." 4/24/17 Tr. 550:11-17 (Shapiro).

SEPFF675. Like Professor Simonson's survey, therefore, the econometric analysis provides further support for the proposition that Sirius XM substitutes in a material way for music services that pay higher royalties.

4. The Record Is Replete With Qualitative Evidence Of Competition Between Sirius XM And Subscription Interactive And Noninteractive Services

SEPFF676. The opportunity cost calculated by Professor Willig arises because Sirius XM competes with music services that pay (usually higher) royalties to the copyright owners. A consumer's choice of Sirius XM over a competitor that pays royalties contributes to the copyright owners' opportunity cost. Recognizing this, Sirius XM argues that it principally competes with (and therefore substitutes for) terrestrial radio, which pays no royalties. *See, e.g.,* Trial Ex. 5 at 2 (Blatter WDT). While there is no doubt that terrestrial radio is a competitor, however, the record is replete with evidence that Sirius XM believes it significantly competes with subscription interactive and subscription noninteractive services as well.

SEPFF677. For example, on January 1, 2016, Sirius XM filed a complaint in the Supreme Court of the State New York for breach of contract against a former programmer who had moved to Spotify. In the complaint, Sirius XM represented to the court that Spotify is a "Direct Competitor of Sirius XM." Trial Ex. 282 at 3. According to the complaint, "Spotify aims to, and in fact does, compete directly with Sirius XM by offering and providing music and music entertainment services including curated music playlists and on-demand satellite radio

programming." Trial Ex. 282 at 3. In a subsequent letter to the court, Sirius XM punctuated the point by representing that Spotify is "one of Sirius XM's key direct competitors." Trial Ex. 283 at 1.

SEPFF678. One of the reasons Sirius XM views Spotify as a direct competitor (and, presumably, other interactive services such as Apple Music) is that the interactive services have increasingly offered "lean-back" listening in the form of playlists, which are suitable for in-car listening because they do not require the consumer to actively choose the music being played. Thus, Sirius XM's concern in its lawsuit against its former programmer was that Spotify subscribers can "browse through the music collections of friends, artists and celebrities, or create a radio station and just sit back." Trial Ex. 282 at 3.

SEPFF679. Indeed, the former Sirius XM programmer who wound up as a defendant in the case was curating for Spotify country playlists such as "New Boots" and "Wild Country." Trial Ex. 282 at 7. Sirius XM was concerned that the programmer would share "Sirius XM's strategy and philosophy regarding the creation of successful music country programming formats, [and] the breaking of new songs, acts and artists" (Trial Ex. 282 at 7) — an effective acknowledgement that Spotify is not simply an on-demand music service, but rather a music service that competes on curation and lean-back features.

SEPFF680. UMG's Aaron Harrison confirmed that interactive demand services no longer are simply passive recipients of subscriber requests for on-demand plays of music. Trial Ex. 32 at ¶ 43 (Harrison WDT). [ ]. 5/16/17 Tr. 3991:24-3992:12 (Harrison). "According to data provided to UMG by the services, [ ] percent of plays on Spotify and [ ] percent of the plays on Apple are playlist plays from user-created playlists, service created

playlists, third-party created playlists, or other pre-programmed streams." Trial Ex. 32, at ¶ 28 (Harrison WDT).

SEPFF681. [ ]. Trial Ex. 26 at ¶ 39 (Orszag WDT) (footnotes omitted). [ ]

SEPFF682. In sum, Sirius XM and subscription fully interactive services "appear to be converging in the sense that the interactive services" are increasingly being used with "lean-back functionality" consistent with in-car listening habits. 4/25/17 Tr. 972:12-25 (Orszag).

SEPFF683. [ ]. 5/16/17 Tr. 3988:18-3989:6 (Harrison). In its 10-K filings with the SEC, Sirius XM describes this competition as follows: "Smartphone applications are free to the user and offer music and talk content. Leading audio smartphone radio applications include Apple, Pandora, Spotify, and iHeart Radio. Certain of these applications include advanced functionality, such as personalization, and allow the user to access large libraries of content. These services are easily integrated into vehicles." Trial Ex. 356 at 6 (Sirius XM 2015 10-K).

SEPFF684. Finally, Internet-based music services are penetrating the dashboard. Again quoting Sirius XM's SEC filings, "[n]early all automakers have deployed or are planning to deploy integrated multimedia systems in dashboards. . . . These systems enhance the attractiveness of Internet-based competitors by making such applications more prominent, easier to access, and safer to use in the car." Trial Ex. 356 at 6 (Sirius XM 2015 10-K).

SEPFF685. In the face of this evidence, Sirius XM falls back on the notion that it substitutes greatly for terrestrial radio but little for subscription Internet services because terrestrial radio is free. But Sirius XM's expert Joseph Farrell agrees that Sirius XM subscribers have free AM/FM radio available to them in their cars, and yet they have chosen to pay $10 to $20 per month for Sirius XM, leading to the reasonable conclusion that there is something these subscribers really do not like about AM/FM radio, or something they really do like about Sirius XM. 4/24/17 Tr. 670:21-671:12 (Farrell). At trial, UMG witness Aaron Harrison listed a number of the characteristics that distinguish Sirius XM from terrestrial radio and for which Sirius XM subscribers obviously are willing to pay: "[T]here are a number of differences. . . . Sirius is ad free; radio plays upwards of 20 minutes of ads an hour. Sirius has not only the standard genres of music that are in classic radio formats like adult contemporary, pop, country, and so forth, but they also have very specific sub-genres and niches of music, like bluegrass or EDM [that] is not played on terrestrial radio much, if at all. They also have nationwide coverage . . . [which] radio doesn't have . . . since they are focused on local markets and . . . are limited by the wattage of their radio towers." 5/16/17 Tr. 4085:25-4086:13 (Harrison). *See also* Trial Ex. 5 at 3 (Blatter) (Sirius XM "attracts knowledgeable and sophisticated music fans who appreciated, and who are willing to pay for, [Sirius XM's] more tailored channel offerings and deeper playlists.").

SEPFF686. Of course, the features that distinguish Sirius XM from terrestrial radio and for which subscribers are willing to pay are readily available on subscription interactive and noninteractive services. 5/16/17 Tr. 4086:20-4087:1 (Harrison). It should come as no surprise, therefore, that the Simonson and Dhar surveys found that many Sirius XM subscribers would switch to subscription interactive or noninteractive services if Sirius XM was unavailable.

SEPFF687. In the end, Professor Farrell got it right when he said: "I think it's pretty plain, without having done a study of it, that there's competition among the — among the services." 4/24/17 Tr. 605:2-4 (Farrell). And that competition leads to the opportunity cost calculated by Professor Willig.

K. Professor Willig's Application Of Public Interest Pricing Principles

1. Application Of Public Interest Pricing Principles Produces Rates Consonant With The 801(b)(1) Objectives

SEPFF688. Having concluded that the walk-away opportunity cost of licensing Sirius XM equals $2.55 per subscriber per month, Professor Willig applied that insight in his examination of public interest pricing principles. Opportunity cost "plays a very important role in implementing the public interest pricing principles, the three that I have in mind that we talked about earlier; Ramsey pricing; I didn't define ECPR earlier but I shall; likewise Nash Bargaining . . . . And we shall see that for the implementation of each of those three public interest approaches to the determination of royalties here under the 801(b) factors as I interpret them through the lens of economics, that for all three of those approaches, opportunity costs are very important in terms of setting what will be the right outcome from those approaches." 5/2/17 Tr. 2013:9-2014:3 (Willig).

SEPFF689. To identify methodologies for calculating the royalty rate appropriate for Sirius XM's satellite service, Professor Willig first studied the Section 801(b) policy

objectives. He concluded that the first three policy objectives under Section 801(b)(1) are consistent with the royalty rate that would be negotiated between parties acting in an unregulated marketplace setting. Trial Ex. 28 at ¶ 9 (Willig WDT). Mindful of the fact that Mr. Orszag was presenting a benchmarking approach to determining market-based rates, Professor Willig turned his attention to the complementary perspectives of public interest pricing. Trial Ex. 28 at ¶¶ 11-12 (Willig WDT).

SEPFF690. As a general proposition, Professor Willig concluded that, from an economic perspective, the Section 801(b) policy objectives "require rates, royalty rates and terms generally, that perform the economic function of motivating the record companies and the artists to create desirable sound recordings." 5/2/17 Tr. 1956:25-1957:3 (Willig). At the same time, those rates and terms should motivate the distribution services to distribute those recordings to the public in a way that reflects consumer preferences. 5/2/17 Tr. 1957:4-8 (Willig). More specifically, Professor Willig views the requirement that rates maximize the availability of creative works to the public, *see* 37 C.F.R. § 801(b)(1)(A), as an instruction to maximize production of "the creative works that the public has preference for." 5/2/17 Tr. 1960:21-23 (Willig). In his view, consumer welfare is "the bottom line." 5/2/17 Tr. 1961:3-4 (Willig).

SEPFF691. Optimizing consumer welfare requires creating proper incentives. "[U]pstream, there has got to be adequate or maximal creativity in the right direction for consumers . . . ." 5/2/17 Tr. 1961:12-14 (Willig). However, "it's important equally for the Services to distribute the sound recordings that consumers want and to do so in a way that's sensitive to what consumers most want to hear." 5/2/17 Tr. 1961:16-19 (Willig). Consumer preferences for particular sound recordings may be expressed through willingness to pay. 5/2/17

Tr. 1964:9-13 (Willig). Finally, optimizing for consumer welfare requires competition "among a variety of platforms." 5/2/17 Tr. 1961:23-24 (Willig).

SEPFF692. These goals can be achieved by rates set through negotiation in an effectively competitive unregulated market. 5/2/17 Tr. 1978:9-15 (Willig). "But, second, there's another way to get there. And, again, experience with regulations suggests that, well, nothing is perfect, but we've got a fair shot at achieving the same desirable elements of the outcome if we adhere to public interest pricing principles, not just by making reference to competitive markets, but actually directly applying public interest principles to the pricing that's under the responsible control of the regulators." 5/2/17 1978:16-25 (Willig).

2. Professor Willig's Approach To Public Interest Pricing Does Not Result In An Upward Price Spiral (Or, As Professor Farrell Termed It, The "Lake Wobegon Effect")

SEPFF693. Professor Farrell argues that Professor Willig's public interest pricing approach suggests that rates should be set at a level above opportunity cost, and this process of marking up royalties above opportunity cost, if applied sequentially to various services, would result in royalties that "spiral upwards with no apparent limit." Professor Farrell refers to this as the "Lake Wobegon effect." Trial Ex. 10 at 23-24 (Farrell WRT).

SEPFF694. Professor Farrell's theory need not long detain the Judges. Professor Farrell admitted on cross-examination that his theory had no application to a world where terrestrial radio pays no royalties:

> Q. Right. I am asking you to assume that AM/FM radio continues not to be subject to royalty payments.
>
> A. Yeah. And as I think I discussed in my written testimony, the analytically simplest way to see the spirals motivating power is to think about what happens when the rate paid by the lowest rate service is revisited and reoptimized. And if that never happens for the lowest rate service, *i.e.*, AM/FM radio, *then that argument doesn't work, and it may be that the effect no longer works.*

4/24/17 Tr. 683:11-22 (Farrell) (emphasis added).

3. The Nash Bargaining Solution

i. Background

SEPFF695. The first of Professor Willig's pricing approaches is the Nash Bargaining Solution. Economics has developed and applied the theory of the Nash Bargaining Solution to characterize the features of the outcomes of bilateral bargaining. Trial Ex. 28 at ¶ 38 (Willig WDT). It holds that each of the two parties to a bargaining process has a fallback valuation that would apply in the event that no agreement is reached. Trial Ex. 28 at ¶ 38 (Willig WDT). The surplus created by a successful agreement is the joint profit from the agreement less the sum of the parties' fallback values. Trial Ex. 28 at ¶ 38 (Willig WDT). The Nash Bargaining Solution teaches that a fair outcome of the negotiation over the gains from agreement will accord to each party its fallback value plus one half of the surplus created by the deal. Trial Ex. 28 at ¶ 38 (Willig WDT); 5/2/17 Tr. 2107:21-2108:9 (Willig).

SEPFF696. The Nash Bargaining Solution accomplishes this by first assessing how much each party could make without an agreement. 5/2/17 Tr. 2108:12-14 (Willig). The amount that each party could make without an agreement constitutes each parties "fallback value" and represents the amount of value that the respective parties could secure by pursuing other opportunities in the market. 5/2/17 Tr. 2108:15-20 (Willig). According to the Nash Bargaining Solution, "each party should get at least its fallback because it could get that if it went off on its own." 5/2/17 Tr. 2110:1-3 (Willig).

SEPFF697. In the case of the copyright owners, the fallback value is their opportunity cost of $2.55 per subscriber per month; that is, the amount they would earn from other distribution services in the absence of an agreement with Sirius XM. 5/2/17 Tr. 2111:13-24 (Willig); Trial Ex. 28 at ¶ 49 (Willig WDT). Significantly, Professor Farrell's alternative

Nash-in-Nash model also results in royalties that are above walk-away opportunity costs. 4/24/17 Tr. 673:10-15 (Farrell).

SEPFF698. After assessing how much each party would make without an agreement, the Nash Bargaining Solution looks to the joint profit created by the execution of an agreement. The joint profit created by the agreement, less the parties' fallback values, is the surplus or value of the agreement to be divided between the parties. 5/2/17 Tr. 2109:1-6 (Willig).

SEPFF699. Under the Nash Bargaining Solution, surplus should be split evenly between the parties. 5/2/17 Tr. 2116:9-2118:3 (Willig). That each party receives one-half of the surplus created by the agreement ensures the parties benefit equally from execution of the agreement. 5/2/17 Tr. 2110:1-5 (Willig).[63] Even if parties to an agreement do not possess equal bargaining power and that disparity in bargaining power is incorporated into a Nash model, however, in no event will a party be driven to accept less than their fallback value, *i.e.,* its opportunity cost. 5/2/17 Tr. 2110:14-2111:24 (Willig).

SEPFF700. "The bottom line for the Nash Bargaining Solution is that . . . there is an answer to what each party ought to get from the agreement and it ought to have to do with a notion of fair outcome. It is also a notion of an efficient outcome, because a precondition for this . . . to apply is that the combined value of the two parties getting together exceeds the sum total of the fallback, that means efficiency is served. Value is created." 5/2/17 Tr. 2109:17-25 (Willig).

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[63] As Professor Willig testified at trial, this does *not* mean each part enjoys equal profit. The parties may not profit equally "because their fallback values may have been different." 5/2/17 Tr. 2110:6-8 (Willig).

ii. Professor Willig's Application Of The Nash Bargaining Solution

SEPFF701. In this case, Professor Willig applied the Nash Bargaining Solution to determine the surplus created by Sirius XM's compulsory license. To do that, he estimated the total earnings from an agreement between Sirius XM and the copyright owners to be, per subscriber-month, the relevant average revenue per user (ARPU) of $[[redacted]] less the variable costs, excluding the royalties at issue since they are at once a cost to Sirius XM and an equal amount of revenues to the copyright owners (and therefore they cancel each other out when calculating total surplus). Trial Ex. 28 at ¶ 48 (Willig WDT).

SEPFF702. The variable costs are reported to be about [[redacted]]% of ARPU, inclusive of the $[[redacted]] royalty payments. Trial Ex. 28 at ¶ 48 (Willig WDT). So the variable costs without the royalties at issue are approximately [[redacted]]. The total earnings therefore are [[redacted]]. Trial Ex. 28 at ¶ 48 (Willig WDT).

SEPFF703. To estimate earnings absent an agreement, Professor Willig relied on a survey conducted by Stefan Boedeker finding that approximately 70% of Sirius XM subscribers would cease to subscribe in the absence of the music programming. Trial Ex. 28 at ¶ 48 (Willig WDT) (citing Trial Ex. 21 at ¶¶ 14.d, 77 (Boedeker WDT)). The earnings of Sirius XM, per subscriber per month, would fall to the ARPU of $[[redacted]] less the variable cost of $[[redacted]] times the 30% of the original subscribers who would remain. Trial Ex. 28 at ¶ 48 (Willig WDT). This came to $[[redacted]]. Trial Ex. 28 at ¶ 48 (Willig WDT).

SEPFF704. Absent an agreement, the owners of the sound recording copyrights would earn the opportunity costs of the sound recordings being performed on Sirius XM, which is the $2.55 figure derived from diversion ratios and creator compensation in the destination markets. Trial Ex. 28 at ¶ 48 (Willig WDT).

SEPFF705. Consequently, Professor Willig calculated that the surplus from the agreement is $2.78. This amounts to the total earnings of $[[redacted]] from the agreement, less $2.55 (the earnings of the copyright owners absent the agreement), and $[[redacted]] (the earnings of Sirius XM absent the agreement)]. Trial Ex. 28 at ¶ 48 (Willig WDT). These calculations are restated in the below table.

Calculating Nash Bargaining Solution [RESTRICTED]

SEPFF706. The bottom line from the perspective of the Nash Bargaining Solution is that the sound recording copyright owners would earn from the agreement their opportunity cost per subscriber-month of $2.55, plus one half of the $2.78 surplus created by the agreement (*i.e.*, $1.39), for a total of $3.94 per subscriber-month. Trial Ex. 28 at ¶ 49 (Willig WDT).

SEPFF707. Accordingly, under Nash bargaining solution, the appropriate royalty is $3.94. Trial Ex. 28 at ¶ 49 (Willig WDT).

iii. Sirius XM's Critique Of Professor Willig's Application Of The Nash Bargaining Solution Have No Merit

SEPFF708. Professor Farrell offers several critiques of Professor Willig's approach to implementing the Nash Bargaining Solution.

SEPFF709. Professor Farrell first asserts that the Nash Bargaining solution has been improperly applied because Professor Willig has not used a label-specific opportunity cost as the fallback value in his model. Trial Ex. 10 at ¶ 84 (Farrell WRT). We have addressed the issue of industry-wide versus individual label opportunity cost previously, but in short Professor Farrell errs by concluding that the market must be modeled as though no label is a must-have for Sirius XM, despite substantial evidence that at least the Majors are must-haves. *See supra* V(F)(1)(iii).

SEPFF710. Second, Professor Farrell criticizes Professor Willig because he supposedly fails to account for steering in his application of his Nash Bargaining Solution. Trial Ex. 10 at ¶ 86 (Farrell WRT). In effect, Professor Farrell claims, Professor Willig ignored the potential for price competition among record labels and therefore calculated a monopoly royalty rate. Trial Ex. 10 at ¶¶ 3, 85 (Farrell WRT).

SEPFF711. Professor Farrell fails to appreciate that under Professor Willig's application of the Nash Bargaining Solution, he uses the standard 50/50 split of the surplus between the parties. As Professor Willig testified, this is inconsistent with the exercise of monopoly power. Were a monopolist to engage in bilateral negotiations, the monopoly seller would capture all of the surplus generated by an agreement. By assuming a 50/50 of the surplus, the Nash Bargaining Solution precludes the exercise of monopoly power on the part of the seller. 5/2/17 Tr. 2116:9-2118:3.

SEPFF712. Professor Willig explained this concept at some length at trial:

> But, in any event, if there is ultimate monopoly power in the bargaining, then one party walks away with everything. They get the fallback plus the compete surplus.
>
> On the other hand, if there is a party that has really no clout whatsoever, perhaps completely disciplined by some sort of notion of perfect competition that strips

> away the intrinsic value of their rights, there is nothing there at all, then they might wind up not with half but pushed down to their fallback.
>
> So the range goes all the way up to you get the whole surplus to you get none of the surplus. And if you ask me the expression of monopoly power, the way you asked, Mr. Handzo, is you wind up with a whole surplus. Then you really have the choke hold over this agreement. You get it all.
>
> And the totally powerless party would wind up with just fallback because if he doesn't get his fallback he is going to leave and the agreement won't happen. So that's the range.
>
> And the Nash solution puts us right in the middle, fair division. So it strikes me that that's not a characterization of monopoly. Monopoly is being way up the range toward[s] full extraction of the value, whereas 50/50 seems, you know, fair and in the middle, you know, it is 50/50.

5/2/17 Tr. 2117:1-2118:3 (Willig).

SEPFF713. Professor Farrell attempted to illustrate his conceptual points through a "Nash-in-Nash" model set forth in Appendix E to his written rebuttal testimony. Trial Ex. 10 at E1-E10 (Farrell WRT). As Professor Willig testified at trial, Professor Farrell's model "is not reflective of the actual marketplace at issue in this case." 5/2/17 Tr. 2118:11-14 (Willig). Bluntly, Professor Farrell's model is useless because it bears no resemblance to the real world.

SEPFF714. For example, Professor Farrell acknowledged that he assumed for purposes of his Nash-in-Nash model that there were two copyright owners and that they were identical. 4/24/17 Tr. 673:21-24 (Farrell). Professor Farrell acknowledged that his assumption is not an accurate description of the marketplace at issue in this proceeding. 4/24/17 Tr. 673:25-674:2 (Farrell).

SEPFF715. Professor Farrell acknowledged that his model assumes that each copyright owner had the same bargaining power, in a technical sense, as Sirius XM. 4/24/17 Tr. 674:3-6 (Farrell). At trial, Professor Farrell conceded that he did not know whether that assumption was accurate. 4/24/17 Tr. 674:7-10 (Farrell).

SEPFF716. Professor Farrell acknowledged that his assumption about whether diversion ratios are constant with respect to a label's play share may not hold true in the real world, 4/24/17 Tr. 674:23-675:15 (Farrell), and that he was not able to verify whether it holds true in the real world. 4/24/17 Tr. 676:22-25-677:6 (Farrell). Indeed, Professor Farrell acknowledged that he made this assumption in order to simplify his mathematics. 5/24/17 Tr. 675:16-19 (Farrell).

SEPFF717. Professor Willig explained why these unrealistic assumptions create problems. Professor Farrell "confines attention to a symmetric pair of rival labels. That makes them much more tractable of course." 5/2/17 Tr. 2125:4-8 (Willig). But, as Professor Willig testified at trial, "if there were more labels or even if the two of them were not symmetric . . . the model runs into its own internal grave difficulties because if the labels are not symmetric, then because he has got no volume commitments in the deals that he is modeling, . . . the prices wouldn't necessarily turn out to be symmetric if the labels weren't symmetric in his model, which mean that an equilibrium, there would be steering. And that steering would either upset the equilibrium or upset the reaction of the party against whom the steering runs. The point is that it would be an inefficient solution because the unequal pricing would lead to incentive for the distributor to choose plays that were not consonant with relative popularity. And Nash Bargaining is supposed to give us an efficient solution . . . . And so . . . the model would have its own internal tensions that would further invalidate it and further point to the need in such modeling to consider quantity and the non-steering and the non-discrimination they mention of the deals that the model ought to be analyzing." 5/2/17 Tr. 2125:9-2126:9 (Willig).

SEPFF718. In a further departure from the real world, in Professor Farrell's model, "when the sellers are contemplating what to do in terms of offering or accepting provisional

changes in pricing, they are . . . extremely myopic in the way that their decision making is expressed in the model and they don't take into account the next stage, what is going to happen next if one seller says . . . if I offer a discount in my rate . . . that might mean that I get some extra plays, so . . . I am going to do some steering in my own direction, without thinking the thought in the model that, if I do that, . . . tomorrow the distributor is going to go to one of my competing labels and offer the same deal. And that will undo what I thought was the benefit of extra steering to me. I offered the discount, but I am not going to get any extra volume as a result because tomorrow that same discount will be called forth from one of my competitors. The labels don't think that in the model. And so there is a very severe down spiral in the pricing because of the absence of that forethought on the part of the players." 5/2/17 Tr. 2121:10-2122:6 (Willig).

SEPFF719. Indeed, rational actors have expectations about the consequences of their action, and as Professor Willig indicated in his colloquy with Judge Strickler, could accurately expect "tit for tat responses in the marketplace." 5/2/17 Tr. 2122:23-2123:9 (Willig). As Professor Willig testified as trial, "that sort of insight is missing" from Professor Farrell's model. 5/2/17 Tr. 2123:11-12 (Willig). To Professor Willig, "this is particularly telling . . . because we're in a bargaining context in this model and bargaining means there is rounds of action and reaction. And so even underlying the equilibrium there is a notion that there is an iterative process. And in the iterative process, one would expect there to be not myopic responses but more farsighted responses that's missing in this model." 5/2/17 Tr. 2123:12-20 (Willig).

SEPFF720. The myopic nature of the model is "particularly important because . . . if we imagine putting ourselves into the positions of one of the labels in his model, and along

comes the distributor and says: Well, how about a couple of percent off the royalty but we will do some steering for you or we will have the incentive to do some steering for you . . . leaders of label . . . would say: Well, how do I know I'm really going to get the extra plays for accepting this diminution, this discount off the royalty? Why don't you give me a promise, like the way Merlin and Pandora has some years ago. Why don't you promise me some extra plays and let's put that into the contract. You are asking me to sign a contact so promise me an extra few percentage points off my popularity share and I will think about giving you a discount as a result. Or, alternatively, . . . the distributor goes to the label and says: Look, I promise I won't make a preferential deal with anybody else, so give me a discount because I am not going to steer against you. If you were advising that label and thinking realistically you would say, fine, let's put that in writing. I want a no-steering clause. None of that is in [Professor Farrell's] model." 5/2/17 Tr. 2123:12-2124:22 (Willig).

SEPFF721. Professor Farrell, at trial, acknowledged that he had not studied whether, in the marketplace at issue, sellers negotiate volume along with price. 4/24/17 Tr. 680:25-681:4 (Farrell). His model does not analyze contracts that specified volume as well as price. 4/24/17 Tr. 680:12-15 (Farrell). Professor Farrell further acknowledged that the results of his model might have been different had he attempted to account for whether sellers negotiate volume as well as price. 4/24/17 Tr. 680:21-24 (Farrell).

SEPFF722. This deficiency "makes this model particularly inapposite to the circumstance that we are trying to analyze." 5/2/17 Tr. 2125:1-3 (Willig). Even Professor Shapiro acknowledged that, in the marketplace, willing buyers and sellers that have negotiated steering have negotiated price commitments and volume commitments. 4/20/17 Tr. 464:17-465:15 (Shapiro).

SEPFF723. Finally, Professor Farrell's model is fatally undermined not just by the counter-factual assumptions he makes, but also by the functional forms he employs in his model. "[I]t turns out that . . . the choice of functional form in the model has a very important set of impacts on the numerical valuation of the answers that his model gives. So it is not just the parameters. The functional forms are very important, very significant for the numerical answers that he gets." 5/2/17 Tr. 2120:12-19 (Willig). Professor Farrell admitted that his model was probably "pretty sensitive" to his choice of functional form, that the selection of functional form would impact results, and that he chose his quadratic form in order to allow for solution of his model. 4/24/17 Tr. 679:5-21 (Farrell). Had Professor Farrell chosen a different form, he wouldn't have been able to calculate a result. 4/24/17 Tr. 679:22-25 (Farrell). But as Professor Willig pointed out, "[I]t is not surprising that he chose those functional forms for their tractability mathematically . . . . He doesn't recognize explicitly, however, that those assumptions are very important to the answer. And so even though he is careful calibrating his parameters, he didn't pay attention to calibrating the functional forms for their impact on the answer. And that's another reason why we shouldn't be misled into taking answers from his model seriously." 5/2/17 Tr. 2120:20-2121:6 (Willig).

SEPFF724. Given all of the assumptions and methodological choices made only for purpose of simplification and tractability, it is unsurprising that Professor Farrell admits that his "Nash-in-Nash" modeling does not produce reliable numbers:

> Q: . . . First of all, you don't hold out the modeling that you do in Appendix E as producing any reliable numbers, right?
>
> A: I think I discussed that this morning. That's correct, I don't.

4/24/17 Tr. 673:1-5 (Farrell); *see also* 4/24/17 Tr. 676:25-677:4 (Farrell); 4/24/17 Tr. 673:6-9 (Farrell).

SEPFF725. Professor Willig's Nash Bargaining Solution therefore appropriately suggests a rate above the copyright owners' opportunity costs.

4. Public Interest/Ramsey Pricing

SEPFF726. The second of Professor Willig's pricing approaches is Ramsey Pricing. "Ramsey pricing" addresses a fundamental economic issue: How to price various products or services whose supply draws on common assets in a fashion that maximizes consumer welfare and provides enough net revenues to meet an overall financial target. Trial Ex. 28 at ¶ 13 (Willig WDT). It is frequently employed as an analytic framework for such applications as sales taxes levied to raise sufficient revenue to meet a government financial target, prices for various telecommunications services that all are enabled by the same underlying electronic network, and prices for various railroad services that all make use of the same track infrastructure. Trial Ex. 28 at ¶ 13 n.4 (Willig WDT).

SEPFF727. Ramsey pricing is relevant to the determination of the different royalties that would be charged to different modes of distribution of sound recordings, since their supply draws on the common pool of sound recordings, for which sufficient total compensation is required to enable and motivate their creation. Trial Ex. 28 at ¶ 13 (Willig WDT).

SEPFF728. This financial element is consistent with the Section 801(b)(1) objective that calls for affording the copyright owner a fair return for his creative work. Trial Ex. 28 at ¶ 13 (Willig WDT). Moreover, because the defining objective of Ramsey pricing is the maximization of consumer welfare, Ramsey pricing is fully consistent with the portions of the Section 801(b)(1) criteria that call for the maximization of the availability of creative works to the public, and affording the copyright user a fair income under existing economic conditions. Trial Ex. 28 at ¶ 13 (Willig WDT). And because Ramsey pricing mandates the maximization of consumer welfare subject to the raising of sufficient net revenue for the creation of the common

assets (here, the sound recordings), it accomplishes by its very definition the needed balance between the demand and supply sides of the markets it addresses, and in this manner is fully consistent with policy objective (c) of Section 801(b)(1). Trial Ex. 28 at ¶ 13 (Willig WDT). Put simply, Ramsey pricing insures the widest distribution of the goods being sold, consistent with the 801(b)(1) objectives. 5/2/17 Tr. 1980:1-1981:23 (Willig).

SEPFF729. Ramsey pricing, as applied to this rate-setting proceeding, holds that for different distributors of sound recordings, price-cost margins should be inversely proportional to each distributor's own price elasticity of demand. Trial Ex. 28 ¶ at 32 (Willig WDT); *see also* 5/2/17 Tr. 2094:10-16 (Willig). Put another way: in setting prices to meet the Ramsey financial target, "the Services that should contribute relatively more, relative to their cost, on a percentage basis are the Services with the relatively low own price elasticities of demand." 5/2/17 Tr. 2095:3-6 (Willig). This has two key implications.

SEPFF730. The first and most basic implication is that Ramsey prices must exceed applicable costs, so that there are margins at all. Trial Ex. 28 ¶ at 32 (Willig WDT). Applicable costs include opportunity costs, as well as marginal or incremental costs. Trial Ex. 28 ¶ at 32 (Willig WDT). Accordingly, royalties paid by any service that disseminates sound recordings should at least cover the opportunity cost to creators, namely, the additional creator compensation that would result from other modes of distribution if the music were not licensed to the mode in question. Trial Ex. 28 ¶ at 32 (Willig WDT).

SEPFF731. The second implication of Ramsey pricing is that "where the price elasticity of demand is relatively large, the margin under Ramsey should be relatively small." 5/2/17 Tr. 2094:10-12 (Willig). Likewise, "where the . . . price elasticity demand is relatively

small, that should be a higher Ramsey markup." 5/2/17 Tr. 2094:14-16 (Willig). From a public interest pricing perspective, this is justified for at least two reasons.

SEPFF732. First, services with a low elasticity of demand tend to be more valuable to their users. Trial Ex. 28 ¶ at 33 (Willig WDT). In fact, that value is why demand is less sensitive to price. Trial Ex. 28 ¶ at 33 (Willig WDT). It follows that Ramsey prices should demand greater contributions to reaching the financial target from those users of the common assets. Trial Ex. 28 ¶ at 32 (Willig WDT). Indeed, as Professor Willig testified, this approach is consistent with value of service pricing, "which is the intuitive idea that services that are viewed as more valuable by their users should be contributing relatively more to the coverage of the common costs." 5/2/17 Tr. 2093:13-16 (Willig). Where consumers view a service as more valuable, those consumers "should be expected to pay more to the extent more is needed to cover those common costs." 5/2/17 Tr. 2093:18-20 (Willig).

SEPFF733. Second, services with low elasticity of demand will contract less in reaction to higher prices, so that higher prices will have a less consequential distorting impact on the usage decisions made by distribution modes and their consumers. Trial Ex. 28 at ¶ 32-33 (Willig WDT).

SEPFF734. Below, we address how Professor Willig calculated his Ramsey pricing target. We then address Sirius XM's elasticity of demand, relative to other services that distribute sound recordings, and discuss how Professor Willig applied Ramsey pricing to inform his rate proposal.

i. Ramsey Pricing Target

SEPFF735. Ramsey pricing assumes there is a target amount of money that must be generated to cover the costs of production. In this case, Professor Willig calculated that

financial target by assessing the amount of download sales lost due to the increase in streaming. Trial Ex. 28 at ¶ 31 (Willig WDT).

SEPFF736. Using the amount of creator compensation lost as a result of the transition from ownership models to streaming models as the financial target for Ramsey analysis is appropriate for reasons best explained by reference to the recorded music industry's performance over the past twenty years. Briefly summarized, downloads emerged as a critical revenue source because of the precipitous decline in physical sales and because creators were paid a relatively healthy level of compensation for downloads: on average an estimated $7.67 per album-equivalent, or $0.0051 per performance. Trial Ex. 28 at ¶ 19 (Willig WDT). Streaming services, however, subsequently began to cannibalize download sales. The substitution of streaming distribution of music for paid downloading has significantly reduced total creator compensation, even as it has not reduced the total volume of music distributed. Trial Ex. 28 at ¶ 21 (Willig WDT). The simple reason is that the levels of the royalties for the creators of the sound recordings from most of the streaming services, including Sirius XM, are distinctly low relative to the level of creator compensation from paid downloads. Trial Ex. 28 at ¶ 21 (Willig WDT).

a. Historical Context

SEPFF737. Until about 2003, essentially all of the distribution of music via modes that provided compensation to the creators of the sound recordings was effected physically with products such as CDs, tapes, and vinyl records. Trial Ex. 28 at ¶ 17 (Willig WDT). By 2003, volume distributed physically and distributed by any mode that provided compensation to the creators of the sound recordings had dropped by approximately 30% compared to its peak level in 1999. Trial Ex. 28 at ¶ 17 (Willig WDT). The amount of compensation to the creators of

sound recordings also dropped precipitously between 1999 and 2003. Trial Ex. 28 at ¶ 17 (Willig WDT).

SEPFF738. However, a new phase of the distribution of recorded music kicked off when the opening of Apple's iTunes music store in April 2003 began to facilitate legal downloading of digital music files for a price that was shared between the online music store and the owners of the copyrights on the sound recording. Trial Ex. 28 at ¶ 18 (Willig WDT) (citations omitted). Between then and about 2010, legal downloading of music files grew rapidly, substituting for the sale of physical recordings. Trial Ex. 28 at ¶ 18 (Willig WDT). By 2010 legal downloads represented about a one-third and still growing share of the total volume of compensatory distribution of music, and the absolute amount of legal downloading continued to grow through 2012. Trial Ex. 28 at ¶ 18 (Willig WDT).

SEPFF739. This trend was important to the movement of total compensation to the creators of sound recordings. Trial Ex. 27 at ¶ 19 (Willig WDT). By 2012, when compensation to creators from legal downloads reached its peak level, it had grown to provide about 50% of the industry total. Trial Ex. 27 at ¶ 19 (Willig WDT). The advent and vigorous growth of legal downloads was important because creators were paid a relatively healthy level of compensation: on average an estimated $7.67 per album-equivalent, or $0.0051 per performance (invoking the industry standard that 1,500 performances is equivalent to the sale of one album). Trial Ex. 28 at ¶ 19 (Willig WDT).

SEPFF740. The shift in the industry toward streaming showed its first signs of major importance by about 2010, when its new growth trend took off. Trial Ex. 28 at ¶ 20 (Willig WDT). Streaming entails not just different services or stores for distribution, and not just an electronic instead of a physical medium, but rather a shift from ownership of a file or a

physical medium to access to the ability to hear music. Trial Ex. 28 at ¶ 20 (Willig WDT). Sirius XM is in this category, and while it preexisted the 2010 timeframe, its growth since then is consistent with the overall trend away from ownership in favor of purchase of access. Trial Ex. 28 at ¶ 20 (Willig WDT). The ownership modes of physical media and legal downloads together made up over 70% of the volume of music distributed through compensatory modes in 2010, while by 2016 the access streaming modes had together more than doubled their collective share to about 67%. Trial Ex. 28 at ¶ 20 (Willig WDT). The reversal of the growth trend in paid downloads was an unexpected development, doubtless a consequence of the rush to streaming. Trial Ex. 28 at ¶ 20 (Willig WDT). The trend shows no sign of abating. *See* Trial Ex. 32 at ¶¶ 11, 14 (Harrison WDT).

SEPFF741. The levels of the royalties for the creators of the sound recordings from most of the streaming services, including Sirius XM, are distinctly low relative to the level of creator compensation from paid downloads. Trial Ex. 28 at ¶ 21 (Willig WDT). An exception is paid interactive services, for which the royalty rate negotiated in an unregulated market is higher. Trial Ex. 28 at ¶ 21 (Willig WDT). In other words, movement of music distribution from paid downloads to streaming services other than subscription services that can be licensed at market rates (but including Sirius XM) reduces creator compensation because the royalty rates are too low to compensate for cannibalization, *i.e.* they do not compensate for the adverse financial impact of the substitution effect between the streaming service and paid downloads and other substitutable services. Trial Ex. 28 at ¶ 21 (Willig WDT).

b. Calculating The Ramsey Target

SEPFF742. To identify his Ramsey target, Professor Willig measured the amount of creator compensation lost in 2016 as a result of the movement toward streaming and away from paid downloads since 2010. Trial Ex. 28 at ¶ 22 (Willig WDT). Professor Willig's

analysis was predicated on current levels of royalties and other forms of creator compensation in each distribution mode. Trial Ex. 28 at ¶ 22 (Willig WDT). Based on his calculations, Professor Willig concluded that substitution of streaming services for downloads has cost the recording industry about $800 million per year by 2016. Trial Ex. 28 at ¶ 27 (Willig WDT).

SEPFF743. Professor Willig reached this conclusion based on an econometric analysis that estimated the impact of increases in the total number of streams on the number of downloads purchased. The first step of this analysis entailed assessing the levels of creator compensation for the various modes of distribution in terms of a common unit of measurement. For the purpose of assessing how overall compensation levels have changed in relation to music consumption, Professor Willig used "performances" to provide a unit of measurement. Trial Ex. 28 at ¶ 22 (Willig WDT).

SEPFF744. For paid downloads, the creator compensation per performance is estimated to be $0.0051, since the compensation to the creators for the sale of an album in this mode of distribution is $7.67,[64] which equals $0.0051 when divided by the 1,500 performances, the industry standard for converting between performances and album-equivalents. Trial Ex. 28 at ¶ 23 (Willig WDT). For paid interactive streaming services, [ ]. Trial Ex. 28 at ¶ 23 (Willig WDT). For all other streaming services, Professor Willig determined that the level of compensation received by the creators is considerably lower than the compensation received for the sale of a digital download album, calculated on a per-performance basis. Trial Ex. 28 at ¶ 23 (Willig

[64] *See* Trial Ex. 28 at ¶ 23 (Willig WDT) (citing 2015 RIAA data indicating that the average price for paid (permanent) downloads was $10.96 per album-equivalent in 2015, and the typical iTunes deal provided 70% of the sales price to the label and the recording artist).

WDT). Appendix B to Professor Willig's written direct testimony provides the details. *See* Trial Ex. 28, App. B (Willig WDT).

SEPFF745. The impact on creator compensation of the move toward streaming and away from paid downloads depends on the extent to which the various streaming services actually did substitute for paid downloads, and the total size of the overall movement. Trial Ex. 28 at ¶ 24 (Willig WDT). Professor Willig applied econometric regression analysis to estimate the impact of increases in the total number of streaming performances on the number of album-equivalents that are purchased as file downloads. Trial Ex. 28 at ¶ 24 (Willig WDT).

SEPFF746. To run his regression, Professor Willig took all streaming options with available data, including paid and promotional Sirius XM, interactive streaming, noninteractive streaming, video, subscription services and ad supported services, and aggregated them into a single streaming variable (after the monthly usage data were converted into the common unit of number of performances). Trial Ex. 28 at ¶ 24 (Willig WDT). Professor Willig then ran a linear regression of total monthly paid downloads, measured in album equivalents, against total streaming performances (lagged one month), a time trend (to capture the independent growth of downloads regardless of streaming), and GDP (to capture impacts of general economic conditions). Trial Ex. 28 at ¶ 24 (Willig WDT); *see also* Trial Ex. 28, App. E (Willig WDT) (providing further details about this analysis).

SEPFF747. Professor Willig's regression shows clear substitution between streaming and downloads: the estimated coefficient on streaming performances is -0.0005738 and is highly statistically significant. Trial Ex. 28 at ¶ 25 (Willig WDT). This implies that every additional streaming performance is associated with a reduction in downloaded album-equivalents of 0.0005738. Trial Ex. 28 at ¶ 25 (Willig WDT). Application of the standard

calibration that 1,500 performances are equivalent to an album-equivalent implies that each streaming performance reduces the number of paid downloaded performance-equivalents by 0.8607. Trial Ex. 28 at ¶ 24 (Willig WDT).

SEPFF748. Willig Table 1 below estimates, based on the available data and the econometric analysis presented above, the loss in creator compensation caused by the increase in streaming since 2010. Trial Ex. 28 at ¶ 26 (Willig WDT). In sum, this assessment indicates that the increase in streaming from 2010 to 2016 is causing a net loss in creator compensation of more than $800 million per year. Trial Ex. 28 at ¶ 27 (Willig WDT).

Willig Table 1. Calculation of Sound Recordings' Creator Compensation Shortfall in 2016 due to Increased Streaming [RESTRICTED]

SEPFF749. As streaming services advance in popularity, they create substitution away from paid downloads, and that can be beneficial for social welfare so long as the pricing of the rights to perform the recordings via streaming amply covers the costs of the creators *including* the opportunity costs of what would be creator compensation from the alternative modes. Trial Ex. 28 at ¶ 29 (Willig WDT). What Professor Willig's analysis shows is that the rush to streaming cannibalized paid downloads in a manner that was destructive to creator compensation due to pricing of the copyrights for many streaming services that was insufficient to cover the creator's opportunity costs comprised of what they could have earned from next best

alternative modes of distribution. Trial Ex. 28 at ¶ 29 (Willig WDT). In short, the streaming services as a whole have not been paying their way. Trial Ex. 28 at ¶ 29 (Willig WDT).

c. Sirius XM's Critique Of Professor Willig's Approach To Calculating A Ramsey Target Has No Merit

SEPFF750. Sirius XM, via Professor Shapiro, criticizes Professor Willig's calculation of the creator compensation shortfall caused by the shift from ownership models to streaming models, and in particular, Professor Willig's regression analysis. In his written testimony, Professor Shapiro asserted that the effects of various streaming services on digital downloads and on each other can be reliably disaggregated, and that he had accomplished this by modifying Professor Willig's regression to separate interactive streaming services, noninteractive streaming services, and Sirius XM. According to Professor Shapiro, his alternative approach to Professor Willig's regression analysis reversed Professor Willig's results with the respect to Sirius XM and showed that Sirius XM in fact promotes download sales. Trial Ex. 9 at 30-31 (Shapiro WRT).

SEPFF751. As discussed previously, *see supra* Section (V)(G)(2), Professor Shapiro's approach of disaggregating the categories of streaming for purposes of calculating creator compensation shortfall is not reliable, because strong instrumental variables are only available for Sirius XM. 5/2/17 Tr. 2088:13-25 (Willig). The unreliability of Professor Shapiro's analysis was starkly demonstrated at trial when the evidence showed that Professor Shapiro's analysis "proved" the impossible — that Sirius XM had, all by itself, promoted the sale of more downloads than had actually been sold in total in 2016. 4/24/17 Tr. 552:22-553:20 (Shapiro). Even Professor Shapiro disavowed the results of his regression at trial: "I don't put any weight on that number." 4/24/17 Tr. 554:11-18 (Shapiro); *see also* 4/24/17 Tr. 558:1-5 (Shapiro).

SEPFF752. Unable to support his own results, Professor Shapiro claimed that his failed modification to Professor Willig's regression somehow showed that Professor Willig's methodology is incorrect. 4/24/17 Tr. 553:25-554:18 (Shapiro). It remains a mystery, however, why Professor Shapiro's analysis — which did precisely what Professor Willig said all along could not be done — somehow shows that Professor Willig was wrong. *See* 5/2/17 Tr. 2090:9-14 (Willig) ("he did what I deliberately avoided"). To the contrary, Professor Shapiro only succeeded in demonstrating what Professor Willig emphasized in his written direct testimony: that multi-collinearity problems preclude an econometrically sound approach to disaggregating the effects of various streaming services on paid downloads. *See* Trial Ex. 28 at 16 n.12 (Willig WDT).

SEPFF753. Consequently, there is no sound reason to doubt Professor Willig's calculation of his Ramsey financial target.

ii. Relative Price Elasticity

SEPFF754. For purposes of Ramsey pricing, the applicable price elasticity of demand is that for the use of the music by the distribution mode in question. Trial Ex. 28 at ¶ 33 (Willig WDT). This price elasticity of "derived demand" for the music is equal to the product of: (a) the price elasticity of demand for the overall service of the distribution mode; and (b) the fraction of the price of the overall service that is comprised of the cost of the music input, provided that the use of the music is proportional to the sales of the service. Trial Ex. 28 at ¶ 33 (Willig WDT). Professor Willig concluded that the price elasticity of demand for the use of music by Sirius XM is currently smaller than it is for subscription interactive services. Trial Ex. 28 at ¶ 44 (Willig WDT).

SEPFF755. Below, we address each component of Professor Willig's price elasticity calculation, beginning with the downstream elasticity of demand for Sirius XM.

a. Professor Willig's Analysis Of Downstream Elasticities Of Demand For Sirius XM And Interactive Streaming Services

SEPFF756. Professor Willig calculated the downstream elasticities of demand for Sirius XM and interactive streaming services using data from the survey conducted by Professor Dhar. Trial Ex. 28 at ¶ 44 (Willig WDT). He corroborated the results for Sirius XM using an econometric study of price elasticity of demand for Sirius XM. Trial Ex. 28 at ¶ 44 (Willig WDT). We will begin first with a discussion of the aspects of the Dhar survey that relate to the price elasticity calculations.

b. The Dhar Survey Measures The Price At Which Sirius XM Subscribers And Subscribers To Streaming Services Would Cancel Their Subscriptions Due To Price Increases

(1) Dhar Survey: Pricing Questions

SEPFF757. One aspect of Professor Dhar's survey was designed to determine whether respondents would continue or cancel their subscriptions to Sirius XM or one of several music streaming services at price levels that varied by approximately ten, twenty, or thirty percent from the standard price of a service that they reported to use.[65] Trial Ex. 22 at ¶ 13 (Dhar Corr. WDT). The general methodology of the survey (which applied to both the pricing questions and the switching questions) is discussed above in Section V(J)(1)(iii).

SEPFF758. The survey, which asked respondents whether they would continue subscribing to a given service at alternative price points, uses a common method of ascertaining respondents' willingness to pay for a product or service. *See, e.g.,* Trial Ex. 22 at ¶ 13 & n.8.

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[65] Respondents were screened for qualification as a current user for each one of the Sirius XM and music streaming services, but only asked about a single service in the main survey.

(Dhar Corr. WDT) (citing Robert J. Dolan and John T. Gourville, "Principles of Pricing," Harvard Business School Case 9-506-021, April 3, 2009).

SEPFF759. The On-Demand music streaming services covered by this part of Professor Dhar's survey included paid subscriptions to Spotify, Apple Music, and Pandora One, which Professor Dhar selected because they were the most popular services in their respective categories. Trial Ex. 22 at ¶ 11 (Dhar Corr. WDT).[66]

SEPFF760. To avoid an overly complex or confusing survey, the Sirius XM portion of the survey was limited to respondents who indicated that they subscribe to the Sirius Select package. *See supra* Section V(J)(1)(iv)(c). Respondents included paid subscribers to the Sirius Select package and users of a free trial subscription to Sirius XM. Trial Ex. 22 at ¶ 10 (Dhar Corr. WDT).

SEPFF761. Professor Dhar also measured preferences of consumers who use certain free, ad-supported music streaming services. The survey measures whether those users would subscribe to a corresponding subscription music service at a given price. Specifically, these services include the following music streaming services, represented by the most popular brand that offers a free, ad-supported account.

- Free, ad-supported users of the On-Demand music streaming service Spotify were asked about whether they would subscribe to Spotify Premium at various price points. (Free-ad-supported Spotify represents approximately 24 million users in the U.S.)

[66] Professor Dhar cited to data estimating that Spotify and Apple Music have approximately 8 and 4 million paid subscribers respectively in the U.S., amounting to approximately 75% of the 16 million subscriptions to On-Demand music streaming services. Patrick Seitz, "Streaming Music Leader Spotify Challenged by Apple, Amazon, Pandora," Investor's Business Daily, June 29, 2016, accessed October 17, 2016, http://www.investors.com/news/technology/click/streaming-music-leader-spotify-challengedby-apple-amazon-pandora/?ven=YahooCP&src=AURLLED& ven=yahoo. Trial Ex. 22 at ¶ 11 n.4 (Dhar Corr. WDT). *See also* Trial Ex. 684 at 46 (cited in Trial Ex. 22 at ¶ 11 n.5 (Dhar Corr. WDT)).

- Free, ad-supported users of the Not On-Demand music streaming service Pandora were asked about whether they would subscribe to Pandora One at certain prices. (Free, ad-supported Pandora represents over 80 million unique monthly users.)

Trial Ex. 22 at ¶ 11 (Dhar Corr. WDT).

(i) Sirius XM Paid Subscribers

SEPFF762. Sirius XM paid subscribers to the Select package started the main questionnaire by being introduced to definitions of music services (Q200), and were asked to confirm that they understood the descriptions of all three of these services (Q201). The exact text read by the respondent is as follows (bold in original):

> There are three types of music services you can subscribe to which are defined below. Please keep these definitions in mind when responding to questions in this survey.
>
> **Satellite Radio (Sirius XM)** which is broadcast nationwide via satellite, thus allowing the listeners to hear the same stations anywhere in the country. It is available by subscription, offers commercial free music as well as sports, news, talk, and other programming, and offers subscribers more stations and a wider variety of programming options than AM/FM radio. Satellite radio can be listened to through receivers built into a vehicle or portable receivers.
>
> **On-Demand** music streaming services which allow listeners to choose the specific song, artist, or playlist they wish to hear, in addition to playlists provided by the service. **On-Demand music streaming services include Apple Music, Google Play, Rhapsody/Napster, Spotify, Tidal, and others.**
>
> **Not-On-Demand** music streaming services which do not allow listeners to choose the specific song or artist they wish to hear, but instead provide a pre-programmed list of songs based on listener preferences. The specific selection and order of songs remains unknown to the listener (*i.e.* no pre-published playlist). **Not-On-Demand music streaming services include Pandora One, Slacker Radio, and Rhapsody UnRadio.**

Only those who answered affirmatively that they understood the definitions proceeded to be asked the next set of questions. Trial Ex. 22 at ¶ 54 (Dhar Corr. WDT).

SEPFF763. The Sirius XM subscribers were then informed that "The next few questions will be about your Satellite Radio subscription. If you have more than one paid

subscription to Sirius XM Satellite Radio, please answer the following questions based on the one you have the **longest**." The respondents were then told "You will be presented with several different monthly prices for a single Sirius XM Satellite Radio subscription. **This amount may be higher or lower than the amount you currently pay for your Sirius XM Satellite Radio subscription"** (Q202, bold and underline in original). Trial Ex. 22 at ¶ 55 (Dhar Corr. WDT).

SEPFF764. Sirius XM paid subscribers were asked a set of up to seven questions (for this group and all others, many received fewer questions; seven was the maximum number for this type of question) about whether they would continue their current subscription to Sirius XM Select at certain monthly subscription prices (Q203-Q203.6). These monthly prices started at thirty percent below the standard subscription $15.99 price of the Sirius Select Package, and increased in increments of approximately 10%, as outlined in the table below. Trial Ex. 22 at ¶ 56 & App. D at 67-68 (Dhar Corr. WDT).

Prices Offered to Sirius XM Subscribers

Sirius XM (Select Package)		
Question	**Relative to Standard Price**	**Monthly Price**
Q203	30% below standard price	$11.49
Q203.1	20% below standard price	$12.99
Q203.2	10% below standard price	$14.49
Q203.3	standard price	$15.99
Q203.4	10% above standard price	$17.49
Q203.5	20% above standard price	$18.99
Q203.6	30% above standard price	$20.49

SEPFF765. Specifically, respondents were asked in Q203 "If right now you were to be charged **$11.49** per month for the same Sirius XM Satellite Radio subscription you currently have, would you ...? Continue to subscribe to Sirius XM Satellite Radio, Cancel your subscription to Sirius XM Satellite Radio, or Don't know/unsure" (bold in original). Respondents were asked a set of up to seven questions about whether they would continue their

current subscription to Sirius XM at certain monthly subscription prices (Q203-Q203.6). These monthly prices started at thirty percent below the standard subscription $15.99 price of the Sirius Select Package, and increased in increments of approximately 10%. The order of the Continue and Cancel options was randomized across respondents. Half of the respondents always saw "continue" first, and half always saw "cancel" first. Trial Ex. 22 at ¶ 57, App. D pp. 67-68 (Dhar Corr. WDT).

SEPFF766. Respondents who answered they would continue to subscribe or chose the "Don't know/unsure" option were asked Q203.1, a parallel question with a monthly price of $12.99, and so forth, until they chose the "Cancel your subscription" option, or until they were asked Q203.6, whether they would continue to subscribe to Sirius XM if the subscription price were $20.49 per month. Trial Ex. 22 at ¶ 57, App. D pp. 67-68 (Dhar Corr. WDT).[67]

(ii) Sirius XM Free-Trial Period Subscribers

SEPFF767. Free-Trial-Period Sirius XM subscribers started the main questionnaire by being asked how long they have had their trial period subscriptions (Q500.1). Respondents who reported having a trial subscription for over 12 months were terminated from the survey. Trial Ex. 22 at ¶ 61 (Dhar Corr. WDT).

SEPFF768. Respondents were then introduced to definitions of music services (the same as those quoted above), and were asked to confirm that they understood the descriptions of all three of these services (Q501). Trial Ex. 22 at ¶ 62 (Dhar Corr. WDT).

SEPFF769. Free trial subscribers were then informed that "The next few questions will be about what interest, if any, you may have in purchasing a paid subscription to **Sirius XM**

[67] For the price level at which a respondent stated they would cancel, the respondent was asked the switching questions, a part of the survey described in Section V.J.1 above.

Satellite Radio at the end of your **Trial Period** subscription to **Sirius XM** Satellite Radio. You will be presented with several different monthly prices for a paid subscription to **Sirius XM** Satellite Radio" (Q502, bold in original). Trial Ex. 22 at ¶ 63 (Dhar Corr. WDT).

SEPFF770. These respondents were asked a set of up to seven questions about whether they would convert their Sirius XM subscription at certain monthly subscription prices when their trial period ends (Q503 through Q503.6). These monthly prices started at thirty percent below the standard price for a Select package subscription, and increased in 10% increments, as outlined in the table below. Trial Ex. 22 at ¶ 64 (Dhar Corr. WDT).

Prices Offered to Sirius XM Trial Subscribers

Sirius XM (Select Package)		
Question	**Relative to Standard Price**	**Monthly Price**
Q503	30% below standard price	$11.49
Q503.1	20% below standard price	$12.99
Q503.2	10% below standard price	$14.49
Q503.3	standard price	$15.99
Q503.4	10% above standard price	$17.49
Q503.5	20% above standard price	$18.99
Q503.6	30% above standard price	$20.49

SEPFF771. Specifically, these respondents were asked in Q503 "At the end of your trial period, if you were offered a subscription to **Sirius XM Satellite Radio** at the price of $11.49 per month, would you or would you not subscribe to the service" (bold in original). Answer options included: "Yes, I would subscribe to the service," "No, I would not subscribe to the service," or "Don't know/unsure" (underline in original).[68] Respondents who answered they would subscribe or chose the "Don't know/unsure" option continued to Q503.1, a parallel

[68] The order of the "Yes" and "No" options was randomized across respondents. Half of the respondents always saw "Yes, I would subscribe" first, and half always saw "No, I would not subscribe" first. Trial Ex. 22, App. D at 84-85 (Dhar Corr. WDT).

question with a monthly price of $12.99, and so forth until they chose the "No, I would not subscribe" option or until they reached the last question of the series (Q503.6), which asked whether they would subscribe to Sirius XM if the subscription price were $20.49 per month. Trial Ex. 22 at ¶ 65 (Dhar Corr. WDT).

(iii) Paid On-Demand Music Streaming Service Subscribers

SEPFF772. Subscribers to paid subscriptions to On-Demand music streaming services (specifically, Apple Music or Spotify Premium) started the main questionnaire by being introduced to definitions of music services (the same as those quoted above), and were asked to confirm that they understood the descriptions of all three of these services (Q301). Again, only those who answered affirmatively proceeded to be asked the next set of questions. Trial Ex. 22 at ¶ 69 (Dhar Corr. WDT).

SEPFF773. Paid On-Demand respondents were then informed that "The next few questions will be about your **[Apple Music or Spotify Premium]** streaming service subscription," (bold in original) and were told "You will be presented with several different monthly prices for a subscription to **[Apple Music or Spotify Premium]. This amount may be higher or lower than the amount you currently pay for your subscription to [Apple Music or Spotify Premium]"** (Q302, bold in original). Trial Ex. 22 at ¶ 70 (Dhar Corr. WDT).

SEPFF774. Next, these respondents were asked a set of up to seven questions about whether they would continue their current subscription to Apple Music or Spotify Premium at certain monthly subscription prices (Q303 through Q303.6). These monthly prices started at thirty percent below the standard price for the subscription, and increased in 10% increments, as outlined in the table below. Trial Ex. 22 at ¶ 71 (Dhar Corr. WDT).

Prices Offered to On-Demand Music Streaming Services

Apple Music/Spotify Premium		
Question	**Relative to Standard Price**	**Monthly Price**
Q303	30% below standard price	$6.99
Q303.1	20% below standard price	$7.99
Q303.2	10% below standard price	$8.99
Q303.3	standard price	$9.99
Q303.4	10% above standard price	$10.99
Q303.5	20% above standard price	$11.99
Q303.6	30% above standard price	$12.99

SEPFF775. Specifically, the respondents were asked in Q303 "If right now you were to be charged $6.99 per month for the same **[Apple Music or Spotify Premium]** subscription you currently have, and you knew that **all** other On-Demand music streaming service subscriptions were also $6.99 per month, would you …? Continue to subscribe to **[Apple Music or Spotify Premium]**, Cancel your subscription to **[Apple Music or Spotify Premium]**, or Don't know/unsure" (bold and underline in original).[69] Respondents who answered they would continue to subscribe or chose the "Don't know/unsure" option were asked Q303.1, a parallel question with a monthly price of $7.99, and so forth, until they chose the "Cancel your subscription" option, or until they were asked Q303.6, whether they would continue to subscribe to that service if the subscription price were $12.99 per month. For the price level at which a respondent selected "Cancel your subscription" option, a respondent was then asked the switching questions, discussed in Section V.J.I above. Trial Ex. 22 at ¶¶ 72-73 (Dhar Corr. WDT).

SEPFF776. This set of respondents was instructed to assume that all other On-Demand music streaming service subscriptions would be the same price because the economists

[69] The order of the Continue and Cancel options were randomized across respondents. Half of the respondents always saw "continue" first, and half always saw "cancel" first. Trial Ex. 22 at ¶ 57 n.36 (Dhar Corr. WDT).

were interested in the question as to categories of subscribers, not whether, for example, an Apple Music subscriber would subscribe to Spotify if Apple increased its prices but Spotify did not.[70] 5/8/17 Tr. 2757:15-2758:13; 2887:7-23 (Dhar).

(iv) Paid Not-On-Demand Music Streaming Service Subscribers

SEPFF777. At the beginning of the main questionnaire, respondents who had paid subscriptions to Not-On-Demand music streaming services (specifically, Pandora One) were introduced to the definitions cited above (Q400), and were asked to confirm that they understood the descriptions of all three of these services (Q401). Only those who answered affirmatively proceeded to be asked the next set of questions. Trial Ex. 22 at ¶ 76 (Dhar Corr. WDT).

SEPFF778. These respondents were then informed that "The next few questions will be about your **Pandora One** streaming service subscription," and were then told "You will be presented with several different monthly prices for a subscription to **Pandora One. This amount may be higher or lower than the amount you currently pay for your subscription to Pandora One"** (Q402, bold in original). Trial Ex. 22 at ¶ 77 (Dhar Corr. WDT).

SEPFF779. Next, these respondents were asked a set of up to seven questions about whether they would continue their current subscription to **Pandora One** at certain monthly subscription prices (Q403 through Q403.6, bold in original). These monthly prices started at thirty percent below the standard price for the subscription, and increased in 10% increments, as outlined in the table below. Trial Ex. 22 at ¶ 78 (Dhar Corr. WDT).

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[70] Ramsey pricing principles set levels of compensation for categories of similarly-placed users of common assets. 5/2/17 Tr. 2082:3-14 (Willig). Because firms within a category are similarly placed, they presumably have similar elasticities of demand and may have similar marginal costs, so Ramsey would price them similarly. 5/2/17 Tr. 2082:20-25 (Willig). Applying Ramsey in this way is valuable from a public interest perspective because it ensures that pricing does not impede competition. 5/2/17 Tr. 2083:1-6 (Willig). Accordingly, and contrary to criticisms levelled by Professor Farrell (Trial Ex. 10 at ¶ 94 (Farrell WRT)), the deliberate decision to look at categorical elasticities was appropriate as a matter of economics. 5/2/17 Tr. 2084:4-10 (Willig).

Prices Offered to Not-On-Demand Music Streaming Services

Pandora One		
Question	**Relative to Standard Price**	**Monthly Price**
Q403	30% below standard price	$3.49
Q403.1	20% below standard price	$3.99
Q403.2	10% below standard price	$4.49
Q403.3	standard price	$4.99
Q403.4	10% above standard price	$5.49
Q403.5	20% above standard price	$5.99
Q403.6	30% above standard price	$6.49

SEPFF780. Specifically, these respondents were asked in Q403 "If right now you were to be charged $3.49 per month for the same **Pandora One** subscription you currently have, and you knew that **all** other **Not-On-Demand** music streaming service subscriptions were also $3.49 per month, would you ...? Continue to subscribe to **Pandora One**, Cancel your subscription to **Pandora One**, or Don't know/unsure" (bold and underline in original). The order of the Continue and Cancel options were randomized across respondents. Half of the respondents always saw "continue" first, and half always saw "cancel" first. Trial Ex. 22 at ¶ 79 (Dhar Corr. WDT); Trial Ex. 22, App. D at 77-79 (Dhar Corr. WDT).

SEPFF781. Respondents who answered they would continue to subscribe or chose the "Don't know/unsure" option were asked Q403.1, a parallel question with a monthly price of $3.99, and so forth until they chose the "Cancel your subscription" option, or until they were asked Q403.6, whether they would continue to subscribe to Pandora One if the subscription price were $6.49 per month. For the price level at which a respondent selected "Cancel your subscription" option, a respondent was then asked the switching questions, discussed above. Trial Ex. 22 at ¶¶ 79-80 (Dhar Corr. WDT).

(v) Free Ad-Supported Users Of On-Demand Or Not On Demand Music Streaming Services (Spotify/Pandora)

SEPFF782. At the beginning of the main questionnaire, respondents who reported using free, ad-supported music streaming services (Pandora and Spotify) were screened on time spent listening to the service each week (600.1). Respondents who listened for less than an hour per week were not included in the survey as "users" of the service because they may have signed up for an account at some point in the past, but were not likely to be current and/or active users of the service. Trial Ex. 22 at ¶ 83 (Dhar Corr. WDT).

SEPFF783. Respondents using the free version of Pandora were then told "The next few questions will be about what interest, if any, you may have in purchasing a paid subscription to **Pandora**. A paid subscription to **Pandora** would allow you to listen to music **ad-free, with more skips, and with fewer timeouts**. You will be presented with several different monthly prices for a paid subscription to **Pandora**" (Q603, bold in original).[71] Trial Ex. 22 at ¶ 84 (Dhar Corr. WDT).

SEPFF784. Respondents using the free version of Spotify were instructed "The next few questions will be about what interest, if any, you may have in purchasing a paid subscription to **Spotify**. A paid subscription to **Spotify** would allow you to listen to music **ad-free, with unlimited skips, offline, with high quality audio, and to play any track**. You will be presented with several different monthly prices for a paid subscription to **Spotify**" (Q603, bold in original).[72] Trial Ex. 22 at ¶ 85, App. D p.81 (Dhar Corr. WDT).

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[71] Respondents who indicated that they had both a paid subscription to Pandora One and a free Pandora account were not asked questions about Pandora. Only 5% of respondents that completed the survey indicated that they had both free and paid Pandora. Trial Ex. 22 at ¶ 84 n.50.

[72] Respondents who indicated that they had both a paid subscription to Spotify Premium and a free Spotify account were not asked questions about Spotify. Only 5.7 percent of respondents that completed the survey indicated that they had both free and paid Spotify. Trial Ex. 22 at ¶ 85 n.51 (Dhar Corr. WDT).

SEPFF785. Next, respondents were asked a set of up to three questions about their willingness to purchase a paid subscription to **[Pandora or Spotify]** at certain monthly prices (Q603.1 through Q603.3, bold in original). These monthly prices started at ten percent below the standard price for the subscription, and decreased in 10% increments, as outlined in the table below. Trial Ex. 22 at ¶ 86 (Dhar Corr. WDT).

Prices Offered to Free Ad Supported Music Streaming Services

Question	Relative to Standard Price	Amount
	Pandora	
Q603.1	10% below standard price	**$4.49**
Q603.2	20% below standard price	**$3.99**
Q603.3	30% below standard price	**$3.49**
	Spotify	
Q603.1	10% below standard price	**$8.99**
Q603.2	20% below standard price	**$7.99**
Q603.3	30% below standard price	**$6.99**

SEPFF786. Specifically, they were asked in Q603.1 "If right now you were offered a paid subscription to **[Spotify or Pandora]** at **[INSERT "Monthly price with 10% discount" FROM CHART]**, would you or would you not subscribe to the service" (bold in original).[73] Respondents who answered they would not subscribe, or chose the "Don't know/unsure" option were asked Q603.2, a parallel question with a monthly price 20% below the standard price for the subscription; respondents who still answered they would not subscribe, or chose the "Don't know/unsure" option were asked Q603.3 a parallel question with a monthly price 30% below the standard price for the subscription. Respondents who answered that they would subscribe at any price offered were thanked for their time and completed the survey. Trial Ex. 22 at ¶ 87 (Dhar Corr. WDT).

[73] The order of the "Yes" and "No" options were randomized across respondents. Half of the respondents always saw "Yes, I would subscribe" first and half always saw "No, I would not subscribe" first. Trial Ex. 22 at ¶ 87 n.52 (Dhar Corr. WDT).

(2) Dhar Survey: Pricing Question Results

(i) Sirius XM Paid Subscribers

SEPFF787. Of the 509 paid subscribers to Sirius XM Select, 388 (76% of the sample) indicated that they would cancel their Sirius XM subscription at various price points between $11.49 and $20.49 per month. 92 respondents (18% of the sample) indicated that they would continue their subscription to Sirius XM Select at a price of $20.49 per month. The remaining 29 respondents (6% of the sample) did not report a preference. The distribution of responses is shown in the table below.[74] Trial Ex. 22 at ¶ 91 (Dhar Corr. WDT).

Sirius XM Sirius Select Subscribers

Price	Number of Respondents	Continue	Cancel
$ 11.49	509	390	82
$ 12.99	427	343	43
$ 14.49	384	259	71
$ 15.99	313	209	50
$ 17.49	263	140	80
$ 18.99	183	122	24
$ 20.49	159	92	38

(ii) Sirius XM Trial Subscribers

SEPFF788. Of the 503 respondents who reported having a trial subscription to Sirius XM, 379 (75% of the sample) indicated that they would not purchase a paid subscription

[74] Professor Dhar notes that the fact that 196 respondents (39%) indicated that they would cancel their subscription to Sirius XM when the price was below the $15.99 standard price is consistent with the marketplace practice of offering discounts to subscribers from the "sticker price" for a number of reasons, including to subscribers who purchase longer-term subscription plans, subscribers who have multiple subscriptions, and for customer acquisition and customer retention. [redacted]. *See also* Trial Ex. 22 at ¶ 91 n.55 (Dhar Corr. WDT).

to Sirius XM at various price points between $11.49 and $20.49 per month. 108 respondents (21% of the sample) indicated that they would purchase a paid subscription to Sirius XM at a price of $20.49 per month. The remaining 16 respondents (3% of the sample) did not report a preference.[75] The distribution of responses for the Sirius XM Trial Subscriber sample is presented in the table below. Trial Ex. 22 at ¶ 94 (Dhar Corr. WDT).[76]

Sirius XM Trial Subscribers

Price	Number of Respondents	Continue	Cancel
$ 11.49	509	390	82
$ 12.99	427	343	43
$ 14.49	384	259	71
$ 15.99	313	209	50
$ 17.49	263	140	80
$ 18.99	183	122	24
$ 20.49	159	92	38

(iii) On-Demand Paid Subscribers (Apple Music And Spotify Premium)

SEPFF789. Of the 504 respondents who reported being paid subscribers to On-Demand music services, 246 (49% of the sample) indicated that they would cancel their On-Demand music service subscription at various price points between $6.99 and $12.99 per month. 221 respondents (44% of the sample) indicated that they would continue their subscription to their On-Demand music service at a price of $12.99 per month. The remaining 37 respondents

[75] Professor Dhar notes that [redacted] Trial Ex. 22 at ¶ 94 n.56 (Dhar Corr. WDT).

[76] Professor Dhar estimated the precision of these and other reported estimates in his report with the bootstrapping technique, as recommended by AAPOR. *See, e.g.,* Trial Ex. 22 at 35, 38 (Dhar Corr. WDT).

(7% of the sample) did not report a preference. The distribution of responses is shown in the table below.[77] Trial Ex. 22 at ¶ 97 (Dhar Corr. WDT).

On-Demand Paid Subscribers (Apple Music and Spotify Premium)

Price	Number of Respondents	Continue	Cancel
$ 6.99	504	474	20
$ 7.99	484	432	29
$ 8.99	455	385	33
$ 9.99	422	358	31
$ 10.99	391	274	67
$ 11.99	324	245	37
$ 12.99	287	221	29

(iv) Not-On-Demand Paid Subscribers (Pandora One)

SEPFF790. Of the 499 respondents who reported being paid subscribers to the Not-On-Demand music service Pandora One, 209 respondents (42% of the sample) indicated that they would cancel their Not-On-Demand music service subscription at various price points between $3.49 and $6.49 per month. 254 respondents (51% of the sample) indicated that they would continue their subscription to Pandora One at a price of $6.49 per month. The remaining 36 respondents (7% of the sample) did not report a preference. The distribution is shown in the table below. Trial Ex. 22 at ¶ 100 (Dhar Corr. WDT).

[77] Professor Dhar analyzed the responses of Apple Music subscribers and Spotify subscribers separately. Their responses to questions related to canceling their subscriptions and to questions about whether they would switch to another subscription service were similar across the two services. Trial Ex. 22 at ¶ 97 n.57 (Dhar Corr. WDT).

Not-On-Demand Paid Subscribers (Pandora One)

Price	Number of Respondents	Continue	Cancel
$ 3.49	499	461	22
$ 3.99	477	446	18
$ 4.49	459	382	42
$ 4.99	417	362	21
$ 5.49	396	303	50
$ 5.99	346	296	21
$ 6.49	325	254	35

(v) Subscribers To Free On-Demand Or Not-On-Demand Music Services (Spotify Or Pandora)

SEPFF791. Of the 501 respondents who reported being users of free, ad-supported On-Demand or Not-On-Demand music services, 190 (38% of the sample) indicated that they would purchase a paid subscription if the price was discounted between 10% and 30% below the standard price for the subscription. Of the remaining 311 respondents, 257 (51% of the sample) indicated that they would not purchase a paid subscription if the price was discounted between 10% and 30%. The remaining 54 respondents (11% of the sample) did not report a preference. The distribution of responses for On-Demand or Not-On-Demand Free Subscriber sample is presented in the table below. Trial Ex. 22 at ¶ 103 (Dhar Corr. WDT).

On-Demand/Not-On-Demand Free Subscribers

Percent Discount	Number of Respondents	Subscribe	Continue with Free
10%	501	154	285
20%	347	25	268
30%	322	11	257

(3) Dhar Survey: Response To Hauser Critique Of Pricing Questions

(i) There Is No Basis To Claim That Cancellation Prices Were Understated

SEPFF792. In his Written Rebuttal Testimony, Professor Hauser criticized Professor Dhar's survey. Several of Professor Hauser's criticisms, relating to Professor Dhar's general survey methodology, or to Professor Dhar's "switching" questions, are addressed in Section V.J.1 above. This section is limited to a response to Professor Hauser's criticism of the pricing section of Professor Dhar's survey.

SEPFF793. Professor Hauser first asserted that Dhar Survey respondents were likely to have underestimated the price at which they would cancel their subscriptions because the price points for paid subscribers are arranged from lower prices to higher prices. Professor Hauser asserted that respondents likely underestimated their cancellation prices because of "starting point" bias, anchoring bias, "iterative bidding," or similar principles. Trial Ex. 11 at ¶¶ 31-35 (Hauser WRT). These criticisms are without merit.

SEPFF794. *First*, Professor Hauser — who does not have training, experience, or accomplishments in consumer behavior and psychology remotely approaching that of Professor Dhar — has misapplied the literature and these concepts. *See* 5/9/17 Tr. 3114:11-3115:1 (Hauser) (testifying that he is not an expert in consumer psychology, in contrast to Professor Dhar who is highly qualified in this field). Neither starting point bias nor anchoring have been found to be likely or even present when survey respondents are asked about consumer products or services they are familiar with and, as here, *have already purchased.* 5/8/17 Tr. 2764:16-2765:3, 2765:20-2766:9, 2768:12-2776:24 (Dhar). The paid subscribers to Sirius XM and/or streaming services in Professor Dhar's survey by definition already had a paid subscription and must have made the subscription decision themselves or played a major role in the decision.

Trial Ex. 22 at ¶ 32 & App. D at 62-63 (Dhar Corr. WDT). As Professor Dhar explained, the literature cited by Professor Hauser — involving public goods such as asking respondents to place a value on clean water, or consumer goods they have not already purchased — is thus inapplicable. 5/8/17 Tr. 2764:16-2765:3, 2765:20-2766:9, 2768:12-2776:24 (Dhar).

SEPFF795. For example, Professor Hauser cited a 2002 article in a publication called *Land Economics*, Trial Ex. 804, in which the authors conducted two surveys — one with questions about whether landowners near a river would be willing to pay certain amounts for programs to ensure safe water quality, and a second agricultural survey about whether respondents would be willing to pay higher taxes to prevent closure of certain research and extension programs. Trial Ex. 804, at 290; 5/8/17 Tr. 2769:18-2771:5 (Dhar) (explaining that the *Land Economics* (Whitehead) article involves non-market goods). The studies discussed in this article plainly have no application to consumer surveys about prices for services the consumers already subscribe to. 5/8/17 Tr. 2764:16-2765:3; 2765:20-2766:9; 2768:12-2776:24 (Dhar). Moreover, unlike the tighter price ranges in the Dhar survey (5/8/17 Tr. 2743:7-10 (Dhar)); Trial Ex. 22 at ¶ 64 (Dhar Corr. WDT) (price range of $11.49 to $20.49 for Sirius XM cell)), the Whitehead non-market-goods surveys involved price ranges from $10 to $200. Trial Ex. 804 at 290; 5/8/17 Tr. 2768:12-2769:16 (Dhar).[78]

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[78] Professor Hauser also cites an article by Kahneman and Tversky, Trial Ex. 728, 5/9/17 Tr. 3028:2-3 (Hauser), but the discussion of anchoring in that article involves studies in which respondents were asked to estimate percentages (such as the percentage of African countries in the U.N.), with a "wheel of fortune" spinner generating the anchoring number (Trial Ex. 728 at 1128) — a situation not remotely similar to existing subscribers to a service choosing the price at which they would continue or cancel. At trial Professor Hauser also cited to a paper by Nunes and Boatwright that was not shown to any witness or offered into evidence. 5/9/17 Tr. 3029:3-3030:2 (Hauser). Professor Hauser acknowledged that that particular experiment involved using a very wide range for anchors — sweatshirts priced from $10 to $80 — that resulted in only a $1.50 effect on the willingness to buy particular CDs *the respondents did not previously own*. 5/9/17 Tr. 3122:1-15 (Hauser). No further information was provided about the study conditions as the article was not offered into evidence, but, as noted above, Professor Dhar's study of paid subscribers involves a tight range of prices for services the consumers have already subscribed to.

SEPFF796. A 2004 article by Professor Simonson, and cited by Professor Hauser, "Anchoring Effects on Consumers' Willingness-to-Pay and Willingness-to-Accept," *Journal of Consumer Research* (Trial Ex. 803) involves some consumer goods, but does not involve goods or services the respondents had already purchased, and the anchoring in that article is based on "irrelevant anchors" and "arbitrary anchors" such as Social Security numbers, not the actual price of the products. 5/8/17 Tr. 2771:6-2772:5 (Dhar); Trial Ex. 803 at 681, 683, 685-87. Professor Simonson, who wrote that article, testified that it focused on a completely different issue and has "no implications for any of the surveys conducted in this case." 5/11/17 Tr. 3466:14-3467:7 (Simonson). Moreover, neither of the articles cited by Professor Hauser involves a survey with a tight range of prices and alleged anchors, where starting point bias or anchoring would not occur or would be unlikely to occur (even leaving aside the distinction that Professor Hauser's sources do not involve consumer services the consumers already subscribe to). 5/8/17 Tr. 2768:12-2769:16 (Dhar).

SEPFF797. In contrast to the inapplicable articles cited by Professor Hauser, Professor Dhar cited to a much more recent and relevant article and study in the *American Economic Journal: Microeconomics* (Fudenberg, et al. "On the Robustness of Anchoring Effects in WTP and WTA Experiments"), Trial Ex. 316, which finds that "anchoring goes away when bidding on objects with greater familiarity, such as lotteries." Trial Ex. 316, at 141; 5/8/17 Tr. 2772:6-2776:24 (Dhar). Notably, even in the Fudenberg studies, the common goods were not ones already owned by the participants in the study, so the objects (services) at issue in the Dhar study were even *more familiar* to the consumers than in the Fudenberg studies which found no anchoring.

SEPFF798. *Second*, Professor Hauser does not cite to any actual evidence that respondents understated their cancellation price based on anchoring, starting-point bias, iterative bidding, or any other reason. While Professor Hauser conducted two surveys of his own, he chose to maintain Professor Dhar's pricing questions as phrased by Professor Dhar, rather than reversing the order of prices or making any other change to test the impact of changing the questions or response options. Trial Ex. 11 at ¶ 45 (Hauser WRT)); 5/9/17 Tr. 3064:19-3065:1 (Hauser) (acknowledging he did not test whether reversing the prices would have had any effect); 5/9/17 Tr. 3117:7-12 (Hauser) (Professor Hauser's acknowledgment that he did not attempt to quantify the alleged understatement in cancellation prices in the Dhar survey); *see also* 5/9/17 Tr. 3065:2-11 (Hauser) (acknowledging that not reversing the prices would have "less of an effect" than the effects he believes may have occurred on the switching/substitution section of the Dhar survey). There simply is no evidence — as distinct from erroneous speculation that mischaracterizes and misapplies the literature — that respondents understated the prices at which they would cancel their service. Nor did Professor Hauser pretest Professor Dhar's pricing questions for alleged ambiguities, despite having supposedly conducted nine days of pretesting. 5/9/17 Tr. 3117:17-3118:4 (Hauser); Trial Ex 11, App. H at 1 (Hauser WRT) (noting nine days of pretests).

SEPFF799. Professor Hauser is so keen on finding any reason to critique Professor Dhar's survey that he even suggested at trial that there could be anchoring in Professor Dhar's own pricing cancellation questions based on the price respondents actually paid for their subscriptions. 5/9/17 Tr. 3068:4-5 (Hauser). But when Professor Hauser was reminded by Judge Strickler that Professor Dhar's survey *does not even ask respondents what they actually paid*, let alone remind them, 5/9/17 Tr. 3068:25-3069:5 (Hauser), Professor Hauser switched

tacks and criticized Professor Dhar for *not anchoring* to the actual subscription price. 5/9/17 Tr. 3071:6-11 (Hauser) ("it's much better to have this anchored, if you're going to have it anchored to anything, to have it anchored *to the price they're currently paying*, because that's something they made a decision about at some point. ***It's useful to remind them of that price***" (emphasis added). Professor Hauser thus criticizes Professor Dhar for anchoring (misapplying the literature) and for not anchoring (to the actual price paid). Yet in his own "Modified Dhar Survey," Professor Hauser did not ask respondents about their subscription price *before* asking the pricing questions, notwithstanding his newly minted theory at trial that it would be "useful" to do so. And in response to a later question from Judge Strickler, Professor Hauser flipped his views yet again and acknowledged that reminding respondents exactly what they actually paid could itself have a bias — because respondents may be less willing to say that they would cancel at a price lower than they originally paid (lest they appear foolish for having overpaid). 5/9/17 Tr. 3072:21-3073:5 (Hauser).

SEPFF800. *Third*, although anchoring and starting point bias are simply inapplicable in this context of consumer services already purchased (as well as a tight range of prices), it is also important to note that it is not common to rotate *pricing choices* in this type of survey, 5/8/17 Tr. 2763:16-25 (Dhar),[79] and reversing the prices here (high to low) would cause unnecessary confusion. 5/8/17 Tr. 2763:23-2764:15 (Dhar). If prices were presented from high to low, respondents would be asked if they would continue or quit at the highest price; if they would cancel, they would then be asked a lower price until they chose to continue. This would

[79] Professor Hauser cited to an article by Shari Diamond regarding the general concept of rotating answer choices, but in the excerpt he cites the author discusses rotation of product options, precisely what Professor Dhar (and Professor Simonson) did in the switching questions. None of the examples cited in the Diamond article suggests rotation of prices in a willingness-to-pay survey, Trial Ex. 279, at 395-96, and, notwithstanding Professor Hauser's reliance on the Diamond source to support "rotation," not even Professor Hauser suggests randomizing or rotating the prices (as opposed to reversing the order). 5/9/17 Tr. 3031:3-22 (Hauser).

create confusion for the next set of questions on switching, which start with the premise that the respondent has just stated in the prior answer the price at which he or she would *cancel*. Under a high-to-low method, respondents would instead have to be referred back to earlier answers — not the most recent one — as to the price they said they would cancel at, causing unnecessary confusion. 5/8/17 Tr. 2763:23-2764:15 (Dhar).[80] The confusion caused by reversing the order of prices would be entirely unnecessary for the reasons stated above — that anchoring and starting point bias are simply inapplicable in this context.

SEPFF801. *Fourth*, and critically important, the economists cite to the Dhar Survey pricing results only to show the *comparative* elasticity of Sirius XM vs. paid streaming services, *see, e.g.*, *infra* Section V(K)(4)(ii)(c), and Professor Dhar *used precisely the same low-to-high-price survey methodology for the questions involving paid subscriptions to Sirius XM, Apple Music, Spotify, and Pandora.* 5/8/17 Tr. 2777:1-2778:4 (Dhar). This point is vital to emphasize because Professor Hauser conceded he has no data or evidence that the alleged understatement of cancelation prices (under any of his theories) had any different effect on the Sirius XM respondents compared to the Apple Music, Spotify, and Pandora One respondents. 5/9/17 Tr. 3120:24-3121:16 (Hauser). In fact, Professor Hauser went further and acknowledged that the effect of any bias would be **directionally similar across all of those different services to a strong degree**. 5/9/17 Tr. 3121:17-21 (Hauser); *see also* 5/8/17 Tr. 2777:1-2778:4 (Dhar) (no basis to conclude that any alleged bias, even assuming it did occur, would be different across

[80] When he notes that prices can be reversed and questions referenced using HTML or JavaScript, 5/9/17 Tr. 3026:20-22 (Hauser), Professor Hauser misunderstands Professor Dhar's point about the confusion that would be caused by reversing prices. Professor Dhar did not testify that it would be *technically* difficult to change the survey that way, but that the switching questions would become confusing when the last pricing question is no longer the cancellation price. 5/8/17 Tr. 2763:23-2764:15 (Dhar).

the services). Thus, there is no basis to question the economists' comparative elasticity conclusions.

(ii) Respondents Did Not Need To Know Their Exact Subscription Price

SEPFF802. Professor Hauser next asserted that many respondents did not know what their "exact" subscription price was, and thus may have had difficulty answering the pricing questions. Trial Ex. 11 at ¶¶ 51-53 (Hauser WRT).[81] This argument is flawed in multiple respects. To begin with, Professor Dhar explained that a respondent's knowledge of her subscription price (which could be based on a subscription purchased months or years before the survey was taken), is not at all needed in order to answer a survey question on what she would be willing to pay for her service *at present* — at the time of the survey. 5/8/17 Tr. 2739:1-23, 2742:13-22, 2781:3-18 (Dhar).

SEPFF803. The language of the Dhar survey makes this crystal clear. Question 202, for example (and similar questions applied to streaming services), states as follows: "You will be presented with several different monthly prices for a single Sirius XM Satellite Radio subscription. **This amount may be higher or lower than the amount you currently pay for your Sirius XM Satellite Radio subscription"** (bold font in original). Trial Ex. 22, App. D at 66 (Dhar Corr. WDT). The very next question (203) begins by stating "If right now you were to be charged … per month for the same Sirius XM Satellite Radio subscription you currently have, would you . . . ?" Trial Ex. 22, App. D at 67 (Dhar Corr. WDT). It is thus clear from the text of

[81] As noted above, the paid subscribers to Sirius XM and/or streaming services in Professor Dhar's survey had to have already purchased those services, and must have made the subscription decision themselves or played a major role in the decision. Trial Ex. 22, App. D at 62-63 (Dhar Corr. WDT).

the survey that the prices at which respondents would continue or cancel "right now" is not dependent in any way on their knowledge of their subscription price.

SEPFF804. In a similar vein, Professor Hauser asserted that of the 293 respondents in his survey who chose to cancel their Sirius XM service, 13% of them chose prices below their reported subscription price. Trial Ex. 11 at ¶ 54 (Hauser WRT).[82] That is not at all surprising given that the respondents were asked what they were willing to pay at the time of the survey, "which may be higher or lower than the amount you currently play." Trial Ex. 22, App. D at 66 (Dhar Corr. WDT); 5/8/17 Tr. 2784:16-2785:18 (Dhar); *see also* 5/8/17 Tr. 2742:23-2743:13 (Dhar) (also noting frequent discounting in the marketplace).

SEPFF805. In addition, the premise of Professor Hauser's argument — that a certain percentage of respondents do not know how much they pay — is misleading. Professor Dhar's survey does not even ask respondents their subscription price, so Professor Hauser bases his conclusion on a question Professor Hauser included in his own survey. But that question — question 210.4 — inexplicably did not ask respondents if they know "approximately" what they pay, let alone whether they know if they pay within various ranges of listed prices. Trial Ex. 11, App. I at 12. In Professor Hauser's words, his survey asks respondents "whether or not they know *exactly* how much they pay for their subscriptions." Trial Ex. 11 at ¶ 52 (Hauser WRT) (emphasis added). Only those who answer "yes" are asked to respond with various price ranges; those who respond "no" (that they do not know their subscription price) or are "unsure" are *not* asked to provide an estimate or approximate price or price range. Trial Ex. 11, App. I at 12 (Hauser WRT). It is not at all uncommon for consumers not to remember precisely what they

[82] The percentage is similar for the On-Demand part of Professor Hauser's survey. Trial Ex. 11 at ¶ 54 (Hauser WRT).

paid for a subscription (which they could have signed up for months or even years earlier), and there is no reason to refrain from asking survey respondents to estimate or approximate their subscription price. 5/8/17 Tr. 2767:18-23, 2782:1-2783:5, 2783:6-2784:15 (Dhar). Even Professor Hauser could not recall exactly how much he originally paid for his own Sirius XM subscription. 5/9/17 Tr. 3072:6-9 (Hauser).

SEPFF806. Even though Professor Hauser's survey did not allow respondents to estimate their subscription price, only 26% of Sirius XM subscribers, and 19% of paid on-demand subscribers, in his survey reported not knowing their subscription price — hardly a surprising result. That only 26% of Sirius XM subscribers and 19% of paid on-demand subscribers do not know "exactly" their subscription price, Trial Ex. 11 at ¶ 52 (Hauser WRT), also belies Professor Hauser's speculation that respondents who do not pay on a monthly basis might have difficulty estimating their equivalent monthly subscription price.

(iii) Professor Hauser's Assertions Regarding The "Reproducibility" Of Professor Dhar's Pricing Questions Are Without Merit

SEPFF807. Professor Hauser asserted that he attempted to replicate the results of the pricing question section[83] of Professor Dhar's survey but obtained statistically significant different results, and thus that Professor Dhar's pricing questions are not scientifically "replicable" or "reproducible." Trial Ex. 11 at ¶¶ 40-50 (Hauser WRT). But it is Professor Hauser's methodology that is fundamentally unsound and flawed, as he violated the cardinal rule of replicability by failing to keep study conditions static, and by failing to conduct repeated attempts of replication (with conditions static) before drawing any conclusion about whether

[83] Professor Hauser does not purport to have attempted to replicate the "switching" section of Professor Dhar's survey and thus does not contend that that part of Professor Dhar's survey is not "reproducible."

Professor Dhar's pricing questions are *capable* of replication. 5/8/17 Tr. 2789:17-2807:4 (Dhar). Ultimately, faced with his own methodological flaws, and in response to a question from the Judges, Professor Hauser appears to have retreated from his written testimony by acknowledging that his arguments could go to the *weight* afforded to Professor Dhar's pricing questions, rather than declaring the pricing questions not scientifically "reproducible." 5/9/17 Tr. 3099:22-3100:2 (Hauser).

SEPFF808. As Professor Dhar explained, Professor Hauser's replicability conclusions are flawed at the most fundamental level because Professor Hauser changed the survey population in critical ways. Professor Hauser entirely excluded from his survey population anyone who had taken a survey involving radio or music in the six months prior to the survey, thereby removing 1,266 respondents from the survey population — 8.5% of those who "clicked in" to the survey. Trial Ex. 11 at ¶ 45 n.48 (Hauser WRT), Trial Ex. 11, App. M at 1 (Q49) (Hauser WRT); 5/8/17 Tr. 2790:1-2791:6 (Dhar). In Professor Dhar's opinion as a marketing expert and consumer psychologist, consumers who have taken a survey involving radio or music are likely to have certain kinds of preferences for those products, and may be more interested in certain music products, creating a systematic difference in the survey universe. 5/8/17 Tr. 2795:4-18 (Dhar). Professor Hauser removed those respondents from the survey entirely, rendering it impossible to quantify the impact of changing the survey population. 5/8/17 Tr. 2794:17-2795:3 (Dhar).

SEPFF809. In response to this fundamental defect, Professor Hauser's explanation at trial that he simply took out a *random* part of the population, 5/9/17 Tr. 3077:22-25 (Hauser), is patently inaccurate. Professor Hauser's screening question removed anyone who had taken a music or radio survey in the past six months — not a "random part" of the population. Professor

Hauser's next attempt to justify his flawed "replication" methodology is equally meritless and misleading. Professor Hauser contends that if people who have taken music surveys might answer music questions differently than the general population, then that somehow must mean Professor Dhar's survey population is biased. This is smoke and mirrors. Professor Dhar's survey does not *limit* invitations to persons who have completed music surveys, or favor their inclusion in any way; it is only Professor Hauser who hand picks that subset of respondents for exclusion.

SEPFF810. Had Professor Hauser asked respondents at the *end* of the survey if they had taken a music or radio survey in the last six months, the Judges would have the complete data set and could examine exactly how those respondents answered the main survey questions. 5/8/17 Tr. 2794:17-2795:3 (Dhar). But Professor Hauser chose instead to fundamentally change the survey population up front, rendering any conclusions about "reproducibility" invalid. In response to the panel's question, Professor Hauser acknowledged, as he must, that he could have placed the question about other surveys at the end. 5/9/17 Tr. 3078:16-3079:3 (Hauser).[84]

SEPFF811. The relatively small differences between Professor Dhar's and Professor Hauser's results on pricing questions demonstrate that excluding even a fraction of the 1,266 persons Professor Hauser excluded could have materially changed the results. Appendix M to Professor Hauser's written rebuttal testimony shows the percentage of respondents who

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[84] Professor Hauser, who does not have the expertise in consumer psychology that Professor Dhar has, speculates that this fundamental change to the population would have no "material" effect. It should be apparent, as Professor Dhar explains, that persons who have taken music surveys could well have a greater interest in various music services, and thus could have a higher willingness-to-pay than persons who have not participated in music surveys in the past six months, but in any event the onus cannot be on Professor Dhar to prove that a change definitely would have occurred, given that it was Professor Hauser who changed the population and chose not even to *collect* the data from the music survey subgroup. This is precisely why, as discussed below, Professor Gilbert and others criticize the authors of the "replication" article cited by Professor Hauser for changing the underlying survey conditions.

were excluded by the music-survey question, as well as the percentage excluded by screening questions after the music-survey question (*e.g.*, 59.2% screened out because they do not have satellite radio service, 0.5% screened out because they played a minor role or no role in the subscription decision, 12.4% screened out because they did not have the Select package). Trial Ex. 11, App. M, at 1 (Hauser WRT). The respondents excluded by the music-survey question may well have been more likely than the general population to qualify under the remaining criteria (*e.g.,* more likely to have a satellite radio subscription), but even with the conservative assumption that 75% of the 1,266 respondents would later have been screened out for other reasons, that would still amount to the music-survey question eliminating more than 300 people from the main survey, well more than enough to account for the differences between Professor Hauser's pricing results and Professor Dhar's. When the number of respondents who would choose to cancel at each price point is compared between Professor Dhar's results (Trial Ex. 22 at ¶ 91, Table 7 (Dhar Corr. WDT)) and Professor Hauser's reported results (Trial Ex. 288, Figures 1-3), it demonstrates that at some price points there are between zero and ten respondents separating Professor Hauser's results from Professor Dhar's, and at other points only between 15 and 26 respondents separating the results — so excluding 300 (or even, for that matter, 200 or 100 or 50) respondents from the survey who had completed any kind of radio or music survey in the past six months quite obviously could alone account for the differences between the Dhar and Hauser results.

SEPFF812. Although the stated reason for the exclusion is irrelevant when dealing with a "reproducibility" conclusion — that is, the purpose or motivation for the exclusion cannot and does not alter the fact that the population was changed in a significant way and thus that any conclusion that a study is incapable of replication is invalid — here Professor Hauser fails to

justify the broad exclusion of *anyone* who took a music or radio survey in the six months preceding his survey, even assuming, *arguendo*, that it was necessary to exclude respondents who took Professor Dhar's or Mr. Boedeker's survey.[85]

SEPFF813. Professor Hauser's Modified Dhar Survey population also differs significantly from Professor Dhar's because the in-bound and final *demographics do not match* (*see, e.g.,* 5/9/17 Tr. 2796:14-2801:5 (Dhar)), and it is undisputed that demographics are a factor in Sirius XM subscription decisions. *See, e.g.,* 5/15/17 Tr. 3712:11-23 (Meyer).[86]

SEPFF814. The differences in demographics are not disputed. 5/9/17 Tr. 3084:23-24, 3085:18-21 (Hauser). As a result, the population of the Hauser and Dhar surveys simply was not the same, leading to another source of "error" — *i.e.,* an explanation for differing results *other than* a conclusion that a study is not "replicable." 5/8/17 Tr. 2800:7-17 (Dhar); Trial Ex. 262, at 1 (replicability paper describing as "infidelities" differences in study populations or other conditions which are potential sources of error in replication attempts); Trial Ex. 262 at p.1 ("This strongly suggests that the infidelities did not just introduce random error but instead *biased the replication studies toward failure*.") (emphasis added).

SEPFF815. Professor Hauser did not cite any authority finding consumer surveys like those in this case to be not "reproducible," let alone any that reach such a conclusion based on one or two attempts that failed to mimic the underlying survey population. The only remotely relevant source cited by Professor Hauser, Trial Ex. 257, "Estimating the Reproducibility of

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[85] For example, Professor Hauser could have simply asked the survey vendor to exclude up front anyone who had taken a survey on the specific days the Dhar and Boedeker surveys were administered. As noted above, Professor Hauser also could also have asked the question at the end of the survey rather than eliminating up front anyone who took a music survey in the prior six months.

[86] Professor Hauser's Modified Dhar Sirius XM survey demographic data are contained in Trial Ex. 288, in the "Modified Dhar Sirius XM Survey" tab. Column DU shows the ages of each respondent. Trial Ex. 288 also contains Professor Dhar's demographic data, in the "SoundX_000154716" tab, where Column M shows respondents' ages.

Psychological Science," is a meta-analysis of multiple studies which actually brings home the fatal flaw in Professor Hauser's argument. As the authors explain, "It is also too easy to conclude that a failure to replicate a result means that the original evidence was a false positive. Replications can fail if the replication methodology differs from the original in ways that interfere with observing the effect." Trial Ex. 257, at AAC 4716 6 (SXM Dir 0013810) (emphasis added); 5/8/17 Tr. 2802:2-2803:4 (Dhar).

SEPFF816. These principles and others that undermine Professor Hauser's conclusions are emphasized further in a response to "Estimating the Reproducibility of Psychological Science." Eminent professors Daniel Gilbert, Gary King, and others explain in their "Comment on Estimating the Reproducibility of Psychological Science," Trial Ex. 262, that conclusions about replicability "require[] having data from multiple replications of the same original study." Trial Ex. 262, at 1037-b. The Gilbert paper goes on to explain that when 35 or 36 replication attempts were made, 85% of the original studies were replicated, as opposed to 47% when only one replication attempt was made. Trial Ex. 262, at 1037-b.

SEPFF817. Professor Dhar explains that even setting aside the critical issue that Professor Hauser changed the survey population, the Gilbert paper shows that because of other potential sources of errors, studies need to be run many times before any conclusions about replicability can be reached. 5/8/17 Tr. 2803:14-2807:4 (Dhar). And while the issue of replicability more generally may be complex and controversial, the core principles of the need to mimic the original study conditions and conduct multiple replication attempts are not. 5/8/17 Tr. 2806:5-2807:4 (Dhar).[87]

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[87] Professor Hauser effectively attempted only one "replication" of Professor Dhar's study — the so-called Modified Dhar Survey (which, for reasons discussed above, did not actually "replicate" the original study conditions). Professor Hauser's much more limited "Dhar Reproduction Survey" hardly constitutes a replication attempt since it involved a trivial 113-person survey population, with an absurdly low 1.3% response rate, in

SEPFF818. In response to Judge Strickler's question, Professor Hauser seems to implicitly acknowledge that based on one attempt (or, for the sake of argument, two, if one counts the small 113-person survey as a legitimate "replication" attempt), it may be overstated to declare Professor Dhar's survey results "not replicable" — as opposed to a more modest claim that Professor Hauser found the Dhar results were "hard to replicate" and thus should be given "less weight." 5/9/17 Tr. 3099:22-3100:2 (Hauser). While it is certainly true that there is no basis to declare Professor Dhar's pricing questions "not replicable," there is also no basis to give less weight to Professor Dhar's results given the deficiencies with Professor Hauser's so-called "replication" attempts noted in this section (*e.g.*, change of survey population, change of demographics, insufficient replication attempts, inadequate "reproduction" survey with small sample size and only marginally different results).

SEPFF819. Moreover, even leaving all other defects of Professor Hauser's "replicability" assertions aside, any one of which would undermine his conclusions, Professor Hauser also errs by relying heavily on "p values" and tests of statistical significance in concluding that Professor Dhar's survey is not "replicable," rather than examining the economic or practical difference between study results. 5/8/17 Tr. 2807:5-24 (Dhar).[88] Professor Hauser acknowledged at trial that it is important that "courts try to avoid being misled by p values and should focus on more substantive concerns such as interval estimates or confidence intervals, which may be more valuable." 5/9/17 Tr. 3141:5-12 (Hauser). Had Professor Hauser kept the study conditions constant and conducted more replication attempts, comparing his study results

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addition to other defects discussed below. 5/8/17 Tr. 2807:25-2808:19 (Dhar); 5/9/17 Tr. 3135:17-3136:14 (Hauser).

[88] Of course, as discussed above, even the practical/economic differences between the Dhar and Hauser surveys here are overstated and unreliable because of Professor Hauser's changes to the study populations and, in the case of the so-called "reproduction" survey, the small sample and response rate.

to Professor Dhar's as an absolute matter, and/or through confidence intervals, could have provided more relevant information. But unlike in his own *SDARS II* report (Trial Ex. 20 at ¶ 45 & App. H p.2 (Hauser SDARS II Corr. WDT)), Professor Hauser did not calculate confidence intervals here (while acknowledging he could have done so). 5/9/17 Tr. 3138:18-3139:1 (Hauser); 5/9/17 Tr. 3153:14-17 (Hauser). Here Professor Hauser would have needed to keep study conditions including the population constant, repeated the survey multiple times, and calculated confidence intervals or estimates before reaching any conclusion about replicability or the weight to be given to Professor Dhar's results on the pricing cancellation questions.

SEPFF820. In addition, beyond all the problems with Professor Hauser's "replicability" conclusions identified above, there are additional reasons why Professor Hauser's so-called "Reproduction Survey" should be given no weight. That survey:

- had an admittedly small sample size of only 113 respondents compared to the much larger sample size of Professor Dhar's survey, 5/8/17 Tr. 2808:4-19 (Dhar); 5/9/17 Tr. 3092:13 (Hauser) (Hauser admission that sample size was "small");[89] Trial Ex. 22 at ¶ 52 & Table 1 p.19 (Dhar Corr. WDT) (showing Professor Dhar's survey sample size of approximately 500 respondents per category);
- had a miniscule *1.3%* response rate that even Professor Hauser conceded, in response to Judge Feder's question, was low, 5/9/17 Tr. 3135:17-3136:8 (Hauser);
- excluded altogether the Sirius XM trial group and the on-demand streaming group, 5/9/17 Tr. 3135:17-3136:2 (Hauser); and
- showed results that even Professor Hauser described as only "marginally" statistically significantly different from Professor Dhar's, notwithstanding all the other problems with the so-called Reproduction Survey. 5/8/17 Tr. 2808:6, 2884:12-17 (Dhar); Trial Ex. 11 at ¶ 43 (Hauser WRT).

SEPFF821. Professor Hauser's written testimony, in which he claims that *after* obtaining "marginally" significant results from the so-called "Reproduction Survey," he decided

[89] Professor Hauser's only justification for using such a small sample size was that he ran out of time, the same excuse he provided for not attempting to replicate Professor Dhar's switching questions as is. 5/9/17 Tr. 3136:11-3137:3 (Hauser).

to run a "second attempted reproduction," is patently misleading. Trial Ex. 11 at ¶ 43 n.47, p.16 heading B., ¶ 45 (Hauser WRT) (Professor Hauser's assertion that *after* conducting the Reproduction Survey, he conducted a "*second attempted reproduction*," also described as an "*additional* attempt at replication," and "further replication") (emphasis added). In fact, Professor Hauser did no such thing; his "second attempted reproduction" was nothing more than running statistical tests on the already completed Modified Dhar Survey. Professor Hauser did no further surveys or "second attempted reproductions" following the marginal results of the Reproduction Survey. 5/9/17 Tr. 3134:10-3135:13 (Hauser). This is significant because Professor Hauser himself concedes that when a result is only marginally significant, a further test is needed (Trial Ex. 11 at ¶ 43 n.47), which cannot possibly mean looking *backwards* at a prior survey. In short, the "second" survey here *was* the Reproduction Survey, which did ***not*** produce statistically significant results at conventional levels. 5/8/17 Tr. 2884:12-17 (Dhar).

(iv) Professor Hauser's Criticism That Professor Dhar Should Have Reminded Respondents Of Psychological And Other Costs Of Switching To A New Service In A Vehicle Is Without Merit

SEPFF822. Professor Hauser argues that consumers who discontinue a Sirius XM subscription should be explicitly reminded of "hassle" or other costs associated with using a different service in the vehicle. Trial Ex. 11 at ¶¶ 36-39 (Hauser WRT). As Professor Dhar — who has substantial expertise in consumer psychology which Professor Hauser does not have — explained, however, any alleged "hassle" cost is too idiosyncratic to address in the survey and could instead create confusion; and, more generally, respondents already will consider possible "switching costs" when responding to the questions. 5/8/17 Tr. 2779:9-2780:20 (Dhar). Professor Hauser did not test whether consumers already take any such costs into account, and presents no evidence that they do not. 5/9/17 Tr. 3123:11-13 (Hauser). Professor Hauser also

seems to claim that using an on-demand service in the car would involve a "very large switching cost," 5/9/17 Tr. 3043:8-25 (Hauser), but that assertion is devoid of evidentiary support and contrary to other evidence, discussed above, concerning the increasing use, and ease of use, of streaming services in vehicles.

c. Calculating The Relative Downstream Elasticity Of Demand For The Services

SEPFF823. "Downstream elasticity is the interface between the Service and the end consumer. That's what the Dhar survey gets to." 5/2/17 Tr. 2096:6-8 (Willig). Based on the Dhar survey, and using Sirius XM's ARPU of about ($[[redacted]]), Professor Willig calculated that Sirius XM's price elasticity of demand is 0.8, while that for Apple/Spotify just above their price point of $9.99 is 1.7. Trial Ex. 28 at ¶ 44 (Willig WDT); *see also* Trial Ex. 28, App. C (Willig WDT) (providing further details about this calculation).

SEPFF824. Professor Willig also undertook a careful econometric study of the price elasticity of demand for Sirius XM, and found that it corroborates the finding of the survey for Sirius XM, with a range of estimates from 0.3 to 0.9 depending on the time frame of the measured response to a price change. Trial Ex. 28 at ¶ 44 (Willig WDT); *see also* Trial Ex. 28, App. D (Willig WDT) (providing details about the econometric analysis).

d. Calculating The Relative Upstream Elasticity Of Demand For Sound Recordings

SEPFF825. The Dhar survey, and Professor Willig's econometric analysis of elasticity of demand for Sirius XM, is informative with respect to the downstream elasticity of demand for the service by consumers. Ramsey pricing, however, requires assessing the upstream elasticity of demand for sound recordings by the service, as well as the downstream elasticity of demand. Trial Ex. 28 at ¶ 24 n.12 (Willig WDT); 5/2/17 Tr. 2096:9-17 (Willig). "What the Dhar survey tells us about is the elasticity of demand for the service with respect to its price, but

that's not the same thing as the elasticity of demand for the service with respect to the price of music which, after all, is only one input into the basis, the cost basis, the financial basis of the Services." 5/02/17 Tr. 2095:17-23 (Willig).

SEPFF826. The price elasticity of demand for sound recordings distributed through one of these services is the price elasticity of the downstream demand for subscriptions to the service, multiplied by music's cost share of the total downstream price, provided that the number of music performances is proportional to the number of subscribers. Trial Ex. 28 at ¶ 44 (Willig WDT).

SEPFF827. Today, the cost of sound recordings for Sirius XM is very small compared to other modes of distribution. 5/2/17 Tr. 2099:4-5 (Willig). Accordingly, when the downstream elasticity of demand for Sirius XM and subscription interactive streaming services is multiplied by the ratio of consumer-facing price to the cost of sound recordings, Sirius XM's upstream elasticity is lower than the upstream elasticity of other distribution channels. 5/2/17 Tr. 2099:6-11 (Willig). Given an estimated price elasticity of demand of 0.8 for Sirius XM subscriptions, and a [[redacted]] = .09 music's cost share of price, the elasticity of demand for sound recording performances at Sirius XM is .09 x. 8 = .072. Trial Ex. 28 at ¶ 44 (Willig WDT). In contrast, the corresponding elasticity of demand for music performances at Apple/Spotify is [[redacted]]. Trial Ex. 28 at ¶ 44 (Willig WDT).

SEPFF828. This empirical evidence is persuasive that the elasticity of demand for sound recordings is larger at Apple/Spotify than it is at Sirius XM. Trial Ex. 28 at ¶ 44 (Willig WDT). As a result, Professor Willig concluded that "even at royalty rates proposed by SoundExchange, the music input would still be a significantly smaller percentage of the downstream price for Sirius, meaning that upstream [price] elasticity is not going to be bigger,

probably lower than the upstream elasticities for the other Services that we're talking about." 5/2/17 Tr. 2099:21-2100:3 (Willig).

iii. Royalty Rate Indicated By Ramsey Pricing

a. Professor Willig's Application Of Ramsey Pricing

SEPFF829. Based on Professor Willig's analysis of Sirius XM's relative elasticity of demand, the margin between Sirius XM's royalty and the walk-away opportunity cost should equal or exceed the margin for paid interactive services. 5/2/17 Tr. 2101:14-2102:1 (Willig). Because Sirius XM has lower elasticity of demand than subscription interactive services, Ramsey pricing suggests that Sirius XM should bear more of the cost needed to support a consumer-welfare maximizing level of investment in sound recordings.

SEPFF830. Sirius XM's margin can be calculated as [[redacted]]. Trial Ex. 28 at ¶ 50 (Willig WDT). It would take a royalty of $[[redacted]] per subscriber per month for Sirius XM to yield the same margin as that paid by the interactive streaming services (calculated as [[redacted]]). Trial Ex. 28 at ¶ 50 (Willig WDT). These calculations are reproduced below.

Margin for Subscription Fully Interactive Services [RESTRICTED]

Margin for Subscription Fully Interactive Services	
Creator Compensation from Subscription Fully Interactive Services	[[redacted]]
Walk-away Opportunity Cost for Subscription Fully Interactive Services	$1.76

Margin for Subscription Fully Interactive Services	[redacted]

Deriving an Equalizing Margin for Sirius XM [RESTRICTED]

Margin for Sirius XM	
Walk-away Opportunity Cost for Subscription Fully Interactive Services	$2.55
Margin for Subscription Fully Interactive Services	[redacted]
Formula to Identify Amount of Creator Compensation Needed from Sirius XM to Equalize Margins	[redacted]
Creator Compensation Needed From Sirius XM to Equalize Margins	[redacted]

SEPFF831. As Professor Willig noted in his written direct testimony, "a move from the current royalty of $[redacted] to $[redacted] is too jolting and uncertain to be practically contemplated, but it does however follow logically from economic principles and from the policy criteria (a), (b) and (c) of Section 801(b)(1)." Trial Ex. 28 at ¶ 50 (Willig WDT). Moreover, at

trial, Professor Willig testified that, without additional data, he could not determine whether the relative elasticity of demand for Sirius XM would change as a result of raising royalties to $8.33 per subscriber per month. 5/2/17 Tr. 2102:17-22 (Willig). As a result, Professor Willig could not determine whether a price increase to $8.33 would reduce the proper Ramsey price. 5/2/17 Tr. 2102:23-2103:1 (Willig).

SEPFF832. Although Professor Willig does not put his Ramsey analysis forward as a rate proposal, the analysis indicates that "Ramsey principles point to a serious rise in the Sirius creator compensation from the current level." 5/2/17 Tr. 2103:2-8 (Willig). Professor Willig cautioned that his calculation of the Ramsey target in this case is not intended for use in setting a specific royalty rate, 5/2/17 Tr. 2086:3-6 (Willig), and noted that he makes no attempt to determine what royalty rates are needed across the relevant categories to generate the $800 million lost because of the transition from ownership to access, 5/2/17 Tr. 2086:9-12 (Willig). Professor Willig's Ramsey pricing calculation is directional, but confirms that Sirius XM's royalties should rise. 5/2/17 Tr. 2086:3-6 (Willig).

5. The Efficient Component Pricing Rule

SEPFF833. The "efficient component pricing rule" (ECPR) is another principle of public interest pricing that can inform this rate-setting exercise. Trial Ex. 28 at ¶ 14 (Willig WDT). ECPR was developed to guide pricing of access to assets that are necessary to the production of competing services or products, particularly where there are complaints of anticompetitive foreclosure of access by would-be competitors of the owner of the necessary assets. Trial Ex. 28 at ¶ 14 (Willig WDT). In short, ECPR prescribes rates for access equal to direct plus competitive opportunity costs, in part as a reaction to anticompetitive practices that attempt to extend the owner's monopoly power over the needed assets to broader potentially competitive markets. Trial Ex. 28 at ¶ 35 (Willig WDT).

SEPFF834. Because ECPR is designed to address anti-competitive foreclosure of access to assets, Trial Ex. 28 at ¶ 14 (Willig WDT), it is not perfectly suited to this rate-setting exercise, which does not involve the anti-competitive and monopolistic behavior to which ECPR typically is directed.[90] 5/2/17 Tr. 2105:24-2106:5 (Willig).

SEPFF835. However, ECPR still provides perspective here. The most salient lesson of ECPR for the matter at hand is that the most confining pricing remedy for attempted monopolization through refusals of access to needed assets is prescribing that prices equal direct plus competitive opportunity costs. Trial Ex. 28 at ¶ 36 (Willig WDT); *see also* 5/2/17 Tr. 2105:2-23 (Willig) (noting that ECPR is designed to be punitive). Thus, while there is no need for such remedies in the marketplace at issue here, at a minimum royalties should be permitted to cover direct plus opportunity costs. Trial Ex. 28 at ¶ 36 (Willig WDT).

SEPFF836. Indeed, as Professor Willig testified, application of ECPR indicates that "opportunity cost is the floor on the economically-efficient access price." 5/2/17 Tr. 2106:6-8 (Willig). Accordingly, the ECPR provides further evidence that "opportunity cost is a very important indicator of the bottom of the reasonable range of royalties" in setting appropriate rates for Sirius XM's satellite radio service. 5/2/17 Tr. 2106:8-11 (Willig).

6. Summary of Rate Calculations Predicated on Public Interest Pricing

SEPFF837. Principles of public policy pricing — including the Nash Bargaining Solution, Ramsey Pricing, and the Efficient Component Pricing Rule — indicate that royalty

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[90] Professor Willig, in his written direct testimony, provided the follow illustration of when ECPR might be deployed: imagine that owners of copyrights on sound recordings formed a joint venture with a large subscription interactive service, and proceeded to refuse to negotiate reasonably over access to the music for any competitive distributor. An antitrust court might invoke ECPR as a cure for the anticompetitive effect of the refusal to deal by prescribing that the copyrights be licensed to at least some competitors at rates that assured that an efficient entrant could succeed in the market. Trial Ex. 28 at ¶ 35 (Willig WDT).

rates should be set at a level at or above the recording industry walk-away opportunity cost of licensing Sirius XM. Trial Ex. 28 at ¶ 39 (Willig WDT).

SEPFF838. When applying Ramsey pricing, the floor on the range of reasonable royalties for Sirius XM's satellite radio service is opportunity cost: $2.55 per subscriber per month. 5/2/17 Tr. 2126:22-23 (Willig). When applying ECPR, which illustrates how public pricing principles apply in circumstances that require punitive pricing that is unwarranted here, the floor on the range of reasonable royalties again is opportunity cost: $2.55 per subscriber per month. 5/2/17 Tr. 2126:24-2127:1 (Willig). When applying the Nash Bargaining Solution, the range of reasonable royalties for Sirius XM's satellite radio service is $2.55 (the opportunity cost or fallback value) to $3.94, a rate that is based on fair split of the surplus. *See* 5/2/17 Tr. 2127:1-3 (Willig).

SEPFF839. As Professor Willig indicated in his written direct testimony, $2.55 per subscriber per month "is the amount of compensation that the sound recording creators lose from the alternative distribution modes due to Sirius XM's distribution of the sound recordings itself. With lower royalties than that, like the current level of $[[redacted]] per subscriber per month, Sirius XM is a net drain on the financing of sound recording creation, to say nothing of not paying its fair share." Trial Ex. 28 at ¶ 45 (Willig WDT).

SEPFF840. Ensuring that the rate set in this case is at or above opportunity cost is important because under the statutory scheme, the record companies are forced sellers. 5/2/17 Tr. 2016:15-17 (Willig). Because the record companies are forced sellers, "they can't negotiate above the cap that's set by regulation. They can't say no." 5/2/17 Tr. 2016:16-17 (Willig). Accordingly, if the statutory rate is set below what the record companies would seek in an

unregulated market transaction — and in particular, if the rate is set below their costs (including opportunity cost) — they have no recourse.

SEPFF841. By contrast, "the Services are not forced buyers. They can say no. Or they can steer in a very important way, and so they can push rates down below the cap. So sort of a one-sided thing." 5/2/17 Tr. 2017:3-6 (Willig). Thus, as Professor Willig testified at trial, once a rate is set, the "rate[s] can actually come out lower" than the statutory rate if market forces so dictate, but they cannot come out higher no matter what because of the "imbalance in rights created by the statute." 5/2/17 Tr. 2017:9-12 (Willig).

SEPFF842. Professor Shapiro effectively acknowledged this when questioned at trial on Sirius XM's campaign to execute direct licenses:

> Q: . . . So, for example, the statutory rate is a ceiling on what a service will pay, isn't it?
>
> A: Yes, it is.
>
> Q: And even if an unregulated market there would have been agreement at rates above the statutory rate, you won't see them where there is a statutory rate, correct?
>
> A: I think that's correct.
>
> Q: Conversely, where there is a statutory rate, direct licenses, if they exist, are always going to be at lower rates, right?
>
> A: They can't be above, that's correct.

4/20/17 Tr. 443:10-22 (Shapiro).

> [redacted]?
>
> A: In general, that's right.

4/20/17 Tr. 482:25-483:6 (Shapiro).

SEPFF843. [ ]. 4/20/17 Tr. 443:10-22 (Shapiro); *see also* 4/20/17 Tr. 481:21-22 ("[T]he statutory rate provides a ceiling on what the service will pay."). For these reasons, the Judges should set a rate that ensures reasonable compensation for the copyright owners at a level at or above the opportunity cost calculated by Professor Willig.

VI. The Mid-Tier Agreements With iHeart And Pandora Corroborate SoundExchange's Rate Proposal

A. The Mid-Tier Rates Are Consistent With SoundExchange's Proposal And Dramatically Inconsistent With Sirius XM's Rate Proposal

SEPFF844. Under recently executed, voluntary, and market-determined direct licenses executed for subscription mid-tier services, [ ].[91] *See* Table below. When compared to this range, the per-subscriber rate that Professor Shapiro calculates as part of his *Web IV* benchmark – $1.03 per subscriber per month – is exposed as lacking any sound economic basis. Trial Ex. 43 at ¶ 43 (Orszag WRT). This is especially so given that Sirius XM's per-subscriber revenues attributable to music are higher than the per-subscriber revenues attributable to music for both [ ]. Trial Ex. 43 at ¶¶ 43, 55 (Orszag WRT).

SEPFF845. Professor Shapiro's percentage-of-revenue calculations are likewise out of step with the percentage-of-revenue rates negotiated in the mid-tier deals. Professor Shapiro has proposed percentage-of-revenue rates in the range of 8.1-11% based on various approaches to benchmarking. Trial Ex. 8 at 3 (Shapiro WDT). But [ ]. *See* Table below.

SEPFF846. In short, rates in the freely negotiated mid-tier deals demonstrate that Sirius XM's rate proposal is dramatically understated. By contrast, the per-subscriber and

[91] The deals executed with Pandora and with iHeart also cover other tiers of service, including fully-interactive tiers and, in the case of Pandora, an ad-supported tier. *See, e.g.*, Trial Exs. 112-114. For ease of exposition, we use the term "mid-tier deals" to refer to the portion of each agreement that relates to the subscription service that is offered to consumers for $4.99 and does not provide on-demand functionality.

percentage-of-revenue rates in the mid-tier deals [ ] to the rates proposed by SoundExchange, which include a per-subscriber rate ranging from $2.48-$2.79 per month, and a percentage-of-revenue rate of 23%. SoundExchange Amended Proposed Rates and Terms at 3-4 (filed June 14, 2017).

SEPFF847. The Table below provides a breakdown of rates contained in the mid-tier deals that were admitted into evidence in this proceeding, which include agreements negotiated with the major record companies, Merlin, The Orchard, INgrooves, and Secretly Canadian Distribution. For context, the Table also identifies rates applicable to fully-interactive tiers of service.

Percentage-of-Revenue And Per-Subscriber Rates In Pandora And iHeart Deals [RESTRICTED]

[92] Trial Ex. 112-16B at § 11 (SoundX_000107538–39) (Pandora Plus and Pandora Premium royalty provisions); Trial Ex. 112-16A at Service Schedule #1 § 7(a) (SoundX_000107458) (iHeart Plus royalty provisions); Trial Ex. 112-16A at Service Schedule #2 § 7(a) (SoundX_000107492) (iHeart All Access royalty provisions).

[93] Trial Ex. 113-017B at Schedule 1 § 3.1(a)(i)-(ii), § 3.2(a)(i)-(ii), § 4.1 and § 4.2 (SoundX_000107051–52, 056) (Pandora Plus and Pandora Premium Royalty provisions); Trial Ex. 113-017A at Schedule 1 § 1.1 and § 1.2 (SoundX_000106973) (iHeart Plus and iHeart All Access royalty provisions). [ ]. Trial Ex. 113-017B at Schedule 1 § 3.2(a)(iii) (SoundX_000107052, 056).

[94] Trial Ex. 114-018B at 11-14 (SoundX_000107127–30) (Pandora Plus and Pandora Premium royalty provisions); Trial Ex. 114-018A at § 3(a) and § 3(b) (SoundX_000107206–07) (iHeart Plus and iHeart All Access provisions).

[95] Trial Ex. 243 at § 3(b) and § 3(c) (SoundX_000477169–170) (Pandora Plus and Pandora Premium royalty provisions); Trial Ex. 272 at Schedule 3 (SoundX_000488916) (iHeart Plus and iHeart All Access).

[96] Trial Ex. 270 at § 11 (SoundX_000488073–74) (Pandora Plus and Pandora Premium royalty provisions); Trial Ex. 277 at Service Schedule #1 § 7(a) (SoundX_000488048) (iHeart Plus royalty provisions); Trial Ex. 277 at Service Schedule #2 § 7(a) (SoundX_000488054) (iHeart All Access royalty provision).

[97] Trial Ex. 278 at § 3(b) and § 3(c) (SoundX_000486586–87) (Pandora Plus and Pandora Premium royalty provisions).

[98] Trial Ex. 271 at Schedule 3 (SoundX_000488119 at 146) (iHeart Plus and iHeart All Access royalty provisions).

B. The Difference Between Sirius XM's Proposed Rates And The Mid-Tier Rates Cannot Be Explained By The Functionality Of The Mid-Tier Services

SEPFF848. [redacted]. 5/15/17 Tr. 4057:3-8 (Harrison); 5/15/17 Tr. 3851:1-2 (Walker). However, differences in functionality between mid-tier services and Sirius XM do not justify setting the rate for Sirius XM's satellite radio service at rates well below those freely negotiated in in the mid-tier deals, let alone adopting Professor Shapiro's proposal that Sirius XM pay [redacted] the rates bargained for by Pandora and by iHeart. This is true for the reasons discussed below.

1. Any Functional Differences Between The Mid-Tier Services And Sirius XM Have Little Value To Consumers

SEPFF849. Insofar as the mid-tier services of iHeart and Pandora reasonably can be characterized as offering greater interactivity relative to Sirius XM, it is not plausible that the differential would have a significant impact on consumer valuations and, in turn, on per-subscriber rates. How differences in functionality affect price is not easy to measure with precision. As Mr. Orszag suggested, the best way to assess this issue may be to look at the subscription prices that consumers are willing to pay. Trial Ex. 43 at ¶ 55 (Orszag WRT).

SEPFF850. Subscriptions to the mid-tier services offered by Pandora and iHeart are priced at $4.99 per month. Trial Ex. 32 at ¶ 19 (Harrison WDT). In his written direct testimony, Mr. Orszag estimated that the value of music content on Sirius XM, even under a highly conservative assumption regarding the portion of service value accounted for by music content, is $5.61. Trial Ex. 43 at ¶ 55 & n.68 (Orszag WRT). Accordingly, any differences in functionality between Sirius XM and the current Pandora and iHeart mid-tier services do not appear to cause a substantial difference in the way consumers value the services. Trial Ex. 43 at ¶ 55 & n.68 (Orszag WRT).

SEPFF851. Marketplace evidence bears this out, at least with respect to Pandora. Pandora previously offered a subscription non-interactive service priced at $4.99. When it secured additional functionality and converted its subscription non-interactive service to a mid-tier service, Pandora did not adjust prices. The mid-tier service, like the non-interactive service that preceded it, is priced to consumers at $4.99. As Mr. Orszag explained at trial, this suggests "that consumers' valuation of that increased functionality, in terms of increased skips, the ability to rewind, and some limited caching is not so valuable that it moves it closer to the fully-interactive service," and that, as a result, Pandora could not increase its price. 4/25/17 Tr. 1063:3-1064:5 (Orszag).

2. Mid-Tier Services Provide Record Companies With "Functionality" That Sirius XM Does Not

SEPFF852. Importantly, licensing agreements with mid-tier services are not a one-way street. The record demonstrates that, while record companies license functionality designed to help the mid-tier services appeal to consumers, the mid-tier services offer record companies valuable benefits designed to help them compete for listeners and better monetize their content. All else equal, such non-monetary benefits would tend to reduce the rates charged by the record companies.[99]

SEPFF853. For example, data is critical in helping record companies analyze the performance of their content, and improves their ability to satisfy and compete for listeners. As Mr. Harrison explained in his written direct testimony, the data that streaming services provide is

[[redacted]

[99] *Cf.* Trial Ex. 26 at ¶ 107 (Orszag WDT) (noting that non-monetary benefits secured in agreements with interactive services and not available under the statutory license have value and justify an upward adjustment to Sirius XM royalty rates, but declining to make such an adjustment because of difficulties associated with quantifying non-monetary benefits).

[redacted]"] Trial Ex. 32 at ¶ 31 (Harrison WDT); *see also* Trial Ex. 50 at ¶ 6 (Walker WRT) (noting Sirius XM's ability to monetize content without granting important rights and benefits typically negotiated in market transactions, including the right to receive valuable data that reflects how consumers use content).

SEPFF854. In their mid-tier deals with the record companies, Pandora and iHeart provide the record companies with [redacted]. *See, e.g.*, Trial Ex. 112-16A at § 12(9) (SoundX000107307) and Exhibit D (SoundX_000107456); Trial Ex. 112-16B at §§ 13-14 " (SoundX_000107541–42), Exhibit C and Exhibit E (SoundX_000107566, 578–79); Trial Ex. 113-17B, Schedule 5 and Schedule 6 (SoundX_000107102, 113); Trial Ex. 114-18A, Exhibit F (SoundX_000107282–84); Trial Ex. 114-18B, Exhibit D (SoundX_000107172–73); Trial Ex. 270 at Exhibit C and Exhibit E (SoundX_000488101, 103–04).

SEPFF855. Moreover, agreements executed between the mid-tier services and record companies illustrate that the record companies value the data they receive, and recognize that it affects their ability to compete for listeners. For example, [redacted]

[redacted] Trial Ex. 112-16B at § 14 (SoundX_000107542); *see also* Trial Ex. 113-17B, Schedule 5, § 1.3 (SoundX_000107097) [redacted].

3. Summary

SEPFF856. Sirius XM offers an experience that differentiates it from free options like terrestrial radio. 5/16/17 Tr. 4085:25-4086:15 (Harrison); *see also* Trial Ex. 5 at 3 (Blatter WDT); 4/24/17 Tr. 670:21-671:21 (Farrell). For this reason, Sirius XM subscribers are willing to pay for music, 5/16/17 Tr. 4085:25-4086:15 (Harrison); *see also* Trial Ex. 5 at 2-3 (Blatter WDT); 4/24/17 Tr. 670:21-671:21 (Farrell), and they do so at a (conservatively calculated) rate approximating $5.61 per month.

SEPFF857. Given that subscribers to the mid-tier services pay $4.99 per month, it appears that any differences in functionality between the mid-tier services and Sirius XM have little value to the consumer. Trial Ex. ¶ 43 at 55 n.68 (Orszag WRT).

SEPFF858. For these reasons, and because mid-tier services supply the record companies with valuable benefits that Sirius XM does not, any differences between the mid-tier services and Sirius XM's satellite radio services cannot justify a difference in rates, let alone the significant difference proposed by Professor Shapiro.

C. The Mid-Tier Rates Did Not Result From The Exercise Of Undue Market Power By The Record Companies

1. The Mid-Tier Services Can Steer, Which Reduces Any Market Power The Majors Might Otherwise Have

SEPFF859. In *Web IV*, the Judges concluded that Pandora's then existing subscription non-interactive service possessed the ability and incentive to steer. *Web IV*, 81 FR at 26343, 26404. The mid-tier services offered by Pandora and by iHeart are no different. In fact, at trial, Professor Shapiro conceded that Pandora can credibly threaten to steer towards or away from content on its new mid-tier service, subject only to contractual constraints it might negotiate. 5/04/17 Tr. 2600:11-2601:6 (Shapiro). More broadly, Professor Shapiro recognized that mid-tier services have "considerable ability to steer" and identified only one constraint on their incentive to steer: the desire to avoid alienating customers by providing them with an undesirable mix of music. 5/04/17 Tr. 2600:11-2601:6 (Shapiro). Put simply, mid-tier services can credibly threaten to steer to the extent consistent with consumer taste. 5/04/17 Tr. 2600:11-2601:6 (Shapiro).

SEPFF860. The ability and incentive of a mid-tier service to steer toward or away from record company content reduces any undue market power that the major record companies might otherwise have. As Professor Willig explained at trial, when negotiating parties know that there will or can be steering, that will push down prices paid for sound recordings. 5/02/17 Tr. 1990:3-16 (Willig). Indeed, "even if a label is a must-have, there's still lots of room for there to be effective competition expressed in the actuality of steering or in the anticipation of it, leading to more favorable terms in the agreement, more favorable from the point of view of the distributor, reflecting the potentiality for steering in the absence of an agreement not to steer." 5/02/17 Tr. 1996:16-23 (Willig). In short, where, as in the market to license mid-tier services,

there is an ability and incentive to steer, markets are effectively competitive and resulting agreements do not reflect the exercise of undue market power.

i. [redacted] Do Not Change This Conclusion Because Granting No-Steering Provisions Reduced [redacted] Royalty Obligations

SEPFF861. The bargained-for anti-steering provisions in [redacted] mid-tier agreements are consistent with the conclusion that the market for mid-tier services is effectively competitive, and that the negotiated rates do not result from the exercise of undue market power.

SEPFF862. At trial, Professor Shapiro acknowledged that a service with significant ability and incentive to steer will obtain concessions if it agrees to an anti-steering provision. 5/04/17 Tr. 2603:9-16 (Shapiro); *see also* 5/04/17 Tr. 2606:5-15 (Shapiro) (conceding that it would be reasonable to expect that [redacted] would obtain a benefit in exchange for bargaining away its ability to steer, and questioning only the magnitude of the benefit secured). Moreover, Professor Shapiro conceded that any rate discounts attributable to steering could be passed on to consumers. 5/04/17 Tr. 2545:22-2546:7 (Shapiro). Professor Shapiro's testimony also established that, as a theoretical matter, anti-steering provisions can promote competition and generate cost savings for both services and consumers, a point Professor Willig made repeatedly at trial. *See, e.g.*, 5/02/17 Tr. 2010:16-25 (Willig).

SEPFF863. Marketplace evidence confirms that anti-steering provisions reflect effective competition at work. [redacted] 5/15/17 Tr. 3858:1-8 [redacted]. [redacted][100] 5/15/17 Tr. 3858:1-5 [redacted]. [redacted]

100 [redacted]

[redacted] 5/15/17 Tr. 3895:3-13 [redacted].

SEPFF864. [redacted] ultimately secured a [redacted] from [redacted]. Trial Ex. [redacted]. And, as [redacted] testified, [redacted]. 5/15/17 Tr. 3894:5-11 [redacted].

SEPFF865. [redacted]. 5/16/17 Tr. 3981:19-24 [redacted]. As [redacted] stated plainly: [redacted] 5/16/17 Tr. 3981:19-23 [redacted].

SEPFF866. [redacted] Trial Ex. [redacted]; 5/16/17 Tr. 3983:21-3984:6 [redacted]. As [redacted] testified, [redacted]. 5/16/17 Tr. 3981:19-3982:1, 3983:21-3984:6 [redacted].

SEPFF867. While Sirius XM may argue that other negotiation points exerted downward pressure on the rates that the record companies negotiated for Pandora's mid-tier service, there is clear and unrebutted testimony that [redacted]

[redacted]. 5/15/17 Tr. 3858:15-20 (Walker). [redacted]. 5/15/17 Tr. 3894:17- 3895:13 (Walker). [redacted]. 5/15/17 Tr. 3894:12-3895:7 (Walker).

[redacted]]. 5/15/17 Tr. 3894:5-11 [[redacted]]; 5/16/17 Tr. 3981:19-3982:1, 3983:21-3984:6 [[redacted]].

SEPFF868. This testimony underscores that anti-steering provisions are evidence of an effectively competitive market, namely, one in which the threat of steering induces record companies to accept lower rates. *See also* 5/02/17 Tr. 2010:16-25 (Willig); 5/02/17 Tr. 2011:1-4 (Willig) ("[E]conomics would suggest the efficient solution tends to be found by such bargaining, and efficiency would foreswear steering and discrimination but price it into the agreement."). In fact, as Professor Shapiro recognized under questioning from Judge Strickler, any rate reduction attributable to [[redacted]] request for an anti-steering provision could have been passed on to consumers, if [[redacted]] so desired. 5/04/17 Tr. 2545:22-2546:7 (Shapiro) (acknowledging that reduction in consumer-facing price "would be a mechanism of consumer benefit that could" result if an anti-steering provision resulted in lower royalty rates).

SEPFF869. Most significantly, anti-steering provisions enable price competition while preserving a distributor's incentive to preserve the optimal mix of plays, thus maximizing consumer welfare by ensuring that price competition does not distort the listening experience. 5/02/17 Tr. 2001:19-2002:1 (Willig) ("[T]he potentiality for steering is influencing, perhaps in a very strong way, the level of a uniform royalty rate in the presence of a no-steering provision, which means it's highly pro-competitive because it's adjusting prices in accordance with what steering would do, but without distorting consumer welfare at the same time.") Put simply, anti-steering provisions do not indicate that the record companies have or exercise any undue market power in the market for mid-tier services. Quite the contrary, record evidence suggests that anti-steering provisions signal that the market for mid-tier services is effectively competitive.

ii. iHeart [redacted] And Thus There Can Be No Argument That Its Agreement Does Not Reflect Effective Competition

SEPFF870. As discussed above, the mid-tier services' ability and incentive to steer demonstrate that the market for mid-tier services is effectively competitive. *See, e.g.*, 5/02/17 Tr. 1996:16-23, 2001:19-2002:1 (Willig).

SEPFF871. There is no dispute that, with respect to its mid-tier service, iHeart has "considerable ability to steer." 5/04/17 Tr. 2600:11-2601:6 (Shapiro). [redacted]. 5/04/17 Tr. 2525:24-2526:3 (Shapiro). [redacted]. 5/15/17 Tr. 3893:9-14 [redacted] ([redacted]); 5/16/17 Tr. 3984:10-15, 3985:1-5 [redacted] [redacted].

SEPFF872. At trial, Professor Shapiro candidly acknowledged that [redacted]. 5/04/17 Tr. 2525:18-21 (Shapiro). Moreover, unrebutted record evidence indicates that [redacted]."[101] 5/15/17 Tr. 3893:15-20 [redacted].

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[101] Sirius XM may argue that FCC regulations preclude iHeart from steering on its terrestrial radio broadcasts and simulcasts thereof. However, nothing precludes iHeart from steering on its webcasting platforms, [redacted].

SEPFF873. [redacted], 5/04/17 Tr. 2525:24-2526:3 (Shapiro) – [redacted], 5/15/17 Tr. 3893:15-20 [redacted], [redacted] 5/15/17 Tr. 3893:10-14 [redacted]; 5/16/17 Tr. 3984:9-15, 3985:1-5 [redacted] – [redacted].

2. There Is No Evidence That The Major Record Companies Used Their Alleged Market Power In The Market For Fully-Interactive Services To Obtain Concessions Regarding Mid-Tier Services Launched By Pandora And iHeart

SEPFF874. There is no evidence that the major record companies used their alleged market power in the market for fully-interactive services to obtain concessions related to the mid-tier services negotiated with Pandora and with iHeart. Below, we address the contemporaneous documentary evidence and then turn to the testimony at trial.

SEPFF875. In preparing his written rebuttal testimony, Mr. Orszag and staff working under his direction reviewed documents concerning negotiation of the licenses executed by iHeart and by Pandora with each of the major record labels. Trial Ex. 43 at ¶ 55 n.67 (Orszag WRT). After reviewing this contemporaneous evidence, produced in this proceeding, Mr. Orszag concluded that it contained no evidence that the major record companies used their alleged market power in the market for fully-interactive services to obtain concessions on deal terms related to the mid-tier services. Trial Ex. 43 at ¶ 55 n.67 (Orszag WRT).

SEPFF876. At trial, Sirius XM did not offer or introduce a single document related to negotiation of the direct licenses executed by Pandora and by iHeart with Sony. Likewise, Sirius XM did not introduce a single document concerning negotiation of the direct licenses that Pandora and iHeart executed with WMG. In other words, after reviewing the same

contemporaneous evidence that Mr. Orszag analyzed, Sirius XM did not identify for the Judges any evidence that either Sony or WMG leveraged its alleged market power in the market for fully-interactive services to obtain concessions on deal terms related to the mid-tier services.

SEPFF877. Sirius XM did introduce two contemporaneous documents related to the negotiation of direct licenses executed by Pandora and iHeart with UMG. The first, Trial Ex. 698, is an internal UMG document that [ ].

SEPFF878. Trial Ex. 698 provides no evidence that UMG attempted to use its supposed market power in the market for fully-interactive services to obtain concessions related to other deal points, whether related to the mid-tier service or some other portion of the agreement. In trial exhibit 698, [ ]. Trial Ex. 698 at 2 (SoundX_000474649). Pandora's negotiator then acknowledges that [ ]. Trial Ex. 698 at 2 (SoundX_000474649). [ ]. Trial Ex. 698 at 2 (SoundX_000474649). When UMG and Pandora ultimately reached agreement, [ ]. Trial Ex. 113-17B at Schedule 1 § 3.1, 3.2, 4.1, 4.2 (beginning SoundX_000107051-52, 56). This compromise hardly constitutes an exercise of undue market power on the part of UMG.

SEPFF879. Trial Exhibit 698 also contains some [ ], more than a month before the direct license was executed. Trial Ex. 698 at 4-8 (beginning SoundX_000474651-55). [ ]. 5/16/17 Tr. 4066:22-24 (Harrison). In any event, UMG's [ ] says nothing about how the deal was negotiated.

SEPFF880. The other contemporaneous evidence of negotiation that Sirius XM introduced at trial is Trial Ex. 774. Of course, as Mr. Harrison testified at trial, the correspondence in this email concerns [ ], has no relevance to this proceeding. 5/16/17 Tr. 4070:3-10 (Harrison).

SEPFF881. The only part of the trial exhibit that is relevant is a marketing deck that Pandora provided to UMG. The document effectively [ ]. For example, it states that [ ]. Trial Ex. 774 at 7 (SoundX_000474620). Nowhere does the document provide any indication that UMG leveraged alleged market power in the market for fully-interactive services to obtain concessions on deal terms related to the mid-tier service that Pandora now operates: Pandora Plus.

SEPFF882. In short, the contemporaneous evidence regarding the negotiation of direct licenses executed by Pandora and by iHeart with the major record companies does not reveal any evidence that the major record companies exercised allegedly undue market power in

the market for fully-interactive services to extract concessions during negotiations related to the mid-tier services launched by Pandora and iHeart.

SEPFF883. The testimony at trial confirms this. Although Mr. Harrison testified that [ ]. 5/16/17 Tr. 4066:19-24 (Harrison). And nowhere in the testimony of Mr. Walker or Mr. Harrison – the record company witnesses who negotiated these deals – is there any indication that the record companies leveraged their alleged market power in the fully-interactive space to affect rates in the mid-tier, nor is there any indication that provisions germane to one tier were traded off against another.

SEPFF884. In sum, there is no evidence that the major record companies leveraged their supposed market power in the market for fully-interactive services to extract concessions on deal terms related to the mid-tier services launched by Pandora or by iHeart. Indeed, as Mr. Orszag noted in his written testimony "Merlin [ ]" Trial Ex. 43 at ¶55 n.67 (Orszag WRT). So too did [ ]. *See* Table above. This further illustrates that the major record companies did not exercise their allegedly undue influence in the market for fully-interactive services in negotiating mid-tier deals with Pandora and iHeart.

VII. The Direct Licenses Between Sirius XM And Independent Record Labels Do Not Offer A Reliable Benchmark.

SEPFF885. One of Professor Shapiro's primary benchmarks in this case is a set of direct license agreements between Sirius XM and independent labels. As benchmarks, these agreements are deeply flawed for a variety of reasons.

SEPFF886. To begin, Professor Shapiro agreed at trial that if the direct licenses were not motivated by a desire on the part of the licensors to obtain steering benefits, then the direct licenses are not informative for the purposes of this case. 4/20/17 Tr. 445:1-6 (Shapiro). And if benefits other than steering "explain the lion's share of the discount for most of the labels who entered into them, then you put much less weight on these direct licenses." 4/20/17 Tr. 446:21-447:2 (Shapiro).

SEPFF887. In fact, the "lion's share of the discount" between the direct license rate and the statutory rate can be accounted for by just two non-steering benefits (out of several) that were uniformly offered to all labels. First, as Sirius XM's head of music licensing explained, [ ]. 5/17/17 Tr. 4269:6-18 (White); *see* 17 U.S.C. § 114(g)(2). Second, as Professor Shapiro himself acknowledged, direct licensors avoid having to pay [ ] 5% of their earnings to cover SoundExchange's administrative fee. 4/20/17 Tr. 310:7-16 (Shapiro); *see also* 4/20/17 Tr. 466:20-467:9 (Shapiro). At trial, Sirius XM's head of music licensing conceded that, [ ]

[ ]

[redacted]

5/17/17 Tr. 4270:10-25 (White).

SEPFF888. These facts alone should end any discussion of the direct licenses as a benchmark. From an economic point of view, the direct license rate and the statutory rate are essentially the same.

SEPFF889. Moreover, apart from saving the SoundExchange administrative fee and keeping the non-featured artist share, there are a variety of reasons other than steering why labels would (and did) sign direct licenses. Sirius XM offered additional benefits including the opportunity to receive payment for performances of pre'72 sound recordings, the opportunity to be paid according to the label's share of performances on Sirius XM's webcasting reference channels, the opportunity to receive an advance, and the opportunity to be paid 100% of the royalties (as opposed to the 50% share that the label would receive under the statutory rate structure). Trial Ex. 25 at ¶ 255 (Lys Corr. WDT).

SEPFF890. Indeed, steering was the one thing Sirius XM did not offer. Sirius XM's witnesses admitted over and over again that [redacted] Trial Ex. 306; *see also* 4/20/17 Tr. 466:11-15 (Shapiro); 5/17/17 Tr. 4225:24-4226:2, 4276:6-13 (White); 5/10/17 Tr. 3365:12-14, 3374:5-9 (Blatter). Sirius XM does not steer, full stop.

SEPFF891. Although Professor Shapiro claims that the direct license rates resulted from "steering," that claim is entirely belied by testimony from Sirius XM's witnesses and label executives, by the direct licenses themselves, and by contemporaneous email communications reflecting the labels' negotiations with Sirius XM. As a result, the direct licenses are uninformative for the purposes of this proceeding.

SEPFF892. Even if this fundamental problem could be surmounted, there are many others. To begin, Sirius XM's direct license benchmark is not new. It offered a similar direct license benchmark in *SDARS II*. The Judges identified numerous "weaknesses of the Direct Licenses as a data set" which "diminish[ed] [their] usefulness" in that proceeding. *SDARS II*, 78 FR at 23063, 23065. The benchmark suffers from those same infirmities today.

SEPFF893. First, the royalty rates in the agreements are keyed to the statutory rate and are unrelated to the actual market value of the conveyed royalty rights. *See* Trial Ex. 25 at ¶ 252 (Lys Corr. WDT).

SEPFF894. Second, the direct licenses do not approximate the results of a negotiation between a willing buyer and a willing seller, due to the influence of this ratemaking proceeding and Sirius XM's litigation motives. Sirius XM [ ], relative to what it would earn under the statutory license. That, along with corroborating internal communications, strongly indicates that Sirius XM has an incentive to offer artificially deflated headline royalty rates, even if the *effective* royalty rates for those licenses exceed the statutory rate. This dynamic would simply not exist in a world without the statutory license.

SEPFF895. Third, the percentage of the market represented by the direct licenses is small. In terms of economic activity, the direct licenses are dominated by just thirty labels.

The remaining labels earn only a fractional percentage of overall royalties and, as Professor Shapiro acknowledges, are not necessarily representative of the broader marketplace. Moreover, Professor Shapiro has admitted that [ ]. Trial Ex. 9 at 45-46 (Shapiro Corr. WRT); 4/20/17 Tr. 471:20-472:1, 472:14-23 (Shapiro). That is so because at least half of the direct licenses can be explained, not by steering, but by the phenomenon known as "overindexing"—the ability to earn more under a direct license, with no increase in plays, due to Sirius XM's methodology for calculating royalties. With the already-small market share represented by direct licenses cut in half, the direct licenses become unrepresentative indeed.

SEPFF896. As Professor Lys put the matter at trial, [ ] 5/1/17 Tr. 1658:18-25 (Lys).

A. The Rates Reflected In The Direct Licenses Are Directly Tied To The Statutory Rate And Cannot Be Viewed As Market Rates.

SEPFF897. Professor Lys has taught classes in negotiation at Stanford University and at several universities around the world. 4/26/17 Tr. 1280:4-9, 1282:19-1283:12 (Lys). He has published in the field. 4/26/17 Tr. 1280:15-21 (Lys). At trial, he was qualified as an expert in the field of negotiations. 4/26/17 Tr. 1302:8-1303:6 (Lys).

SEPFF898. As Professor Lys explains, a fundamental principle of negotiation is that, absent coercion, neither party has an incentive to agree to a deal that leaves it worse off than it would have been by taking its next best alternative. Trial Ex. 25 at ¶ 258 (Lys Corr. WDT). In the case of a direct license negotiation between Sirius XM and a record label, the statutory royalty rate functions as the next best alternative for both parties.

SEPFF899. Sirius XM's expert, Professor Shapiro, conceded the obvious point that the statutory rate functions as a ceiling on what Sirius XM is willing to pay. 4/20/17 Tr. 443:6-13 (Shapiro). "[I]f we see a license for the same rights with nothing else changing, it could only be at or below the statutory rate." 4/20/17 Tr. 444:9-11 (Shapiro). [ ] 4/27/17 Tr. 1578:22-1579:2 (Lys). [ ] Trial Ex. 25 at ¶¶ 252, 258 (Lys Corr. WDT); 4/27/17 Tr. 1472:6-13 (Lys). [ ] 5/17/17 Tr. 4264:3-6 (White).

SEPFF900. Likewise, a label needs a reason to accept a rate lower than the statutory rate. If Sirius XM does not offer a label benefits that sufficiently offset a rate reduction, a label can also exercise the option of simply taking the statutory rate. Trial Ex. 25 at ¶ 252 (Lys Corr. WDT).

SEPFF901. Professor Lys has expressed these observations in algebraic terms, as follows:

$$R_{Statutory\ License} - B_{Indie} \leq R_{Direct\ License} \leq R_{Statutory\ License} + B_{SXM}$$

Trial Ex. 25 at ¶ 263 (Lys Corr. WDT). As expressed in this equation, Sirius XM will not be willing to pay a royalty rate higher than the statutory rate ($R_{Statutory\ License}$) unless there are additional benefits that it derives through direct licensing (B_{SXM}). Trial Ex. 25 at ¶¶ 259-60 (Lys Corr. WDT). A label will not agree to a royalty rate below the statutory rate unless it achieves benefits (B_{Indie}) that at least offset that discount. Trial Ex. 25 at ¶¶ 261-62 (Lys Corr. WDT).

SEPFF902. Professor Lys's equation reveals three important features of the direct license royalty rate. First, the underlying market value of the royalty rights is simply not part of this equation. The actual market value could be less than, equal to, or much greater than the statutory royalty rate, without having any effect whatsoever on the direct license royalty rate ($R_{Direct\ License}$). Trial Ex. 25 at ¶ 265 (Lys Corr. WDT). In short, the royalty rates in the direct license agreements ***are*** dependent on the statutory royalty rate but ***are not*** dependent on the market value of the royalty rights conveyed. Trial Ex. 25 at ¶¶ 252, 265 (Lys Corr. WDT); 5/1/17 Tr. 1675:21-1676:3 (Lys).

SEPFF903. Second, labels will not enter into a direct license unless the nonstatutory benefits offered (B_{Indie}) are positive. Trial Ex. 25 at ¶ 264 (Lys Corr. WDT). This means, in turn, that the headline direct license royalty rate will always be less than the statutory royalty rate. Trial Ex. 25 at ¶ 265 (Lys Corr. WDT). Again, that is so completely irrespective of the unobserved market value of the rights conveyed.

SEPFF904. Third, so long as the benefits offered to labels are not dependent on the statutory royalty rate, then the direct license rate ($R_{Direct\ License}$) will co-move with the statutory rate ($R_{Statutory\ License}$). Trial Ex. 25 at ¶¶ 266-67 (Lys Corr. WDT). In other words, as the statutory rate increases, so too will the direct license royalty rate. As Sirius XM's expert, Professor Shapiro, acknowledged, the statutory rate and the directly licensed rate "are tethered together." 4/20/17 Tr. 442:21-22 (Shapiro).

SEPFF905. The royalty rates observed in the direct license agreements are fully consistent with the implications of Professor Lys's equation. Professor Lys has graphed the simple average of those rates over time against the statutory rate. Trial Ex. 25 at ¶ 271 (Lys Corr. WDT). He has also graphed the weighted average of those rates over time against the

statutory rate. Trial Ex. 25 at ¶ 276 (Lys Corr. WDT). (This weighted average was based on the number of performances that Sirius XM recorded at each royalty rate.) Trial Ex. 25 at ¶ 276 (Lys Corr. WDT). These graphs demonstrate that the [ ]. Trial Ex. 25 at ¶ 272 (Lys Corr. WDT). [ ]. Trial Ex. 25 at ¶¶ 253, 276 (Lys Corr. WDT).

Initial royalty rates found in direct licenses vs. statutory rate, over time [RESTRICTED]

Trial Ex. 25, Figure 67 at 94 (Lys Corr. WDT).

Effective DL royalty rate compared to the statutory rate [RESTRICTED]

Trial Ex. 25, Figure 68 at 96 (Lys Corr. WDT).

SEPFF906. Professor Lys's graphs indicate that the direct license royalty rates are simply a reflection of the statutory rate and are not indicative of the fair market value of the underlying royalty rights. Trial Ex. 25 at ¶¶ 253, 276 (Lys Corr. WDT). The direct license rate travels with the statutory rate regardless of whether the statutory rate is less than, equal to, or higher than the competitive rate. Trial Ex. 42 at ¶ 31 (Lys WRT). [ ] 5/17/17 Tr. 4264:23-4265:2. [ ] 5/17/17 Tr. 4261:3-13, 4264:12-16 (White).

SEPFF907. Professor Shapiro presents a model that purports to offer a different explanation for why the direct license royalty rates track the statutory rate. According to Professor Shapiro, the statutory rate functions as a "magnet" pulling directly licensed royalty rates up above their natural market rate. Trial Ex. 42 at ¶ 7 (Lys WRT); *see* Trial Ex. 8 at 45 (Shapiro WDT).

SEPFF908. In *Web IV*, the Judges rejected Professor Shapiro's "magnet theory," holding that he had failed to provide "a sufficiently detailed explanation as to how the statutory rate would pull up a below-statute consensual rate that is otherwise mutually beneficial." *Web IV*, 81 FR at 26630. The Judges held that Professor Shapiro had failed to "mak[e] a sufficient connection between theory and evidence" and ruled that "the Judges do not credit this conjecture as sufficient to affect their determination of the rate in this proceeding." *Web IV*, 81 FR at 26630.

SEPFF909. The Judges should once again reject Professor Shapiro's conjectural "magnet" theory. Professor Shapiro's conclusion results entirely from an arbitrary and empirically unsupported assumption laid out at the beginning of his model—that "the statutory rate is set above the competitive level." Trial Ex. 8, App. E at E-1 (Shapiro WDT); *see also* Trial Ex. 9 at 40 (noting that, "in th[e] model, the market value of the rights is less than the directly licensed rate, which in turn is less than the statutory rate"). [Trial Ex. 42 at ¶ 17 (Lys WRT); 4/27/17 Tr. 1579:17-1580:2 (Lys).

SEPFF910. Professor Shapiro's assumption could just as well be replaced by the opposite assumption—that the statutory rate has been set *below* the competitive rate. Trial Ex. 42 at ¶ 18 (Lys WRT). If one were to proceed from *this* assumption, then Professor Shapiro's

model no longer supports his conclusion. Professor Shapiro acknowledged as much at trial. [

] 4/20/17 Tr. 482:25-483:10 (Shapiro). Under these circumstances, the pattern displayed in Professor Lys's graphs—in which the directly licensed rate tracks the statutory rate at a consistent discount—would be explicable because of non-statutory benefits but *not* because of "steering." Professor Shapiro rightly acknowledged the existence of such non-statutory benefits and rightly admitted that they can explain the correlation between the directly licensed and statutory rates. *See* 4/19/17 Tr. 299:23-25 (Shapiro) ("I acknowledge -- completely accept and understand there are other benefits."); 4/20/17 Tr. 306:24-307:4 (Shapiro) ("Now, it's also true if steering had nothing to do with it and this was just -- the label was simply saying, look, I'm going to avoid the SoundExchange administrative fee, so I'll sign a direct license, again the direct license rate would track the statutory rate over time.").

SEPFF911. If anything, Professor Shapiro's model shows that labels have an incentive to be *under*steered if the statutory rate is below the market rate. Under these circumstances, every play on Sirius XM represents a loss relative to the label's next best alternative. Professor Shapiro's model represents the benefits to a record company from signing a direct license as $(1 + k)(r - c) \geq t - c$. Trial Ex. 8, App. E at E-2 (Shapiro WDT). [

] Trial Ex. 8, App. E at E-1, E-2 (Shapiro WDT); 4/27/17 Tr. 1582:2-10, 18-21 (Lys). [

[redacted] 4/27/17 Tr. 1582:24-1583:3 (Lys). [redacted] 4/27/17 Tr. 1583:2-20 (Lys). [redacted] 4/27/17 Tr. 1583:21-1584:4 (Lys). [redacted] 4/27/17 Tr. 1584:1-4 (Lys).

SEPFF912. Professor Shapiro's exogenous assumption that the statutory rate is set above the true competitive rate is incorrect. Trial Ex. 42 at ¶ 28-29 (Lys WRT). In the *SDARS I* proceedings, the Judges determined that the most likely marketplace royalty rate was $1.40 per subscriber (which they then translated into a percentage of revenue rate of 13%, "the upper boundary most strongly indicated by marketplace data"). *SDARS I*, 73 FR at 4093, 4097; Trial Ex. 42 at ¶ 29 (Lys WRT). However, the Judges set the statutory rate lower, to account for the 801(b) factors. *SDARS I*, 73 FR at 4097. Simply adjusting the *SDARS I* market-based rate for inflation results in a present-day royalty rate above 15%. Trial Ex. 42 at ¶ 29 (Lys WRT); *see infra* at Section IX(D). That means the 2017 statutory rate of 11% is at least four percentage points below the inflation-adjusted market royalty rate established in *SDARS I*. Trial Ex. 42 at ¶ 29 (Lys WRT).

SEPFF913. Because the statutory rate has been set below the true competitive rate, the true competitive rate has been irrelevant to both parties when negotiating direct licenses. Trial Ex. 42 at ¶ 32 (Lys WRT). Independent labels simply cannot achieve a royalty rate higher than the legally-mandated statutory rate. Trial Ex. 42 at ¶ 32 (Lys WRT). Sirius XM has no incentive to offer such a royalty rate and in fact has never done so. Trial Ex. 42 at ¶ 32 (Lys

WRT). To the extent Professor Shapiro's model implies anything, it is that the statutory rate has acted as a ceiling, artificially capping the rates negotiated between Sirius XM and independent labels. Trial Ex. 42 at ¶ 13 (Lys WRT). Put differently, absent the statutory rate, the royalty rates in the direct license contracts would have been higher. Trial Ex. 42 at ¶ 14 (Lys WRT).

SEPFF914. In short, because direct licenses have been negotiated and signed in the shadow of the statutory rate, which exerts a profound distortionary effect on those negotiations, direct licenses are uninformative for purposes of establishing a market-based benchmark. Trial Ex. 42 at ¶ 33 (Lys WRT).

B. Sirius XM's Litigation Motive Has Influenced The Terms Of Its Direct Licenses, Further Rendering Those Contracts An Unreliable Benchmark.

SEPFF915. From a financial perspective, Sirius XM's direct license campaign has been a [redacted] for the company. Between January 2015 and November 2016, Sirius XM saved on average [redacted] by paying independent labels a direct license royalty rate rather than the statutory rate. Trial Ex. 313 (tab "graphs," average of row 6 minus row 5). But during this same time period, Sirius XM incurred a [redacted] of administrative costs to manage its direct license program. Those monthly administrative costs have included a [redacted] a month fee to its agent, Music Reports Inc. (MRI) to manage Sirius XM's direct license program. Trial Ex. 157 at 17; 5/17/17 Tr. 4267:10-4268:8 (White); *SDARS II*, 78 FR at 23061. They have included additional consulting fees to MRI, averaging between [redacted]. 5/17/17 Tr. 4268:6-8 (White); Trial Ex. 157 at 17. [redacted].] 5/17/17 Tr. 4266:19-4267:9 (White). [redacted] 5/17/17 Tr. 4268:9-14 (White).

SEPFF916. Professor Lys has been able to come up with only one plausible explanation as to why Sirius XM would have undertaken a multi-year direct license campaign that loses it money: [ ] 4/27/17 Tr. 1477:24-1478:4 (Lys). As Professor Lys observed, Mr. White has in fact acknowledged that [ ] Trial Ex. 42 at ¶ 46 (Lys WRT) (citing White deposition). [ ] 5/17/17 Tr. 4323:4-15 (White). [ ] 5/17/17 Tr. 4323:4-15 (White).

SEPFF917. Sirius XM's litigation motive is confirmed by internal Sirius XM documents. Trial Ex. 42 at ¶ 46 (Lys WRT). As Professor Lys observed, Sirius XM and its agent, MRI, have periodically referred to Sirius XM's desire to [ ] and engage in [ ] Trial Ex. 42 at ¶ 46 (Lys WRT); Trial Ex. 162 at SXM_DIR_00095873; Trial Ex. 163 at SXM_DIR_00089888. Particularly revealing is [ ] Trial Ex. 42 at ¶ 46 (Lys WRT); Trial Ex. 161 at SXM_DIR_00092128.

SEPFF918. The timing of Sirius XM's direct license campaign also indicates that it was designed to influence this proceeding. [ ]

[redacted].] Trial Ex. 42 at ¶ 47 (Lys WRT); 5/17/17 Tr. 4320:10-4321:8 (White). MRI [redacted] Trial Ex. 42 at ¶¶ 39, 47 (Lys WRT) (citing Trial Ex. 158); 4/27/17 Tr. 1479:22-24 (Lys); 5/17/17 Tr. 4322:6-11 (White). Labels could "opt-in" to this license by simply clicking on the link, without needing to speak to anyone at Sirius XM. 5/17/17 Tr. 4321:9-16 (White). This "opt-in" mass email resulted in [redacted] new direct deals on the eve of written direct testimony. Trial Ex. 42 at ¶ 46 (Lys WRT). That timing suggests that the campaign was entered into specifically to inflate the number of Sirius XM's direct licensors.

SEPFF919. Because of the perceived benefits of setting a benchmark in this proceeding, Sirius XM has been willing to [redacted], relative to what it would earn under the statutory license. This means not only that Sirius XM has been willing to absorb [redacted] to sign direct deals. It means that, in order to persuade labels to accept a headline royalty rate below the statutory rate, Sirius XM has been willing to offer benefits that more than offset the difference. As detailed below, these benefits have come in many shapes and sizes, ranging from nonreturnable advances to payments for performances of pre-'72 recordings. Evidently, what matters more to Sirius XM is that their direct deals *appear* to be a reduction from the statutory rate. What matters less is whether the direct deals in fact present any savings relative to the statutory environment.

SEPFF920. [redacted] 4/20/17 Tr. 278:7-12 (Shapiro). Due to the distortions created by Sirius XM's litigation incentives, the direct licenses

do not approximate the results of a negotiation between a willing buyer and a willing seller absent regulatory overhang.

C. The Percentage Of The Market Represented By Direct Licenses Is Small, And Even Professor Shapiro Agrees That The Direct Licensed Indies Are Not Necessarily Representative Of The Larger Marketplace, Rendering Direct Licenses Useless As A Benchmark.

SEPFF921. Professor Shapiro's analysis is predicated on the existence of what he considers a sizable set of direct deals between Sirius XM and independent labels. Trial Ex. 42 at ¶ 34 (Lys WRT). However, as Professor Lys has shown, direct licenses account for only a small fraction of the sound recordings that Sirius XM's business relies upon. Trial Ex. 25 at ¶ 277 (Lys Corr. WDT). As illustrated in the following figure, since 2013, royalties paid under direct licenses have accounted for only [ ] of the total royalties paid by Sirius XM for its satellite radio service. Trial Ex. 25 at ¶ 278 (Lys Corr. WDT).

Sirius XM royalty payments in 2016 [RESTRICTED]

Trial Ex. 25, Figure 69 at 97 (Lys Corr. WDT). Because [[redacted]], they should not be considered informative as to the market as a whole. Trial Ex. 25 at ¶ 278 (Lys Corr. WDT).

SEPFF922. In *SDARS II*, the Judges concluded that one of the "weaknesses" of Sirius XM's direct licenses as a benchmark was that they represented "a very small subset of the sound recording market." *SDARS II*, 78 FR at 23063. The Judges observed that the direct licenses were only a "sliver" of the "20,100 rights holders to which SoundExchange distributes payments" and that they represented "no more than 2%-4% of the total number of works performed by Sirius XM." *SDARS II*, 78 FR at 23063 & n.28.

SEPFF923. While Sirius XM has since increased the number of its direct licenses to 498, it has done so in large part by signing direct licenses with labels that receive virtually no plays on Sirius XM (as discussed below). The 498 direct licenses are still a small sliver of SoundExchange's approximately 41,000 rights owner members. Trial Ex. 29 at 3 (Bender WDT). Moreover, the majority of labels who were offered the opportunity to sign direct licenses declined the offer: the evidence shows that Sirius XM approached about [[redacted]] labels about signing direct licenses, *see* Trial Ex. 181 (RESTRICTED _SXM_DIR_00095102), and that MRI mass-emailed [[redacted]] independent labels with a direct license offer, which labels could "click" to accept. Trial Ex. 42 at ¶¶ 39, 47 (Lys WRT) (citing Trial Ex. 158); 5/17/17 Tr. 4320:10-4321:8, 4322:6-11 (White). Thus, an even smaller percentage of labels accepted direct licenses in this proceeding than in *SDARS II*. *See SDARS II*, 78 FR at 23063 (noting that Sirius XM approached 691 labels about direct licenses and that only 95 signed them). And—as in *SDARS II*—the "Direct Licenses do not include any of the major record labels whom, by virtue of the depth and

breadth of their music catalogues, make up a critical portion of the sound recording market." *SDARS II*, 78 FR at 23063. As the Judges previously concluded, it "would be difficult to imagine a successful SDARS service that did not have access to the types of recordings that the major labels possess." *SDARS II*, 78 FR 23063-64.

SEPFF924. Professor Lys has also demonstrated that, under a variety of measures, Sirius XM has overstated the magnitude of its directly licensed activity. Trial Ex. 42 at ¶¶ 34-35 (Lys WRT).

SEPFF925. First, Sirius XM has overstated the number of catalogs under direct license. Trial Ex. 42 at ¶ 36 (Lys WRT). Sirius XM's Senior Vice President of Music Licensing, George White, testified that the number of Sirius XM's direct licenses cover "more than 23,000 catalogs and five million tracks." Trial Ex. 4 at ¶ 5 (White WDT). Since Mr. White submitted that testimony, however, [ ]. Trial Ex. 42 at ¶ 36 (Lys WRT) (citing White deposition). [ ] 5/15/17 Tr. 3815:14-17 (Walker); Trial Ex. 42 at ¶ 36 (Lys WRT). [ ]. 5/17/17 Tr. 4243:19-4244:2; Trial Ex. 42 at ¶ 36 (Lys WRT).

SEPFF926. Second, Sirius XM has overstated the extent to which directly licensed tracks are part of Sirius XM's programming. Trial Ex. 42 at ¶ 40-41 (Lys WRT). Mr. White testified (and Professor Shapiro reiterated) that "[i]n the most recent reporting period, directly-licensed tracks accounted for approximately 6.4% of our monthly spins, more than twice the

percentage covered by direct license at the time of the SDARS II proceeding." Trial Ex. 4 at ¶ 5 (White WDT); Trial Ex. 8 at 35 (Shapiro WDT). This is an unhelpful and misleading statistic.

SEPFF927. The Judges have made clear in the recent underpayment decision that it is "unreasonable" to estimate the proportion of satellite listeners by using "plays on Sirius XM's satellite radio channels … not weighted by listenership." *In re Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, Ruling on Regulatory Interpretation Referred by United States District Court for the District of Columbia, No. 2006-1 CRB DSTRA, at 16 (Jan. 10, 2017) (hereinafter "Underpayment Decision"). The Judges specifically held that this method is not a "rational way" to "determine with any reasonable accuracy the volume or value of those performances." Underpayment decision, 2006-1 CRB DSTRA, at 16.

SEPFF928. Accordingly, rather than looking to the percentage of "spins" that are directly licensed, it is more reasonable to look to the percentage of "performances, *i.e.*, satellite listeners" that are directly licensed. Trial Ex. 42 at ¶ 41 (Lys WRT). Since January 2015, the percentage of performances that are directly licensed has been, on average, [ ] than the percentage of plays that are directly licensed. Trial Ex. 313 (tab "graphs," rows 10 and 11) (native file).

SEPFF929. Furthermore, it is unhelpful to choose a single month data-point to assess the relative percentage of plays or performances that are directly licensed. Trial Ex. 42 at ¶ 43 (Lys WRT). Doing so cannot be viewed as representative sampling and risks overstating a one-time blip. Trial Ex. 42 at ¶ 43 (Lys WRT). An internal spreadsheet created by Sirius XM indicates that [

[redacted] (the last month of data made available to SoundExchange).

[RESTRICTED]

Trial Ex. 313 (native file) (tab "graphs").

SEPFF930. Rather than relying on a single unrepresentative month of data, Professor Lys examined Sirius XM data over a period of 12 months, a more commonly-accepted "reporting period." Trial Ex. 42 at ¶ 43 (Lys WRT). He determined that, during the analyzed year, direct licenses accounted for only [redacted] of SDARS performances. Trial Ex. 42 at ¶ 43 (Lys WRT).

SEPFF931. Third, Sirius XM has overstated the number of directly licensed labels by padding this number with labels that earn negligible or zero royalties (because their songs are rarely played if played at all). Trial Ex. 42 at ¶ 44 (Lys WRT). According to Professor Shapiro and other Sirius XM witnesses, "Sirius XM has now entered into direct licenses with 498 record labels, about five times as many as in the SDARS II proceeding." Trial Ex. 8 at 45 & Figure 1 at 6 (Shapiro WDT); Trial Ex. 5 at ¶ 55 (Blatter WDT). But the gross number of direct license

agreements is utterly irrelevant. Trial Ex. 42 at ¶ 47 (Lys WRT). A majority of these licenses are simply electronic forms that do not represent any economic activity whatsoever. Trial Ex. 42 at ¶ 47 (Lys WRT). [ ] 4/20/17 Tr. 273:14-19 (Shapiro).

SEPFF932. Over the past three years, the proportion of non-royalty-generating (or "inactive") direct licenses has [ ]. Trial Ex. 42 at ¶ 45 (Lys WRT); Trial Ex. 313 (tab "payments," cell AB570) (native file). The following figure from Professor Lys's written testimony displays this trend line.

Growth in the percentage of inactive agreements [RESTRICTED]

Trial Ex. 42, Figure 3 at 13 (Lys WRT).

SEPFF933. Professor Lys's figure does not include September through November 2016. Data for these months had not been provided at the time of his report. That more recent

data makes clear that the percentage of inactive agreements has only continued to increase. [.] Trial Ex. 313 (native file) (tab "payments," cells AB568 and AB569). Simply put, the most recent available data indicates that [ ] of direct licenses are not paid royalties by Sirius XM. They are economically irrelevant. Trial Ex. 42 at ¶ 35 (Lys WRT).

SEPFF934. A more granular examination reinforces the observation that the gross number of direct licenses is a misleading figure. Consider, for example, February 2016. Sirius XM claims that it had [ ] operative direct licenses in this month. Trial Ex. 25 at ¶ 279 (Lys Corr. WDT). [ ] Trial Ex. 25 at ¶ 279 (Lys Corr. WDT). Furthermore, [ ]. Trial Ex. 25 at ¶ 279 (Lys Corr. WDT).

SEPFF935. Many of the "inactive" licenses are irrelevant for an additional reason: They were the product of a take-it-or-leave-it form offer rather than a negotiation between a willing buyer and a willing seller. As noted above, starting in the fall of 2016, MRI mass-emailed [ ] independent labels with a direct license offer, which labels could "click" to accept. Trial Ex. 42 at ¶¶ 39, 47 (Lys WRT) (citing Trial Ex. 158); 5/17/17 Tr. 4320:10-4321:8, 4322:6-11 (White). [.] 4/27/17 Tr. 1479:22-1480:8, 1481:14-17 (Lys); 5/17/17 Tr. 4322:12-16 (White); Trial Ex. 42 at ¶ 39 (Lys WRT). There is no data indicating that these labels have generated any royalties, nor is there any reason to think they will generate

royalties of any significance going forward. Trial Ex. 42 at ¶ 47 (Lys WRT). Sirius XM did not anticipate that these labels' catalogs were valuable enough to justify personalized (or even direct) outreach, let alone negotiations over deal points. Trial Ex. 42 at ¶ 47 (Lys WRT).

SEPFF936. The inactive licenses that resulted from Sirius XM's opt-in form contract are meaningless for purposes of this rate proceeding. [ ] 4/27/17 Tr. 1481:7-13 (Lys). [ ] 4/27/17 Tr. 1479:18-21 (Lys). [ ] 4/27/17 Tr. 1479:12-13 (Lys).

SEPFF937. Notably, Sirius XM has offered no evidence that the labels who "opted in" to its form contract did so because of "steering." Sirius XM has not, and cannot, point to any part of its "opt-in" form contract that guaranteed a licensor increased spins on the SDARS service. The opt-in licenses simply do not support Sirius XM's claim that labels have been willing to accept a below-statutory rate because of the effects of price competition.

SEPFF938. The bulk of Sirius XM's 498 licenses are economically meaningless. As Professor Lys has shown, almost all of the economic activity among these direct licensors is concentrated among a very small subset of labels. In August 2016, for instance—the same month picked by Sirius XM's witnesses—[ ] Trial Ex. 42 ¶ 48 (Lys WRT); Trial Ex. 160 (native file) (tab "payments," cells Y537-39). [ ]

[redacted]]

Trial Ex. 42 ¶ 48 (Lys WRT); Trial Ex. 160 (native file) (tab "payments," cells Y537-39).

SEPFF939. Professor Lys also analyzed the same data over a longer period of time—the twelve months between September 2015 and August 2016. Trial Ex. 42 at ¶ 49 (Lys WRT). His conclusions were similar as to this time period. The Top 5 labels earned more than [redacted] of royalties, and the Top 30 labels collectively earned [redacted] of royalties. Trial Ex. 42 at ¶ 49 (Lys WRT).

Summary of average monthly royalties earned by indie labels, by tier, over the most recent 12 months of available data [RESTRICTED]

Top #	Average total monthly royalties	%
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

Trial Ex. 42, Figure 4 at 15 (Lys WRT); Trial Ex. 160 (native file) (tab "payments").

SEPFF940. The data is displayed in graphical form in the figure below, which shows that [redacted]]

Sirius XM direct license royalty payments by indie, from highest to lowest paid, over the most recent 12 months of available data [RESTRICTED]

Trial Ex. 42, Figure 5 at 16 (Lys WRT); *see* 4/27/17 Tr. 1475:3-1476:24 (Lys). [4/27/17 Tr. 1476:15-16 (Lys). [4/27/17 Tr. 1476:13-16 (Lys).

SEPFF941. In short, while Sirius XM boasts of signing 498 licenses, just [Trial Ex. 42 at ¶ 34 (Lys WRT). The following figure presents the Top 30 labels and their individual and cumulative contribution of average total monthly royalties.

Concentration of average monthly directly-licensed royalties among the top 30 labels [RESTRICTED]

#	Label	Average total monthly royalties	Cumulative % of all royalties earned by direct licensors
1	[redacted]	[redacted]	[redacted]
2	[redacted]	[redacted]	[redacted]
3	[redacted]	[redacted]	[redacted]
4	[redacted]	[redacted]	[redacted]
5	[redacted]	[redacted]	[redacted]
6	[redacted]	[redacted]	[redacted]
7	[redacted]	[redacted]	[redacted]
8	[redacted]	[redacted]	[redacted]
9	[redacted]	[redacted]	[redacted]
10	[redacted]	[redacted]	[redacted]
11	[redacted]	[redacted]	[redacted]
12	[redacted]	[redacted]	[redacted]
13	[redacted]	[redacted]	[redacted]
14	[redacted]	[redacted]	[redacted]
15	[redacted]	[redacted]	[redacted]
16	[redacted]	[redacted]	[redacted]
17	[redacted]	[redacted]	[redacted]
18	[redacted]	[redacted]	[redacted]
19	[redacted]	[redacted]	[redacted]
20	[redacted]	[redacted]	[redacted]
21	[redacted]	[redacted]	[redacted]
22	[redacted]	[redacted]	[redacted]
23	[redacted]	[redacted]	[redacted]
24	[redacted]	[redacted]	[redacted]
25	[redacted]	[redacted]	[redacted]
26	[redacted]	[redacted]	[redacted]
27	[redacted]	[redacted]	[redacted]
28	[redacted]	[redacted]	[redacted]
29	[redacted]	[redacted]	[redacted]
30	[redacted]	[redacted]	[redacted]
	[redacted]	[redacted]	[redacted]

Trial Ex. 42, Figure 6 at 17 (Lys WRT); *see* 4/27/17 Tr. 1485:3-15 (Lys).

SEPFF942. Because [labels, Professor Lys appropriately focused on this subset in order to understand the dynamics of direct license negotiations. Trial Ex. 42 at ¶¶ 34, 51 (Lys WRT); 4/27/17 Tr. 1486:23-1487:1 (Lys). [ ] 4/27/17 Tr. 1486:13-18 (Lys). By investigating the negotiation history concerning these 30 labels, Professor Lys was able to evaluate—and conclusively disprove—Sirius XM's assertion that "steering" motivated direct licensors to accept royalty rates below the statutory rate. Trial Ex. 42 at ¶ 52 (Lys WRT). As detailed below, the vast majority of directly licensed economic activity has nothing whatsoever to do with steering. Trial Ex. 42 at ¶ 52 (Lys WRT); *see infra* Section VII(I).

D. Professor Shapiro's Economic Models Erroneously Fail To Account For Any Non-Steering Benefits To Direct Licenses.

SEPFF943. In his written testimony, Sirius XM's expert, Professor Shapiro, presupposes that there is one and only one benefit to a label that signs a direct license at a royalty rate lower than the statutory rate. Trial Ex. 42 at ¶ 21 (Lys WRT). According to Professor Shapiro, that sole benefit is "steering." Trial Ex. 8, App. E at E-1 (Shapiro WDT). Professor Shapiro has described steering as an increase in the quantity of a label's songs that are played on a service, due to a lowered royalty rate for that label in a workably competitive situation. 4/19/17 Tr. 190:3-12; Trial Ex. 8, App. E at E-1 (Shapiro WDT). It is on this basis that Professor Shapiro models the relationship between the direct license rates and the statutory royalty rate. Trial Ex. 8 at 38, App. E at E-1 (Shapiro WDT).

SEPFF944. At trial, Professor Lys explained how the key equations in Professor Shapiro's models failed to account for any benefit other than steering. As Professor Lys testified, "Professor Shapiro builds a model where everything is proportioned to quantity" and "[t]here are no benefits that are not a function of quantity." 4/27/17 Tr. 1417:1-18 (Lys). "[T]he question is, is that a reasonable model? And what I have done is I have actually gone out and talked to labels and looked at label contracts and came to the conclusion this is not a reasonable model. There are benefits that are not directionally [sic] proportionate. The moment you have benefits to the labels that are not directly proportionate to quantity and price … [t]hen the model breaks down." 4/27/17 Tr. 1417:1-18 (Lys).

SEPFF945. [ ] Trial Ex. 8, App. E at E-1 (Shapiro WDT); 4/27/17 Tr. 1580:22-1584:16 (Lys). [ ] 4/27/17 Tr. 1581:23-1582:23 (Lys). The model does *not* consider the existence of any benefits that are not proportional to Sirius XM's revenues—which Professor Lys denotes by the variable "*B*." 4/27/17 Tr. 1428:4-9, 1582:11-23 (Lys). [ ] 4/27/17 Tr. 1582:16-23.

SEPFF946. At trial, Professor Shapiro acknowledged that his model does not include any variable that represents such non-statutory benefits. 5/4/17 Tr. 2585:14-17

(Shapiro). He further acknowledged that those benefits do, in fact, exist—citing for instance the benefit to direct licensors of avoiding the SoundExchange administrative fee. 5/4/17 Tr. 2585:4-13 (Shapiro).

SEPFF947. Professor Lys also analyzed the following, related equation from Professor Shapiro's written rebuttal testimony, which models a world without a statutory license: $sNP(r - c)$. 4/27/17 Tr. 1420:1-1430-11 (Lys); Trial Ex. 9 at D-2 (Shapiro Corr. WRT); 5/4/17 Tr. 2577:11-14. Professor Shapiro presented this equation as describing "[t]he extra profits that the record company earns by signing a license at royalty rate r." Trial Ex. 9 at D-2 (Shapiro Corr. WRT); *see* 4/27/17 Tr. 1423:13-18 (Lys). But Professor Lys explained that this equation incorrectly posits that these extra profits are exclusively a function of a label's share of Sirius XM's revenues (sNP) and the direct license royalty rate minus the label's opportunity costs ($r - c$). 4/27/17 Tr. 1427:14-1428:14 (Lys). Professor Lys explained that, once again, Professor Shapiro's equation does not consider the existence of nonstatutory benefits (B) and that, if those benefits exist, the equation should be rewritten as: $sNP(r - c) + B$.

SEPFF948. At trial, Professor Shapiro conceded that his "model does not account for" benefits that are not proportional to a label's share of plays on Sirius XM. 5/4/17 Tr. 2583:25-2584:10 (Shapiro). He acknowledged that one such benefit might be cash advances, which Sirius XM could offer without increasing or decreasing a label's share of plays. 5/4/17 Tr. 2577:15-24 (Shapiro).

SEPFF949. [[redacted]

[redacted] 4/27/17 Tr. 1522:17-1523:9 (Lys). [redacted] 4/27/17 Tr. 1522:22-1523:3 (Lys). [redacted] 4/27/17 Tr. 1523:4-1524:5 (Lys). [redacted] 4/27/17 Tr. 1523:18-1524:1 (Lys).

SEPFF950. As discussed in greater detail above, Professor Lys's rewrite of Professor Shapiro's equations has important implications. *See supra* Section IX(C)(2).

SEPFF951. First, once nonstatutory benefits are taken into account, Professor Shapiro's rewritten model shows that labels may enter into direct licenses even if there is absolutely no "steering" benefit associated with that relationship.

SEPFF952. Second, once Professor Shapiro's equations are rewritten, Sirius XM's gross revenues do not divide out of his model. 4/27/17 Tr. 1428:15-1429:6 (Lys) [redacted]; 5/1/2017 Tr. 1584:11-16 (Lys). As a consequence, "the general proposition that profits matter in a negotiation holds." 4/27/17 Tr. 1418:14-17, 1429:15-19 (Lys). As Sirius XM's profitability increases, the bargaining zone (or "combined gains from trade") also increases, affecting the royalty rate to which a willing buyer and a willing seller would agree. 4/27/17 Tr. 1414:14-1415:7; 1424:15-21 (Lys). As Professor Lys succinctly put it, "Profits matter. There's more to share." 4/27/17 1428:15-1429:6 (Lys). Relatedly, Sirius XM's contribution margin ceases to be the only factor related to its financial health that is relevant to a direct license negotiation. 4/27/17 Tr. 1426:7-1427:9, 1429:20-22 (Lys).

SEPFF953. [ ] 4/27/17 Tr. 1436:21 (Lys). [.] Trial Ex. 25 at ¶ 268 (Lys Corr. WDT); 4/27/17 Tr. 1436:5-24 (Lys). Indeed, there is no evidence that "steering" is the exclusive reason (or even an important reason) that directly licensed labels have accepted a royalty rate lower than the statutory rate. Trial Ex. 42 at ¶ 23 (Lys WRT).

E. Professor Shapiro Agrees That The Direct Licenses Are Economically Irrelevant If They Were Not Motivated By The Threat Or Promise Of Steering.

SEPFF954. Importantly, Professor Shapiro agrees with Professor Lys that, if the direct licenses between Sirius XM and independent labels were not motivated by steering, they are not informative for purposes of this case. 4/20/17 Tr. 445:2-6 (Shapiro).

SEPFF955. [ ] 4/20/17 Tr. 283:14-22 (Shapiro); *see also* Trial Ex. 42 at ¶ 22 (Lys WRT) (citing Shapiro deposition); 4/27/17 Tr. 1417:18-24 (Lys) (citing Shapiro deposition). In short: [ ] 4/20/17 Tr. 300:1-3 (Shapiro); *see* 4/20/17 Tr. 283:25 (Shapiro) (describing this as [ ]).

SEPFF956. As discussed below, Professor Shapiro has presented no evidence to answer his own question in the affirmative.

F. Sirius XM Has Produced No Credible Evidence That Independent Labels Signed Direct Licenses Because Of "Steering."

SEPFF957. At trial, Professor Shapiro candidly acknowledged that he had not looked at any empirical data to measure whether and to what degree Sirius XM steers in favor of directly licensed labels. 4/20/17 Tr. 450:13-17 (Shapiro). He admitted point blank that he "cannot quantify the value of steering." 4/20/17 Tr. 448:20-21 (Shapiro). And he conceded that "I don't have quantitative evidence that I could use for further adjustment." 4/20/17 Tr. 450:1-2 (Shapiro).

SEPFF958. The paucity of empirical evidence in this case supporting any inference of steering stands in sharp contrast to the record in *Web IV*. Professor Shapiro acknowledged that, in *Web IV*, he was presented with empirical evidence of steering by Pandora and measurable evidence of steering by iHeart. 4/20/17 Tr. 450:5-12 (Shapiro). Indeed, in *Web IV*, the Judges had the benefit of steering-related experiments conducted internally by Pandora, which "looked and saw how people change their listening hours on Pandora when the mix shifted." 4/19/17 Tr. 202:2-11 (Shapiro); 4/20/17 Tr. 459:10-460:6 (Shapiro). Professor Shapiro acknowledged that this experiment was "certainly helpful, relevant to demonstrate that Pandora could steer certain amounts … without any meaningful adverse effect on listening hours." 4/20/17 Tr. 460:13-17 (Shapiro).

SEPFF959. At trial, Judge Strickler presented Professor Shapiro with two questions, the answers to which are particularly revealing.

SEPFF960. First, Judge Strickler asked Professor Shapiro if there is "anything that you are aware of in this proceeding by way of evidence that is akin to or analogous to the Pandora experiments." 4/19/17 Tr. 202:12-15 (Shapiro). Professor Shapiro answered: "There is no quantitative evidence relating to Sirius XM steering or its effects on listener hours. We don't

have that here, no." 4/19/17 Tr. 202:16-19 (Shapiro). Professor Shapiro acknowledged that no experiments have been done to test the responsiveness of Sirius XM subscribers to steering, or to examine how many subscribers Sirius XM might lose if it steers away from what its programmers regard as the optimal mix of music. 4/20/17 Tr. 460:23-461:2, 461:7-13 (Shapiro).

SEPFF961. Later, Judge Strickler asked Professor Shapiro, "if you can't quantify the value of steering, how do you know it is not zero?" 4/20/17 Tr. 449:10-21 (Shapiro). Professor Shapiro was again unable to respond with any quantitative or empirical evidence. Instead, Professor Shapiro cited two pieces of *qualitative* evidence—the written testimony of Glen Barros and the written testimony of Mr. White. 4/20/17 Tr. 449:10-21 (Shapiro); *see also* 4/20/17 Tr. 300:11-301:2 (Shapiro) (citing Mr. Barros's written testimony and observing that it "speaks for itself here to me"). But this evidence is both meager and mischaracterized. It does not hold up to the exhaustive survey of licenses and negotiation documents conducted by Professor Lys.

SEPFF962. Professor Shapiro's theorizing about Mr. Barros's written testimony is squarely contradicted by Mr. Barros's clear and express written and oral testimony. At trial, Mr. Barros made clear that the [ ] 5/16/17 Tr. 4098:6-11 (Barros). Indeed, Mr. Barros stated that [ ] 5/16/17 Tr. 4104:12-4105:1, 4154:3-7 (Barros). Mr. Barros made the same points in his written testimony: "the primary reason that Concord signed

direct licenses with Sirius XM" was to [ ] Trial Ex. 47 at ¶ 8 (Barros WRT). His written testimony further confirms that "At no point in the negotiations did Mr. White or anyone else from Sirius XM promise us that Sirius XM would play more of Concord's recordings if we signed direct licenses." Trial Ex. 47 at ¶ 13 (Barros WRT).

SEPFF963. Professor Lys supported Mr. Barros's testimony, noting that he had conveyed similar motivations during a telephone interview: [ ] 5/1/17 Tr. 1654:17-1655:13 (Lys).

SEPFF964. Professor Shapiro's citation to George White's written testimony is equally unavailing. Mr. White's testimony consisted entirely of unsupported and unverified hearsay. As he acknowledged at trial, [ ] 5/17/17 Tr. 4275:10-4276:2 (White). Likewise, during his testimony at trial, Mr. White was unable to testify with personal knowledge as to why any particular piece of music—including any directly licensed recording—had been played on Sirius XM. "[W]ith respect to why somebody played a particular piece of music, I have to take the word of somebody on our programming team." 5/17/17 Tr. 4229:7-11 (White).

SEPFF965. When asked by Sirius XM's counsel on what basis he nonetheless concluded that steering was "a significant factor in every direct license that we've executed," Mr. White vaguely and generically cited "the dialogue that I have with the direct licensors, either directly or what I've heard from my team or Music Reports, who work with them." 5/17/17 Tr. 4226:3-19 (White). But when pressed for specifics of any actual examples of steering, Mr.

White came up empty handed. For example, Mr. White was asked about Empire Distribution, which he had cited during his direct examination as an "extremely successful" label and one of the more prominent direct licensors. 5/17/17 Tr. 4247:17-20, 4248:25-4249:9 (White). [5/17/17 Tr. 4282:15-20, 4283:20-25 (White).

SEPFF966. [*See, e.g.*, 4/27/17 Tr. 1463:9-1466:7 (Lys), 5/17/17 Tr. 4326:1-19 (White). Sirius XM's preference is that the Judges examine the steering issue on a barren record, divorced from the actual facts on the ground. The Judges should decline this invitation, given the rich trove of contemporaneous evidence that exists.

G. Professor Lys Is The Only Expert In This Proceeding Who Reviewed The Direct Licenses And Their Negotiation History, And He Has Concluded That Steering Played No Role.

SEPFF967. Sirius XM's evidentiary objections cannot change the fact that Professor Lys has reviewed a mountain of contemporaneous email communications that conclusively rule out "steering" as a motivating factor for the direct licenses. Professor Lys left no stone unturned in his effort to understand the pitches and motivations underlying independent labels' decisions to enter direct deals with Sirius XM. 5/1/17 Tr. 1669:11-13 (Lys).

SEPFF968. [Trial Ex. 42 at ¶ 12 (Lys WRT); 4/27/17 Tr. 1441:21-24 (Lys). [

[redacted] 4/27/17 Tr. 1441:25-1442:3 (Lys).

SEPFF969. [redacted] Trial Ex. 42 at ¶ 12 (Lys WRT); 4/27/17 Tr. 1485:20-1486:7 (Lys). [redacted] 4/27/17 Tr. 1439:5-17 (Lys).

SEPFF970. [redacted] 4/27/17 Tr. 1501:23-1502:6 (Lys); Trial Ex. 181 (native file). [redacted] 4/27/17 Tr. 1495:15-1496:17, 1499:17-1500:13, Trial Ex. 160. [redacted] 4/27/17 Tr. 1495:9-15 (Lys); *e.g.*, Trial Ex. 198 (native file) (tab [redacted]), Trial Ex. 199.2 (native file) (tab [redacted]). As with the emails and contracts, none of this data indicated to Professor Lys that Sirius XM engaged in "steering."

SEPFF971. Finally, in an effort to test the validity of his findings from the documentary evidence, Professor Lys spoke with [redacted].] Trial Ex. 42 at ¶ 12 (Lys WRT); 4/27/17 Tr. 1502:17-1503:7, 1503:23-1504:5 (Lys). In conducting

these interviews, Professor Lys posed open-ended questions that gave the label executives the opportunity to explain why they entered into the direct licenses. 5/1/17 Tr. 1670:14-24 (Lys). [ ] 5/1/17 Tr. 1651:11-12, 1673:21 (Lys). "[T]he approach was to let them talk and tell me, hopefully as people usually do, they tell you the most important [reason] first, and then they go down the list. They may forget some, admittedly, but they rarely forget the 800-pound gorilla." 5/1/17 Tr. 1672:9-14 (Lys).

SEPFF972. None of the six labels that Professor Lys talked to mentioned that steering played any role in their decision to sign a direct license. 5/1/17 Tr. 1670:6-7 (Lys). One label executive, [ ], did bring up the issue of steering—but only to indicate that it did not take place and was not the reason she signed up. As Professor Lys recalled at trial, [ ] 5/1/17 Tr. 1672:15-24 (Lys).

SEPFF973. By contrast, all six of the labels that Professor Lys spoke to mentioned non-statutory benefits that influenced their decisions to enter into direct licenses—including but not limited to payment for pre-1972 recordings, the ability to receive the "artist share" of the royalties, and the ability to earn greater royalties on account of Sirius XM's consumption-based payment methodology. *See infra* Section VII(I).

SEPFF974. Professor Lys's exhaustive review of the record flatly belies the assumption in Professor Shapiro's models that "steering" was the sole reason (or even an important reason) that labels entered into direct licenses with below-statutory royalty rates. Trial Ex. 42 at ¶ 23 (Lys WRT). [

[redacted] 5/1/17 Tr. 1683:2-5 (Lys). [redacted] 4/27/17 Tr. 1445:25-1446:1 (Lys). [redacted] 4/27/17 Tr. 1439:17-20 (Lys). Professor Lys colorfully concluded: "I have looked over every rock that I could find. Steering was not under any of those rocks." 5/1/17 Tr. 1669:11-13 (Lys).

SEPFF975. [redacted] 4/20/17 Tr. 270:23-25 (Shapiro). [redacted] 4/20/17 Tr. 477:21-478:3 (Shapiro). [redacted] 4/20/17 Tr. 477:21-478:3 (Shapiro). [redacted] 4/20/17 Tr. 478:16-18 (Shapiro). [redacted] 4/20/17 Tr. 288:11-289:4 (Shapiro).

SEPFF976. [redacted] 4/20/17 Tr. 478:11-15 (Shapiro). [redacted] 4/20/17 Tr. 490:13-17 (Shapiro).

SEPFF977. Having failed to conduct anything remotely close to Professor Lys's analysis of the negotiation history, Professor Shapiro was forced to concede that he had no basis to criticize that analysis. [redacted] 4/20/17 Tr. 490:18-19 (Shapiro).

H. Sirius XM's Offer Of Access To Programmers Is Not Steering In The Sense Used In Web IV.

SEPFF978. By contrast, Sirius XM's vague suggestions of an improved relationship with programming staff were entirely non-binding. Trial Ex. 42 at ¶ 26 (Lys WRT). In actuality, and as discussed in the following section, [redacted] Trial Ex. 42 at ¶ 26 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 26 (Lys WRT).

SEPFF979. At trial, Professor Shapiro acknowledged that, for steering-induced competition to take hold, the prospect that a service will steer needs to be credible from the point of view of the label. 4/20/17 Tr. 465:16-22 (Shapiro). Sirius XM must have "the ability to move play shares or steer, but it is more than that. It has to be that … it is credible and believable that the [service] would indeed move significant share based on differences in royalty rates." 4/19/17 Tr. 185:16-23 (Shapiro). Put differently, any given record company "has to be of the view that if they charge a higher rate than the others, let's say, they will lose some play share. And if they discount below the others, they will gain some play share." 4/19/17 Tr. 185:11-15 (Shapiro). Professor Shapiro acknowledged that, other things being equal, the more confident a label is that it will get an anticipated increase in volume, the more likely it is to offer a rate discount. 4/20/17 Tr. 464:12-16 (Shapiro).

SEPFF980. In *Web IV*, this condition was satisfied—Pandora had the technical ability to steer *and* the promise of steering was credible and verifiable. *See* Tr. 4/20/17 Tr. 455:14-18 (Shapiro) (acknowledging that Pandora had the ability and incentive to steer). In the Merlin-Pandora agreement considered by the Judges in *Web IV*, "the Merlin labels cut a deal with Pandora to have more play share in exchange for a lower rate." 4/19/17 Tr. Shapiro 192:25-193:3 (Shapiro). Price and volume commitments were embodied in the contract. 4/20/17 Tr. 465:13-15 (Shapiro). These made clear that "Pandora would not save as much money if they didn't steer the required amount." 4/20/17 Tr. 465:1-2 (Shapiro). That is, under the Merlin-Pandora agreement, Merlin received a contractually binding commitment that it would not be paid at lower rates unless and until it received a more than offsetting increase in volume. Trial Ex. 42 at ¶ 26 (Lys WRT); 4/20/17 Tr. 465:4-7 (Shapiro) (acknowledging that Merlin was assured by its contract of getting an increase in volume for a decrease in rate).

SEPFF981. In short, "[t]here was a commitment by Pandora to steer to a minimum degree toward Merlin music." 4/20/17 Tr. 464:21-22 (Shapiro). "[A]nd Pandora did steer towards them." 4/19/17 Tr. 192:25-193:3 (Shapiro).

SEPFF982. By stark contrast, Sirius XM has flatly conceded that [ ] Trial Ex. 306. Every Sirius XM witness who was asked about this at trial admitted this point. Professor Shapiro acknowledged that Sirius XM doesn't actually make any promise that signing a direct license will result in more plays. 4/20/17 Tr. 466:11-15 (Shapiro). [ ] 5/17/17 Tr. 4225:24-4226:2, 4276:6-13 (White). And Steven Blatter, Sirius XM's head of music

programming, admitted that Sirius XM does not guarantee direct licensors increased plays on Sirius XM. 5/10/17 Tr. 3365:12-14, 3374:5-9 (Blatter). [ ] 4/27/17 Tr. 1471:9-13 (Lys). And none of the direct license agreements he examined included any provisions promising increased plays or steering. Trial Ex. 42 at ¶ 133 (Lys WRT).

SEPFF983. Despite Sirius XM's admissions, Sirius XM insists that it engages in "steering" because it has offered direct licensors [ ] Trial Ex. 306. Such pitches fall short of what, from an economic perspective, can rightly be considered "steering." Trial Ex. 42 at ¶ 26 (Lys WRT). Because they are entirely non-binding, they do not demonstrate the existence of price competition and they do not indicate that the market for direct licenses is workably competitive.

SEPFF984. Professor Lys has explained how, as a matter of economics, Sirius XM's offer of improved access to programmers is not helpful in setting the rate for the industry as a whole. Trial Ex. 42 at ¶ 135 (Lys WRT). Improved access to Sirius XM programmers is a benefit that Sirius XM can only give to a limited number of labels. Trial Ex. 42 at ¶ 136 (Lys WRT). Programmers have finite time to take calls or listen to new sound recordings and are already "inundated" with requests from labels and artists to play their music. 4/20/17 Tr. 295:17-20 (Shapiro); 5/10/17 Tr. 3342:2-9 (Blatter); Trial Ex. 42 at ¶ 136 (Lys WRT). As the number of direct licensors increases, the degree to which their access to programmers is preferential will necessarily diminish. Trial Ex. 42 at ¶ 136 (Lys WRT). [ ] 5/17/17 Tr. 4278:15-25, 4279:10-

13, 4284:1-6 (White). At the theoretical margin, when all labels are directly licensed, none of their "access" to Sirius XM's programmers would be unique or special. Trial Ex. 42 at ¶ 136 (Lys WRT). That is to say, they would receive the same access to programming staff that they would have absent a direct deal with a reduced rate. Trial Ex. 42 at ¶ 136 (Lys WRT).

SEPFF985. It is important to interrogate what would happen in this theoretical scenario, when the value of the "benefit" of improved access has fallen to zero. Trial Ex. 42 at ¶ 137 (Lys WRT). If Sirius XM was price-sensitive in selecting what recordings to play, then arguably this lowered market equilibrium would stick—a conclusion that the Judges reached with respect to the kind of "steering" at issue in *Web IV*. Trial Ex. 42 at ¶ 137 (Lys WRT).

SEPFF986. But Sirius XM has conceded that it is *not* price-sensitive when it comes to programming directly licensed content. Trial Ex. 42 at ¶ 137 (Lys WRT). Sirius XM's head of music programming, Steven Blatter, acknowledged at trial that the *price* of directly licensed tracks has never influenced Sirius XM's programming decisions. He admitted that he has never instructed a Sirius XM programmer to play a track just because the cost of playing that track would be less than another track. 5/10/17 Tr. 3374:10-15 (Blatter). He also admitted that he was unaware of *any* Sirius XM programmer who had been instructed to play a track because the cost of doing so would be lower. 5/10/17 Tr. 3374:16-20 (Blatter). Put simply, Sirius XM does not make programming decisions based on price—even though Sirius XM's programmers could theoretically do so. 5/10/17 Tr. 3365:24-3366:7 (Blatter) (noting that "[w]e have the ability to, you know, control the playlist that are presented across our 85 music channels"); 4/20/17 Tr. 451:1-18 (Shapiro) (testifying that Sirius XM has and, so far as he could tell, always has had the ability to steer).

SEPFF987. Given that situation, there is no reason for direct licensors to accept a lowered royalty rate absent the "increased access" benefit that they were promised. Trial Ex. 42 at ¶ 137 (Lys WRT). [ ] Trial Ex. 42 at ¶ 137 (Lys WRT); 4/27/17 Tr. 1575:13-22 (Lys).

SEPFF988. In other words, even if "increased access to programming staff" was a credible promise (which it was not) and even if it was the sole reason licensors signed direct deals (which it was not) that benefit should not be expected to result in a stable, lowered market equilibrium at the directly licensed royalty rate. Trial Ex. 42 at ¶ 138 (Lys WRT). Accordingly, that lowered rate is not indicative of a competitive, market rate and is not instructive for setting the statutory rate. Trial Ex. 42 at ¶ 138 (Lys WRT).

1. Sirius XM Is Clear That It Does Not Steer Based On Price—Sirius XM Programmers Are Instructed To Play The Best Sound Recording Regardless Of Whether It Is Directly Licensed.

SEPFF989. [ ] 4/20/17 Tr. 466:11-15 (Shapiro); 5/17/17 Tr. 4225:24-4226:2, 4276:6-13 (White); 5/10/17 Tr. 3365:12-14, 3374:5-9 (Blatter). Sirius XM's claim that it provides direct licensors with increased access to programmers is, for reasons discussed above, economically irrelevant. Moreover, there is no evidence that labels credited these representations or that Sirius XM made good on them.

SEPFF990. [ ] 5/1/17 Tr. 1650:1-5 (Lys). [ ]

[redacted] 5/1/17 Tr. 1683:19-23 (Lys). Sirius XM's own records indicate that [redacted] Trial Ex. 181 (native file). For example, the label [redacted] rejected a direct license offer because it was [redacted] Trial Ex. 181 (native file) (tab "Labels – 2013001," cell G167). The label [redacted] likewise indicated that it was [redacted] Trial Ex. 181 (native file) (tab "Labels – 2013001," cell G558). Likewise, when Professor Lys spoke to an executive at [redacted] (one of the largest Sirius XM direct licensors) she expressly noted that [redacted] 5/1/17 Tr. 1653:21-23 (Lys) (discussing conversation with [redacted]).

SEPFF991. [redacted] were justified in their skepticism. There is nothing in the record that indicates Sirius XM followed through on even its limited pitch to grant direct licensors increased access to programming staff.

SEPFF992. The story of [redacted] is telling. On January 1, 2014, the [redacted] entered into a direct license with Sirius XM. Trial Ex. 181 (native file) (tab "Signed Licenses," cells F112, G112). More than two years later, a representative of [redacted] wrote to Sirius XM's agent, Music Reports Inc., to ask [redacted] Trial Ex. 214 at SXM_DIR_00094690. When MRI responded that [redacted]. The label representative noted that he had [redacted]

[redacted] Trial Ex. 214 at SXM_DIR_00094689. MRI's response to [redacted] is informative: [redacted] Trial Ex. 214 at SXM_DIR_00094689.

SEPFF993. The experience of directly licensed label [redacted] appears to have been similar. Trial Ex. 181 (native file) (tab "Signed Licenses," row 169). [redacted] direct license took effect on October 1, 2014. But, as Professor Lys observed, a representative of that label wrote to Sirius XM nearly two years later to complain about a significant drop-off in spins. Trial Ex. 42 at ¶ 134 (Lys WRT); Trial Ex. 220. "[redacted]" Trial Ex. 42 at ¶ 134 (Lys WRT) (quoting Trial Ex. 220 at SXM_DIR_00096934). "[redacted]" Trial Ex. 42 at ¶ 134 (Lys WRT) (quoting Trial Ex. 220 at SXM_DIR_00096934).

SEPFF994. The experience of the labels described above should not be a surprise given the relationship between Sirius XM's direct licensing department and its programming department, as described by the leaders of those units. Both Sirius XM's head of music programming and its head of music licensing have admitted that Sirius XM's programmers are highly independent—and that the status of a label as "directly licensed" has virtually no impact on programming decisions.

SEPFF995. Steven Blatter—who oversees 275 people, including programmers for 85 different Sirius XM channels—was unable to establish any connection between a label's

status as directly licensed and his team's decision to spin its tracks. 5/10/17 Tr. 3340:15-17, 3341:2-20 (Blatter). [ ] Trial Ex. 314 at 33:25-34:3 (Blatter); 4/27/17 Tr. 1450:7-9 (Lys). [ ] Trial Ex. 314 at 34:10-14; 4/27/17 Tr. 1450:7-9 (Lys).

SEPFF996. Mr. Blatter also acknowledged that there is no effort made by Sirius XM to track whether directly licensed labels obtain greater access to his programming team. Despite being the head of all programming staff at Sirius XM, Mr. Blatter stated that he didn't know—and that it was "out of the scope of [his] responsibility to know"—how many of the tracks that direct licensors submitted for consideration were ever actually reviewed by programmers. 5/10/17 Tr. 3385:9-14 (Blatter). Indeed, he did not even know whether Mr. White's team passed along to programmers each track that it received from direct licensors. 5/10/17 Tr. 3385:3-8 (Blatter).

SEPFF997. [ ] 5/17/17 Tr. 4279:19-4280:8 (White). [.] 5/17/17 Tr. 4282:21-23 (White); Ex. 157 at 116. "I don't make the selections to play the music that goes on our air. Our programming team does." 5/17/17 Tr. 4229:7-11 (White). "[T]he programmers, at the end of the day, make the decision about which recordings they're going to use." 5/17/17 Tr. 4224:2-4 (White).

[

[redacted] 5/17/17 Tr. 4276:14-17 (White). "I don't think there's a general instruction to play more directly licensed recordings because we don't know what those recordings are until they exist." Ex. 157 at 117:22-25 (White).

SEPFF998. As one would expect, when Sirius XM decides what tracks to play, it is the merits of the artist and the song—*not* the price—that always come first. 5/10/17 Tr. 3385:18-22 (Blatter); 5/17/17 Tr. 4219:15-22 (White). "[W]e have to believe in the particular artist and their song first before anything. And that's always been sort of a philosophy that we have programmed all our channels under." 5/10/17 Tr. 3365:18-23 (Blatter).

SEPFF999. [redacted] 4/27/17 Tr. 1471:16-21 (Lys). [redacted] Trial Ex. 42 at ¶ 129 (Lys WRT); Trial Ex. 215 at SXM_DIR_00099544. [redacted] Trial Ex. 42 at ¶ 129 (Lys WRT); Trial Ex. 215 at SXM_DIR_00099544. [redacted] Trial Ex. 42 at ¶ 129 (Lys WRT); Trial Ex. 215 at SXM_DIR_00099544. [redacted]

] 4/27/17 Tr. 1577:22-25 (Lys).

SEPFF1000. Mr. White's correspondence reflects [

] Trial Ex. 216; *see* Trial Ex. 42 at ¶ 130 (Lys WRT); 4/27/17 Tr. 1576:2-18 (Lys). [

]

SEPFF1001. [

] Trial Ex. 42 at ¶ 130 (Lys WRT) (citing Trial Exs. 217-19). [

] 4/27/17

Tr. 1467:5-12 (Lys). [.] 4/27/17 Tr. 1467:5-12 (Lys).

SEPFF1002. At trial, Both Mr. Blatter and Mr. White cited Hopeless Records as an example of a direct licensor who has commented positively on receiving greater access to programmers. 5/17/17 Tr. 4230:22-4231:4 (White); 5/10/17 Tr. 3365:6-8 (Blatter). According to Mr. White, Hopeless Records came to Sirius XM with a new record by All Time Low. 5/17/17 Tr. 4230:22-4231:4 (White). Mr. White introduced All Time Low to Sirius XM programmer Kid Kelly, who then added their track to the Hits 1 station. 5/17/17 Tr. 4230:22-4231:4 (White). "Louis Posen, who's the head of Hopeless Records, sent us a very nice note, you know, attributing his success with our addition of that record on Hits 1." 5/17/17 Tr. 4231:8-11 (White).

SEPFF1003. But Professor Lys testified that Hopeless Records had a reason for being pleased with its direct license that had absolutely nothing to do with Kid Kelly or the band All Time Low. As detailed in his written direct testimony, Hopeless Records [ ] 4/27/17 Tr. 1548:4-9 (Lys); *see* Trial Ex. 25, Figure 71 at 102 (Lys Corr. WDT). Sirius XM has presented no evidence that "access to programmers" influenced Hopeless Records' decision to sign a direct license, let alone that this benefit [ ] As such, the Judges should not put any weight on the Hopeless Records anecdote presented by Mr. White.

SEPFF1004. [

[redacted] 4/27/17 Tr. 1434:10-1435:9 (Lys). [redacted] Trial Ex. 42 at ¶ 133 (Lys WRT); 4/27/17 Tr. 1471:9-13 (Lys). [redacted] 4/27/17 Tr. 1462:24-25 (Lys)—[redacted]

2. Sirius XM's Offer Of Access To Programmers Would Not Be Viewed As A Benefit By Major Labels, Who Already Have Access To Programmers.

SEPFF1005. The preceding sections have established that Sirius XM did not steer in the sense used in *Web IV*, and that its offer of "increased access to programmers" was neither economically relevant nor a credible, important deal point in any direct license negotiation. [redacted] 4/19/17 Tr. 272:1-4 (Shapiro).

SEPFF1006. [redacted] 4/20/17 Tr. 274:3-5 (Shapiro). [redacted] 4/20/17 Tr. 274:6-14 (Shapiro). Professor Shapiro is right to be uncertain. As the Judges recognized in *SDARS II*, "[t]he Direct Licenses do not include any of the major record labels whom, by virtue of the depth

and breadth of their music catalogues, make up a critical portion of the sound recording market." *SDARS II*, 78 FR at 23063. The fact that "the works licensed by the Direct Licensors represent the kinds of sound recordings performed on Sirius XM does not diminish the importance of the catalogues of the major labels." *SDARS II*, 78 FR at 23063.

SEPFF1007. First, there is no reason to think that Sirius XM's offer of "access to programmers" would make any difference to a major label, or inspire a major label to accept a discounted royalty rate. As the Judges explained in *SDARS II*, "independent labels may have a greater incentive than majors to secure performances of their works on services such as Sirius XM, which would increase the attractiveness of a Direct License relationship. Although major labels also must compete with other majors and with independent labels for airplay, none was apparently so motivated by that concern to negotiate separately with Sirius XM. Therefore, the differing motivations of the 'sellers' in the proposed Direct License benchmark suggest a weakness regarding comparability to the target market." *SDARS II*, 78 FR at 23064 (internal citations omitted).

SEPFF1008. [ ] *See* 4/20/17 Tr. 284:11-14 (Shapiro) (testifying that the majors are regularly in contact with Sirius XM's programmers "to have their music played more on Sirius XM."). In fact, the evidence shows that the majors already have access to Sirius XM. *See* Trial Ex. 34 at ¶ 67 (Kushner WDT) (Atlantic's artists make appearances on Sirius XM and "Sirius XM is often eager to feature our popular artists"); Trial Ex. 50 at 2 n. 2 (Walker WRT) (Sirius XM "pays the costs of recording" live performances by Sony's artists). [

[redacted] *See* 5/16/17 Tr. 4104:18-4105:1 (Barros). In short, lack of access to Sirius XM's programmers is simply not a problem for the majors.

SEPFF1009. [redacted] 5/1/17 Tr. 1653:1-11 (Lys). In short, there is no reason to think that the "offer" of access to programmers would be of any added benefit or value to the majors.

SEPFF1010. Second, there is no reason to think that the rates accepted by smaller independent labels are indicative of the rates that the majors would accept, given the differential size in market power between the two sets of labels. [redacted] 5/17/17 Tr. 4272:2-4273:8 (White) (discussing [redacted]). These conditions would obviously hold for the major labels.

SEPFF1011. Third, there is every reason to think that Sirius XM would have strong disincentives to steer away from any of the majors. [redacted] 5/17/17 Tr. 4277:20-4278:3 (White). As Professor Shapiro acknowledged, steering away from a suboptimal mix can be costly for a

service, which translates into greater bargaining power for labels with desirable repertoire. 4/20/17 Tr. 452:2-2:454:2 (Shapiro).

I. Independent Labels Signed Direct Licenses For A Host Of Reasons Having Nothing To Do With Steering.

SEPFF1012. Professor Lys and Professor Shapiro agree that "the critical issue in evaluating these direct license benchmark agreements is understanding *why* the rates set in these direct licenses are lower than the statutory rates that would otherwise apply." Trial Ex. 8 at 38 (Shapiro WDT); Trial Ex. 42 at ¶ 53 (Lys WRT). Given that there is no evidence that Sirius XM ever made direct trade-offs between the price of sound recordings and the frequency of plays—let alone that it engaged in a contractually binding form of steering—this presents the question why independent labels would sign direct licenses at a rate less than the statutory rate. Trial Ex. 42 at ¶ 54-55 (Lys WRT).

SEPFF1013. Professor Lys's examination of the direct licenses, the negotiation record, and Sirius XM data, as well as his conversations with six label executives, reveal that the direct licenses were the result of a variety of sizable benefits that are not proportional to a label's share of performances on Sirius XM and that are not available to labels under the statutory scheme. Trial Ex. 42 at ¶ 55 (Lys WRT). In particular, the direct licenses afforded labels the opportunity to: (a) save the costs of the SoundExchange administrative fee; (b) save the costs of an otherwise required 5% contribution to a fund for non-featured artists; (c) earn additional royalties without an increase in plays due to Sirius XM's performance-based payment methodology ("overindexing"); (d) earn royalties for the performance of pre-1972 sound recordings that would not otherwise be paid by Sirius XM; (e) obtain an otherwise-unavailable cash advance; (f) obtain an otherwise-unavailable fee for distributing payments to other labels; and (g) earn additional royalties through more accurate reporting. Trial Ex. 42 at ¶ 25 (Lys

WRT). In addition, a handful of labels were motivated by idiosyncratic reasons, including the ability to obtain a share of advertising revenue ([ ]), a flat fee royalty structure ([ ]), or a simple misunderstanding as to its options under the statutory license ([ ]). Trial Ex. 42 at ¶¶ 118-125 (Lys WRT).

SEPFF1014. As noted above, 30 directly licensed labels accounted for [ ] of average monthly royalties paid out by Sirius XM over a twelve month period. Professor Lys has examined Sirius XM's pitches to these Top 30 labels, as well as contemporaneous evidence of the factors that motivated them to sign up. Trial Ex. 42, Figure 6 at 17 (Lys WRT); *see* 4/27/17 Tr. 1485:3-15 (Lys). His conclusions are presented in the below chart:

Top 30 direct license labels, by average monthly royalties from September 2015 to August 2016 [RESTRICTED]

#	Label	%	Pitches and motivations
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			

#	Label	%	Pitches and motivations
22	[redacted]	[redacted]	
23	[redacted]	[redacted]	[redacted]
24	[redacted]	[redacted]	[redacted]
25	[redacted]	[redacted]	[redacted]
26	[redacted]	[redacted]	[redacted]
27	[redacted]	[redacted]	[redacted]
28	[redacted]	[redacted]	
29	[redacted]	[redacted]	[redacted]
30	[redacted]	[redacted]	[redacted]

Trial Ex. 42, Figure 17 at 50 (Lys WRT).

SEPFF1015. At trial, Professor Lys noted that he was unable to find any emails to allow him to determine pitches or motivations for three of the Top 30 labels—[redacted] 4/27/17 Tr. 1574:6-10 (Lys). (Professor Lys did note, however, that he has reviewed these labels' direct license contracts and found no evidence of any promise by Sirius XM to "steer" in exchange for a lower rate.) Trial Ex. 42 at ¶ 143 (Lys WRT). [redacted] 4/27/17 Tr. 1574:11-17 (Lys).

SEPFF1016. Professor Lys noted that in the course of his review he came across several direct licensors outside of the Top 30 who were also pitched on or motivated by benefits other than steering. *See* Trial Ex. 42 at ¶ 141 n.163 (Lys WRT) (noting that these labels included [redacted]). Accounting for these other labels, Professor Lys has covered [redacted] of average monthly royalties earned by all direct licensors. Trial Ex. 42 at ¶ 142 (Lys WRT). [redacted]

[redacted]], Trial Ex. 9 at 45-46 (Shapiro Corr. WRT); 4/20/17 Tr. 471:20-472:1, 472:14-23 (Shapiro)—Professor Lys has accounted for [[redacted]] and found that factors other than steering played a demonstrable role for these labels. 4/27/17 Tr. 1574:21-1575:12 (Lys).

SEPFF1017. [[redacted]] 4/27/17 Tr. 1487:13-16, 1489:9-15 (Lys). [[redacted].] 4/27/17 Tr. 1487:23-1488:3, 1489:5-8, 1489:16-18 (Lys).

SEPFF1018. As Professor Lys acknowledged at trial, his chart is inconsistent in its use of the word "pitched." For example, his chart uses the phrase "received advance," without indicating whether this feature was in fact pitched. [[redacted]] 4/27/17 Tr. 1494:10-13 (Lys). Likewise, a label would not have "received pre-72 royalties" without knowing about and negotiating the terms of this benefit. And labels that were "overpaid by Sirius XM prior to renewal" surely knew so in advance of executing a license that made clear the terms of its repayment. Each of these issues is discussed with more particularity in the corresponding sections that follow.

SEPFF1019. Professor Lys's chart is also imperfect in its presentation of "motivations." In some instances, Professor Lys understood that a benefit was a motivating factor because the label specifically told him—as was the case, for instance, with [[redacted]

[redacted] In other cases, Professor Lys understood that a benefit was a motivating factor because the email history made this explicit—as was the case, for instance, with [redacted]. Again, these and other specific circumstances are discussed below.

SEPFF1020. [redacted] 4/27/17 Tr. 1490:6-1491:2 (Lys). For instance, the record makes clear that Sirius XM was aware as of early September 2014 that [redacted] would all overindex by substantial amounts. Trial Ex. 198 (native file) (metadata, indicating "last modified" date of September 3, 2014; tab "2014-Q1 Summary," rows 11, 15, and 16). Over the following five months, each of these labels renewed their direct licenses. Trial Ex. 181 (native file) (tab "Signed Licenses," rows 119, 153, 194). [redacted] 4/27/17 Tr. 1491:16-20, 1549:23-1550:16 (Lys).

SEPFF1021. Similarly, Professor Lys observed that the Top 30 licensor [redacted] went out of its way to bifurcate its catalog—reverting to the statutory license for its [redacted] content under a direct license—in an effort to avoid the adverse effects of underindexing. [redacted] 4/27/17 Tr. 1550:23-1551:24. [redacted]

[redacted] 4/27/17 Tr. 1488:14-20, 1551:18-24 (Lys). At trial, George White acknowledged that, in fact, indexing was a part of the negotiations between Sirius XM and [redacted] when considering that labels' license renewal. 5/17/17 Tr. 4306:4-4308:6 (White).

SEPFF1022. Regardless of whether Professor Lys's chart is the best possible summary of his findings, his underlying point is both clear and unrebutted. The various nonstatutory benefits that he discussed at length in his reports and during his testimony provide sufficient inducements—absent any steering—for labels to enter into direct licenses at rates lower than the statutory rate. Trial Ex. 42 at ¶ 55 (Lys WRT). As such, they prove the obvious fact that, at any given statutory license rate, record companies will trade a discount off that rate in return for benefits that equal or more than offset the discount. Trial Ex. 42 at ¶¶ 53, 55 (Lys WRT). That is true even if the statutory license is already set below a label's walk-away opportunity cost. *See* 4/24/17 Tr. 663:19-664:12 (Farrell). Given this dynamic, in which the statutory rate casts a long shadow, directly licensed rates are not indicative of royalty rates that willing buyers and willing sellers would agree to in a competitive, free-market environment. Trial Ex. 42 at ¶ 55 (Lys WRT).

SEPFF1023. The Judges recognized as much in *SDARS II*. They observed "that the additional considerations and rights granted in the Direct Licenses that are beyond those contained in the Section 114 license weaken the Direct Licenses' comparability as a benchmark. For example, the Direct Licenses provide for payment of 100% of the royalties to the Direct Licensors, thereby avoiding the statutory apportionment of 50% to record companies and 50% to artists and performers. Certain of the Direct Licenses, in particular those of the larger

independent labels, provide for cash advances and accelerated royalty payments, considerations that also are not provided for under the statutory license. In addition, Sirius XM absorbs all of the administrative costs of the licensing process under the Direct Licenses, which, under the statutory license, are borne by the copyright owners, artists and performers. With respect to rights granted under the Direct Licenses, Sirius XM receives a waiver of the sound recording complement of the statutory license and the ability to perform the works of the Direct Licensors on other services not covered by the statutory license." *SDARS II*, 78 FR at 23064 (internal citations and footnote omitted). "It may well be that independent record labels took the Direct License offer because of the[se] valuable non-statutory benefits," and not because of "price competition aimed at increasing their market share through increased plays on Sirius XM." *SDARS II*, 78 FR at 23064.

SEPFF1024. Finally, and critically, each of the non-statutory benefits discussed below are not proportional to Sirius XM's gross revenues. The following equation from Professor Lys's written testimony expresses the conditions under which an independent label will accept a direct license:

$$R_{Statutory\ License} - B_{Indie} \leq R_{Direct\ License} \leq R_{Statutory\ License} + B_{SXM}.$$

Trial Ex. 25 at ¶ 263 (Lys Corr. WDT). Nonstatutory benefits such as overindexing correspond to "B" in this equation. Trial Ex. 25 at ¶ 281 (Lys Corr. WDT). The following equations from Professor Shapiro's models, as revised by Professor Lys, express the profits achieved by a label under a direct license:

[redacted]

4/27/17 Tr. 1428:16-23.

$$sNP(r - c) + B.$$

4/27/17 Tr. 1427:14-1428:14 (Lys). Again, nonstatutory benefits such as advances or pre-1972 royalties correspond to the variable "B" in these equations. As discussed in greater detail above, the existence of nonstatutory benefits prevents Professor Shapiro from discounting the relevance of Sirius XM's increasing profitability to the overall size of the bargaining zone between Sirius XM and prospective licensors.

SEPFF1025. Before considering each nonstatutory benefit in isolation, it is helpful to consider how Sirius XM packaged these various advantages together when "pitching" its direct license program. Consider one illustrative pitch, an email from Sirius XM to directly-licensed label [[redacted]]. Trial Ex. 42 at ¶ 24 (Lys WRT); Trial Ex. 312. In this pitch, Sirius XM represented that, under the proposed agreement, [[redacted]] Trial Ex. 42 at ¶ 24 (Lys WRT); Trial Ex. 312. Sirius XM further represented that [[redacted]"] Trial Ex. 42 at ¶ 24 (Lys WRT); Trial Ex. 312. And Sirius XM went on to represent that, [[redacted]] Trial Ex. 42 at ¶ 24 (Lys WRT); Trial Ex. 312.

SEPFF1026. These three reasons for entering a direct license—avoidance of administrative deductions, recovery of the artist share, and reduced administrative burden through consolidation of licenses—have nothing whatsoever to do with "steering." Trial Ex. 42

at ¶ 25 (Lys WRT). Furthermore, unlike the "cheap talk" of increased access to programmers, [ ]. Trial Ex. 25 at ¶ 282 (Lys Corr. WDT). For instance, the direct license entered into with [ ] expressly provided that [ ] Trial Ex. 642, at SXM_DIR_00000347. And it further consolidated all relevant licenses with Sirius XM, noting that its terms applied to the [ ] Trial Ex. 642, at SXM_DIR_00000346.

SEPFF1027. As demonstrated below, these various benefits far exceed the value of any hypothetical, non-guaranteed access to programmers, and indeed can effectively double the headline royalty rate provided to directly licensed labels. Trial Ex. 42 at ¶ 25 (Lys WRT).

1. The Gap Between The Direct License Rate And The Statutory Rate Is Closed By Two Benefits That Are Uniformly Offered To Direct Licensors.

SEPFF1028. As of the first half of 2016, [ ]. Trial Ex. 25 at ¶ 254 (Lys Corr. WDT). This remains true regardless of whether the delta is computed based on a simple average of headline royalty rates or on a weighted average based on the number of performances that Sirius XM recorded at each rate. Trial Ex. 25 at ¶¶ 273, 275 (Lys Corr. WDT). For instance, the average initial rate in direct licenses in 2016 (as of September 2016, the month through which Sirius XM has provided direct license agreements) was [ ], in comparison to the current statutory rate of 10.50%. Trial Ex. 25 at ¶ 273 (Lys Corr. WDT). Weighing on the basis of accrued royalties, the weighted average royalty rate was [ ]

SEPFF1029. Stated differently, the headline direct license royalty rate has been between [ ] less than the statutory rate. Trial Ex. 25 at ¶¶ 273, 275 (Lys Corr. WDT).

SEPFF1030. This gap between the headline direct license rate and the statutory rate is closed by two benefits that Sirius XM uniformly pitched to its direct licensors and which direct licensors uniformly received.

SEPFF1031. First, direct licensors avoid having to pay SoundExchange's administrative fee. Under the current statutory mechanism, labels receive payments from SoundExchange only after deducting those fees. [ ] Trial Ex. 25 at ¶ 322 (Lys Corr. WDT); Trial Ex. 42 at ¶ 57 (Lys WRT) (citing Trial Ex. 8 at 42 (Shapiro WDT)); 5/17/17 Tr. 4270:10-17 [ ] (White). [ ] Trial Ex. 42 at ¶ 57 (Lys WRT); 4/27/17 Tr. 1507:13-19 (Lys). By contrast, when a label signs a direct license with Sirius XM, there is no off-the-top deduction for administrative fees. Trial Ex. 42 at ¶ 57 (Lys WRT).

SEPFF1032. [ ] 5/17/17 Tr. 4266:3-7 (White).

SEPFF1033. Second, direct licensors avoid having to contribute to a fund for non-featured artists. [ ] 5/17/17 Tr. 4268:15-25, 4269:6-13 (White); *see* 17 U.S.C. § 114(g)(2). [ ] 5/17/17 Tr. 4269:14-18 (White).

SEPFF1034. [ ] 5/17/17 Tr. 4270:1-6 (White).

SEPFF1035. Assuming that the only benefits to the direct licensed label were retention of the non-featured artist share (5%) and avoidance of the SoundExchange administrative fee (5%), those two benefits alone would come very close to offsetting an agreement to accept a rate 1% lower than the statutory rate. Trial Ex. 42 at ¶ 71 (Lys WRT). This point was made explicitly by Sirius XM in certain pitches to direct licensors. As Sirius XM put it:

[ ]

Trial Ex. 42 at ¶ 70 (Lys WRT) (quoting Trial Ex. 164 at SXM_DIR_00033693 (emphasis added)).

SEPFF1036. The point was also conceded by George White at trial. [ ] 5/17/17 Tr. 4270:18-25 (White).

SEPFF1037. Professor Shapiro admitted that it is appropriate to adjust the headline direct license rate to account for benefits that are both quantifiable and "pretty uniform or general across the license[s]." 4/20/17 Tr. 447:19-25 (Shapiro). Indeed, Professor Shapiro acknowledged that, when analyzing the Merlin/Pandora agreement in *Web IV*, he himself utilized the contract's effective rather than headline royalty rate. 4/20/17 Tr. 510:8-511:5 (Shapiro). In

that case, Professor Shapiro worked through a series of contractual provisions in the Merlin/Pandora deal to see how the various economic terms raised the agreement's effective rate. 4/20/17 Tr. 510:8-511:5 (Shapiro).

SEPFF1038. With regard to the direct licenses, Professor Shapiro admitted that the cost savings from the SoundExchange administrative fee had a direct, upward impact on the effective rate in those contracts. "[A] non-statutory benefit of the direct license is that Sirius XM does not take an administrative fee, but SoundExchange does take an administrative fee of 4.6 percent. And when that adjustment is made … the corresponding statutory rate would not be 9.42 percent; it's 9.87 percent." 4/20/17 Tr. 310:7-16 (Shapiro); *see also* 4/20/17 Tr. 466:20-467:9 (Shapiro). Put differently, after considering the cost savings from the administrative fee, the effective direct license rate is [[redacted]] lower than the statutory rate. 5/17/17 Tr. 467:20-468:9 (Shapiro). Professor Shapiro correctly recognizes that, for labels entering into a direct license, earning back the SoundExchange administrative fee offsets almost half of the average direct license discount below the statutory rate. Trial Ex. 42 at ¶ 61 (Lys WRT).

SEPFF1039. Professor Shapiro also admitted that "it would be useful … if you could quantify more of the benefits that were associated with non-statutory benefits." 4/20/17 Tr. 447:13-18. "I took out the part I could quantify, which were the SoundExchange administrative fees. If you could quantify more of these other benefits in the same way, it would be reasonable, and that was pretty uniform or general across the license, it would … make sense to adjust for that, too, and that would pull things up." 4/20/17 Tr. 447:19-25 (Shapiro). "I did an adjustment that pulled up from 9.42 percent to 9.87. If you took out more of these items, you could get that 9.87 drifting up a bit further. It would be relevant." 4/20/17 Tr. 448:1-4 (Shapiro).

SEPFF1040. Finally, Professor Shapiro acknowledged that, if benefits other than steering "explain the lion's share of the discount for most of the labels who entered into them, then you put much less weight on these direct licenses." 4/20/17 Tr. 446:21-447:2 (Shapiro).

SEPFF1041. Because "the lion's share of the discount" for most direct licensors is comprised of costs savings from the SoundExchange administrative fee and the non-featured artists' fund, "much less weight" should be put on the direct licenses. 4/20/17 Tr. 446:21-447:2 (Shapiro). Because the existence of a host of other non-statutory benefits closes any remaining gap—and in fact pulls the effective direct license rate *above* the statutory license—the direct licenses should be discarded altogether as a useful benchmark.

i. SoundExchange's Administrative Fee

SEPFF1042. Professor Lys has compared average direct license contract royalty rates over time, as reported by Professor Shapiro. Trial Ex. 42 at ¶ 62 (Lys WRT). The below chart shows the effective direct license royalty rates trued up for the impact of not having to be subject to SoundExchange's administrative expenses of 4.6%. Trial Ex. 42 at ¶ 62 (Lys WRT).

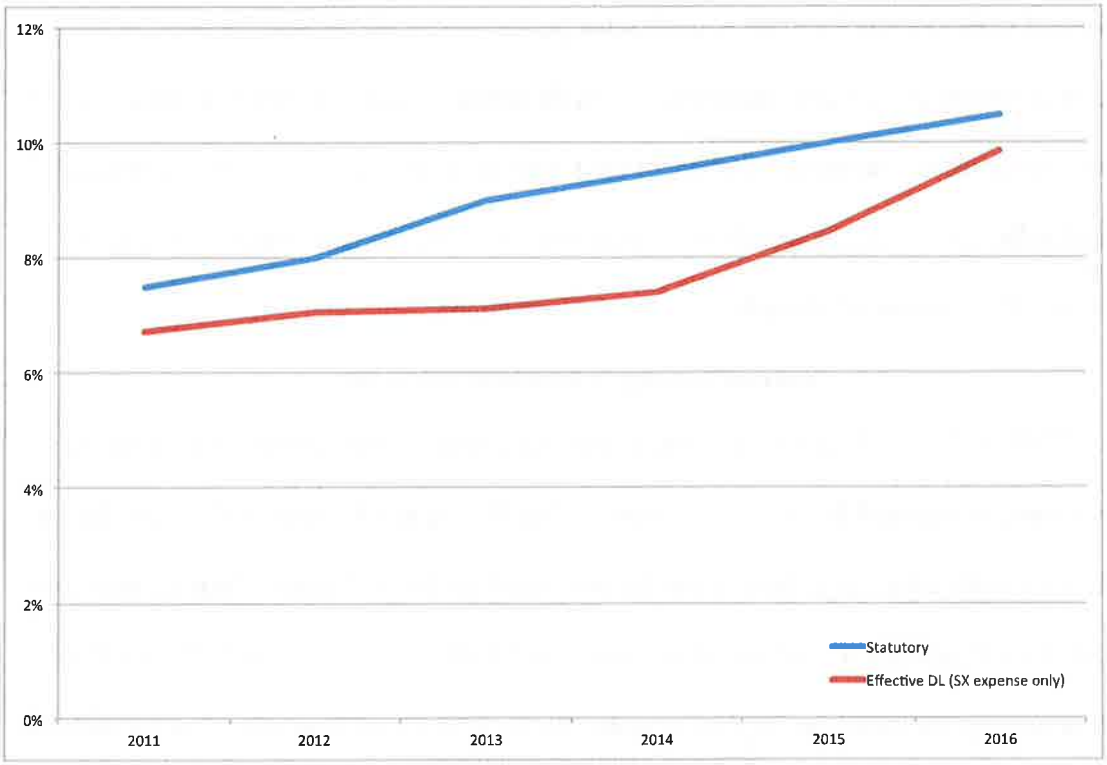
Effective average contract royalty rates under Sirius XM direct licenses, adjusted only for SoundExchange expenses

		2011	2012	2013	2014	2015	2016
A	Average contract royalty rate	6.42%	6.75%	6.79%	7.07%	8.07%	9.42%
B=A/(1-4.6%)	Effective average contract royalty rate grossed up for SoundExchange average overhead deduction of 4.6%	6.73%	7.08%	7.12%	7.41%	8.46%	9.87%

Trial Ex. 42, Figure 7 at 20 (Lys WRT); 4/27/17 Tr. 1512:11-18 (Lys). In this table, the royalty rates in row B represent the effective direct license rates, adjusted just for the SoundExchange administrative expenses. Trial Ex. 42 at ¶ 63 (Lys WRT). Professor Shapiro does not dispute these calculations. 4/20/17 Tr. 448:1-4 (Shapiro).

SEPFF1043. The below figure shows that the gap between effective direct license rates and the statutory rates has been tightening over time and was only 63 basis points (6% in relative terms) in 2016. Trial Ex. 42 at ¶ 63 (Lys WRT).

Gap between effective direct license and statutory SDARS royalty rates



Source: Lys analysis.

Trial Ex. 42, Figure 8 at 21 (Lys WRT).

SEPFF1044. The lack of a SoundExchange administrative fee is a pure cost savings to labels. [ ] 5/17/17 Tr. 4267:9-14 (White).

SEPFF1045. As Professor Lys observed, Sirius XM made this clear to prospective licensors. For instance, Sirius XM explained to Top 30 licensor [ ] that [ ]

[redacted] Trial Ex. 42, Figure 67 at A-4 (citing Trial Ex. 241); 4/27/17 Tr. 1510:24-1511:11 (Lys). Sirius XM explained to anther licensor that [redacted] Trial Ex. 237, at SXM_DIR_00038524.

SEPFF1046. Sirius XM has pitched avoidance of the SoundExchange administrative fee to many other labels, as a reason to accept a direct license with a nominal below-statutory royalty rate. Trial Ex. 42 at ¶ 58 (Lys WRT). Consider, for instance, Sirius XM's acknowledgment in one email to a label:

[redacted]

Trial Ex. 42 at ¶ 58 (Lys WRT) (citing Trial Ex. 164 at SXM_DIR_00033692).

SEPFF1047. Consider also Sirius XM's solicitations to Top 30 licensor [redacted]. Trial Ex. 42 at ¶ 59 (Lys WRT). Sirius XM initially solicited this label on January 30, 2014. Trial Ex. 42 at ¶ 59 (Lys WRT). When doing so, it noted that [redacted] Trial Ex. 42 at ¶ 59 (Lys WRT) (citing Trial Ex. 165 at SXM_DIR_00037545). Sirius XM further noted that its [redacted] royalty rate [redacted] due in part [redacted] Trial Ex. 42 at ¶ 59 (Lys WRT) (citing Trial Ex. 165 at SXM_DIR_00037545). When [redacted] pushed back on this offer—observing that it [redacted]—Sirius XM again promoted the

advantage of avoiding the SoundExchange administrative fee. Trial Ex. 42 at ¶ 59 (Lys WRT) (citing Trial Ex. 165 at SXM_DIR_00037545). Sirius XM urged the label to [ ] Trial Ex. 42 at ¶ 59 (Lys WRT) (citing Trial Ex. 165 at SXM_DIR_00037536). Shortly after receiving this email, [ ] signed its direct license. Trial Ex. 42 at ¶ 59 (Lys WRT); Trial Ex. 166.

SEPFF1048. As Professor Lys observed, Sirius XM has at times even overstated the size of this administrative fee savings in the course of pitching labels. In an email to [ ], for example, Mr. White stated that, [ ] 4/27/17 Tr. 1509:25-1510:23 (Lys) (quoting Trial Ex. 239 at SXM_DIR_00059016). [ ] 4/27/17 Tr. 1505:4-10, 1509:25-1510:23 (Lys).

SEPFF1049. The below chart from Professor Lys's report identifies other instances of "pitches" by Sirius XM on administrative fee savings.

Administrative fee pitches by Sirius XM to Top 30 direct licensed independent labels [RESTRICTED]

Label	Administrative Fee "Pitch" by SiriusXM

Label	Administrative Fee "Pitch" by SiriusXM
	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Trial Ex. 42, Figure 67 at A-4 (Lys WRT) (citing Trial Exs. 239, 312, 183, 165, 235, 240, 190, 236, 241).

SEPFF1050. Regardless of whether Sirius XM explicitly pitched the benefit of avoiding the SoundExchange administrative fee, every directly licensed label obtained this benefit. Trial Ex. 42 at ¶ 60 (Lys WRT). [redacted] 4/27/17 Tr. 1512:24-1513:8 (Lys).

ii. Non-Featured Artist Share

SEPCL1. The Copyright Act requires SoundExchange to distribute a total of 5% of Section 114 royalties to funds for non-featured artists (backup musicians and vocalists). Trial Ex. 42 at ¶ 64 (Lys WRT). SoundExchange must make these distributions regardless of whether any non-featured artists appeared on the royalty-generating track.

SEPCL2. Specifically, The Copyright Act provides that SoundExchange must distribute Section 114 royalties according to the following schema: "(A) 50 percent of the receipts shall be paid to the copyright owner of the exclusive right … to publicly perform a sound recording by means of a digital audio transmission. (B) 2½ percent of the receipts shall be deposited in an escrow account managed by an independent administrator jointly appointed by copyright owners of sound recordings and the American Federation of Musicians … to be distributed to nonfeatured musicians … who have performed on sound recordings. (C) 2½ percent of the receipts shall be deposited in an escrow account managed by an independent administrator jointly appointed by copyright owners of sound recordings and the American Federation of Television and Radio Artists … to be distributed to nonfeatured vocalists … who have performed on sound recordings. (D) 45 percent of the receipts shall be paid, on a per sound recording basis, to the recording artist or artists featured on such sound recording…." 17 U.S.C. § 114(g)(2).

SEPFF1051. By contrast, for transmissions that are directly licensed, there is no requirement that nonfeatured artists be paid *unless* they in fact appear on a track and are contractually entitled to payment. 17 U.S.C. § 114(g)(1) provides that, for non-statutorily licensed transmissions, "a nonfeatured recording artist who performs on a sound recording that has been licensed for a transmission shall be entitled to receive payments from the copyright owner of the sound recording in accordance with the terms of the nonfeatured recording artist's applicable contract or other applicable agreement." 17 U.S.C. § 114(g)(1)(B).

SEPFF1052. Separate from the cost savings from the SoundExchange administrative fee, a direct license allows a label to retain the 5% non-featured artist share—a

fact Sirius XM was quick to emphasize in its communications with potential licensors. *See* Trial Ex. 42 at ¶ 70 (Lys WRT) (quoting Trial Ex. 164 (emphasis added)).

SEPFF1053. [ ] 5/17/17 Tr. 4268:15-25, 4269:6-18 (White). [ ] 5/17/17 Tr. 4270:1-6 (White).

2. Featured Artist Share

SEPFF1054. As noted, under the current statutory mechanism, labels receive payments from SoundExchange after SoundExchange's administrative fees are deducted and after a total of 5% is distributed to funds for "non-featured" artists. Trial Ex. 42 at ¶ 64 (Lys WRT). In addition, the "featured" artist receives 45% of the royalties before the label receives the remaining 50%. Trial Ex. 42 at ¶ 64 (Lys WRT); 17 U.S.C. § 114(g)(2)(A), (D).

SEPFF1055. By signing a direct license with Sirius XM, a label avoids the "50/50" split of royalties with artists. Trial Ex. 42 at ¶ 64 (Lys WRT). Instead, the label receives *all* royalties owed by Sirius XM, and it is left to the label to disburse payments to its artists under the individually negotiated terms of the label/artist contracts. Trial Ex. 42 at ¶ 64 (Lys WRT).

SEPFF1056. [ ]:

[ ]

[redacted]

Trial Ex. 25 at ¶ 305 (Lys Corr. WDT) (citing Trial Ex. 642 at SXM_DIR_00000030; SXM_DIR_00000037; SXM_DIR_00000045; SXM_DIR_00000054; and SXM_DIR_00000064).

SEPFF1057. In *SDARS II*, the Judges recognized that this kind of provision provides significant monetary value to direct licensors. As the Judges explained, "the Direct Licenses provide for payment of 100% of the royalties to the Direct Licensors . . . thereby avoiding the statutory apportionment of 50% to record companies and 50% to artists and performers." *SDARS II*, 78 FR at 23064 (internal citations omitted). This "receipt of 100% of the royalties upfront is clearly attractive to certain record labels and was a selling point in negotiations with independent record labels." *SDARS II*, 78 FR at 23064 n.29.

SEPFF1058. [redacted] 4/20/17 Tr. 475:18-476:2 (Shapiro). [redacted] 4/20/17 Tr. 475:8-17 (Shapiro).

SEPFF1059. Obtaining the artist share through a direct license offers two specific advantages to a label. Trial Ex. 42 at ¶ 65 (Lys WRT).

SEPFF1060. *First*, avoiding the statutory 50/50 artist split will be beneficial to labels whose contracts allow them to recoup advances, recording costs, marketing expenses, and similar costs incurred to create and promote their artists' sound recordings, *before* distributing any royalties to the artists. Trial Ex. 42 at ¶ 65 (Lys WRT). [redacted]

[redacted] 4/27/17 Tr. 1515:10-22 (Lys). Receiving the artist share presents two kinds of economic advantages to labels whose artist contracts permit recoupment. Trial Ex. 42 at ¶ 65 (Lys WRT). If the artists *never* recoup, then the artist share represents revenue that the label would simply never realize under the statutory license. Trial Ex. 42 at ¶ 65 (Lys WRT). [redacted] 4/27/17 Tr. 1515:23-24 (Lys). If the artists do eventually recoup, then the label has been able to earn that recoupment faster than it could under the statutory license (beneficial because of the time-value of money). Trial Ex. 42 at ¶ 65 (Lys WRT).

SEPFF1061. The evidence from record labels confirms the benefit of recouping against the 100% of the royalty received from Sirius XM under a direct license. For example, Michael Kushner, Executive Vice President of Business and Legal Affairs at Atlantic Recording Corporation, testified that [redacted] 5/11/17 Tr. 3550:8-14 (Kushner). Mr. Kushner stated that, [redacted] 5/11/17 Tr. 3542:25-3543:25 (Kushner). Mr. Kushner stated that [redacted] 5/11/17 Tr. 3425:24-3543:6 (Kushner).

SEPFF1062. The Judges admitted into evidence the designated testimony of Michael Powers from the *SDARS II* proceeding. Powers is the President of Yellow Dog Records, which previously signed a direct license with Sirius XM. Trial Ex. 53 at 1-2 (Des. WRT of Powers, SDARS II). In *SDARS II*, the Judges credited Powers's testimony in concluding that receipt of the artist share was "clearly attractive to certain record labels and was

a selling point in negotiations." *SDARS II,* 78 FR at 23064 n.29. Powers explained the benefit of the direct license as it relates to recoupment: [redacted]"] Trial Ex. 53 at 5 (Des. WRT of Powers, SDARS II). As Powers testified, this aspect of the Sirius XM direct license was part of its "appeal" and "added value" to the direct license "above the base royalty rate." Trial Ex. 53 at 4-5 (Des. WRT of Powers, SDARS II).

SEPFF1063. Similarly, Darius Van Arman (co-founder of the group of independent record labels called Secretly Group) testified than when MRI contacted Secretly Group about signing a direct license with Sirius XM, "one of MRI's selling points to us was that the royalties paid to our labels under a direct license would include the artists' share of royalties, which would 'afford[] labels the opportunity of making more than they have made from SoundExchange under statutory licenses." Trial Ex. 37 at 7 (Van Arman WDT). As Van Arman explained, receipt of 100% of the royalties confers a benefit on labels because of the way recoupment works: "[R]oyalties are typically subject to recoupment. . . . if the artist's album had not yet recouped, 100% of the artist's share of the royalties would go to offsetting any unrecouped balance, instead of some portion flowing through to the artist." Trial Ex. 37 at 8 (Van Arman WDT). That is, the artist would receive its contractual share of the royalties (which may be less than 50%) [[redacted] and if [redacted]

[redacted] Trial Ex. 37 at 8 (Van Arman WDT).

SEPFF1064. Furthermore, the record reflects that recoupment against direct license royalties from Sirius XM also benefits director licensors that are distribution companies. For example, [redacted] The evidence shows that [redacted] Trial Ex. 167 at 11 (SoundExchange Response to Interrog. No. 3).

SEPFF1065. Professor Lys spoke to an executive at [redacted], a Top 30 licensor, who explained that [redacted] Trial Ex. 42 at ¶ 65 (Lys WRT). This executive told Professor Lys that [redacted]. Trial Ex. 42 at ¶ 65 (Lys WRT). The executive explained that, under the statutory license, SoundExchange [redacted] Trial Ex. 42 at ¶ 65 (Lys WRT). By contrast, through a direct license, [redacted] Trial Ex. 42 at ¶ 65 (Lys WRT). Professor Lys testified that, according to this executive, "recoupment of advances" was "the 800-pound gorilla" motivating [redacted] license. 4/27/17 Tr. 1621:1-8 (Lys).

SEPFF1066. Professor Lys also reviewed testimony from [ ], which, as discussed above, confirmed the point. Trial Ex. 42 at ¶ 65 (Lys WRT).

SEPFF1067. [ ] Trial Ex. 42 at ¶ 65 n.56 (Lys WRT). As one label representative explained to Professor Lys, even if such a provision existed, [ ] 4/27/17 Tr. 1529:21-1531:1 (Lys). [ ] Trial Ex. 42 at ¶ 65 n.56 (Lys WRT).

SEPFF1068. In fact, recoupment against direct licensing royalties, such as royalties from streaming services like Sirius XM, is typical in the industry. *See, e.g.*, Trial Ex. 37 at 8 (Van Arman WDT) ("Based on my experience in the industry, . . . royalties are typically subject to recoupment."); 5/11/17 Tr. 3550:3-14 (Kushner) [ ]; Trial Ex. 104 at ¶¶ 7, 9(d)(iii), 22 ([ ] form artist contract).

SEPFF1069. *Second*, a label's artist contracts may provide for a split of royalties lower than the statutory 50/50. Trial Ex. 42 at ¶ 66 (Lys WRT); Trial Ex. 37 at 8 (Van Arman WDT) (stating that "[b]ased on my experience in the industry," record companies "tend to share less than [ ] of royalties with artists"); Trial Ex. 53 at 5 (Des. WRT of Powers, SDARS II) ( )

[redacted]). Trial Ex. 34 at 16 (Kushner WDT) ("streaming royalty rates in new contracts are in the same range as physical and digital product royalty rates (typically [redacted]"). For instance, if the label's agreements with the artist provide for a [redacted] artist share, the indie can obtain [redacted]% of the royalty by signing a direct license, instead of 50% under the statutory license. Trial Ex. 25 at ¶ 268 (Lys Corr. WDT). *See also* Trial Ex. 37 at 8 (Van Arman WDT) ("So, for example, if a label's agreement with an artist requires the label to pay the artist 15% of royalties, then under a direct license with Sirius XM, the label would retain 85% of the royalties, as opposed to 50% of statutory royalties. And if the artists' album had not yet recouped, 100% of the artist's share of the royalties would go to offsetting any unrecouped balance, instead of some portion flowing through to the artist.")

SEPFF1070. According to Professor Shapiro, RIAA data indicates that artists tend to receive [redacted] of royalties under their contracts with labels. Trial Ex. 42 at ¶ 66 (Lys WRT) (citing Professor Shapiro's testimony from *Web IV*); 4/27/17 Tr. 1621:1-3 (Lys). [redacted] Trial Ex. 42 at ¶ 66 (Lys WRT) (citing Trial Ex. 167 at Exs. A-C for Interrog. 4). Such agreements generally provide that the artist is entitled to [redacted] of royalties earned by the sound recording. Trial Ex. 25 at ¶ 307 (Lys Corr. WDT) (citing Trial Ex. 34 at ¶¶ 38-39 (Kushner WDT)). Professor Lys also considered an artist contract for one Top 30 licensor that was recently disclosed in litigation related to the licensor's direct deal with Sirius XM. Trial Ex. 42 at ¶ 66 (Lys WRT). This contract gives the artist a 25% share of royalties earned through digital performances (including performances on Sirius XM). Trial Ex. 42 at

¶ 66 (Lys WRT). Other artist contracts with independent labels likewise indicate royalty splits below 50/50. For instance, one contract between a [ ] and an artist specifies a royalty rate of [ ] for performances on satellite radio. Trial Ex. 713 § 7(a), § 13(r). Another specifies a royalty rate of [ ] for performances on satellite radio. Trial Ex. 712 at §§ 2, 4(n).

SEPFF1071. The increase in percentage of royalties alone can easily justify the acceptance of a lower royalty rate in the direct license. Trial Ex. 25 at ¶ 308 (Lys Corr. WDT). As an example, consider an instance in which an indie's share of performances/plays (depending on the particular agreement) would result in Sirius XM paying $100 in royalties based on the statutory rate of 10.5% for 2016. Trial Ex. 25 at ¶ 308 (Lys Corr. WDT). Under the statutory license, the indie receives $50 (with the remaining $50 going to artists). Trial Ex. 25 at ¶ 308 (Lys Corr. WDT). Now assume that the indie signs a direct license at a rate of 9.5%. Trial Ex. 25 at ¶ 308 (Lys Corr. WDT). In that case, the royalties paid by Sirius XM would decrease to $90.50 ($100 x 9.5%/10.5%). Trial Ex. 25 at ¶ 308 (Lys Corr. WDT). However, that full amount would be paid directly to the indie. Trial Ex. 25 at ¶ 308 (Lys Corr. WDT). Assuming the indie pays its artist [ ], the indie would keep a total of $[ ]. Trial Ex. 25 at ¶ 308 (Lys Corr. WDT) (citing Trial Ex. 34 at ¶ 38 (Kushner WDT)). That is, it has earned almost [ ]% more royalties even though it agreed to a lower royalty rate. Trial Ex. 25 at ¶ 308 (Lys Corr. WDT).

SEPFF1072. In some cases the label may not be required to share *any* royalties with its artists—specifically, labels that create sound recordings using musicians on a "works for hire" basis. Trial Ex. 42 at ¶ 67 (Lys WRT); 4/27/17 Tr. 1520:4-8 (Lys). In such circumstances, the artist is paid a one-time flat fee in exchange for the sound recording and is entitled to no further royalty stream from the label. Trial Ex. 42 at ¶ 67 (Lys WRT). [

[redacted] Trial Ex. 42 at ¶ 67 (Lys WRT); *see* 4/27/17 Tr. 1520:10-1521:5 (Lys). [redacted] Trial Ex. 42 at ¶ 67 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 67 (Lys WRT); Trial Ex. 25 at ¶ 311 (Lys Corr. WDT). [redacted] Trial Ex. 42 at ¶ 67 (Lys WRT). The label reported to Professor Lys that it was able to increase its royalties by [redacted] by signing a direct license. Trial Ex. 25 at ¶ 311 (Lys Corr. WDT).

SEPFF1073. [redacted] Trial Ex. 42 at ¶ 68 (Lys WRT); 4/27/17 Tr. 1517:2-5 (Lys). Depending on the terms of a label's contracts with artists, these savings could be significant and could more than offset the delta between a contractual royalty rate and the statutory rate. Trial Ex. 42 at ¶ 68 (Lys WRT). To illustrate this point, Professor Lys has calculated the effective direct license royalty rate under different label/artist royalty splits, as reflected in Figure 9. Trial Ex. 42 at ¶ 68 (Lys WRT). These splits include [redacted] (as cited by Professor Shapiro) and [redacted] (the split achieved by [redacted]). Trial Ex. 42 at ¶ 68 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 68 (Lys WRT) (citing Trial Ex. 8 at Table 1 (Shapiro WDT)); *see* 4/27/17 Tr. 1518:12-1519:11

(Lys). [

] Trial Ex. 42 at ¶ 68 (Lys WRT); 4/27/17 Tr. 1519:12-1520:2 (Lys).

Effective average contract royalty rates under Sirius XM direct licenses, adjusted for SoundExchange expenses and at different hypothetical label/artist splits [RESTRICTED]

	Label share of split with artists	2011	2012	2013	2014	2015	Current

Trial Ex. 42 at Figure 9 (Lys WRT).

SEPFF1074. Even a cursory review of the figure above reveals that, in virtually all circumstances, labels with artist contracts that allow the label to keep more than 50% of the royalties are far better off accepting direct licenses compared to the statutory rate—even if the headline direct license rates were lower. Trial Ex. 42 at ¶ 69 (Lys WRT). The ability to collect more than the statutory 50/50 split with artists more than compensates for a lower nominal royalty rate. Trial Ex. 42 at ¶ 69 (Lys WRT). Professor Lys has calculated for the past several years the break-even split that equates the nominally reduced direct license to the statutory rate. Trial Ex. 42 at ¶ 69 (Lys WRT). [

] Trial Ex. 42 at ¶ 69 (Lys WRT); 4/27/17 Tr. 1531:13-22 (Lys). In 2015, the break-even split was a 41% artist share, in 2014 the break-even split was a 36% artist

share, and in 2013 the break-even split was a 37% artist share. In both 2011 and 2012, the break-even split was a 44% artist share. Trial Ex. 42 at ¶ 69 (Lys WRT).

SEPFF1075. Several labels in the Top 30 were pitched by Sirius XM on the advantages of receiving the artist share. An illustrative example comes from an email promoting a direct license to [[redacted]], a Top 30 label:

[[redacted]]

Trial Ex. 42 at ¶ 64 (Lys WRT) (citing Trial Ex. 165). Other, similar pitches are identified in the tables below:

Artists' share pitches by Sirius XM to Top 30 direct licensed independent labels [RESTRICTED]

Label/Source	Artists' Share "Pitch" by Sirius XM
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Label/Source	Artists' Share "Pitch" by Sirius XM
	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Trial Ex. 42 at Figure 65 (Lys WRT) (citing Trial Exs. 213, 312, 165, 234, 235, 236); Trial Ex. 25 at ¶ 310 (Lys Corr. WDT).

Artists' share pitches by Sirius XM to certain direct licensed independent labels outside of the Top 30 [RESTRICTED]

Label/Source	Artists' Share "Pitch" by Sirius XM
[redacted]	[redacted]

Label/Source	Artists' Share "Pitch" by Sirius XM
[redacted]	[redacted]
[redacted]	[redacted]

Trial Ex. 42 at Figure 66 (Lys WRT) (citing Trial Exs. 237, 238); Trial Ex. 25 at ¶ 310 (Lys Corr. WDT).

SEPFF1076. Several labels within the Top 30 expressed (in emails to Sirius XM or conversations with Professor Lys) that the artist share was a crucial deal point. Trial Ex. 42 at ¶ 72 (Lys WRT). For these labels, it is reasonable to conclude that the artist share, and not steering, was the reason for the direct license. Trial Ex. 42 at ¶ 72 (Lys WRT).

SEPFF1077. [redacted] told Professor Lys in interviews that receiving the artists' share was the "biggest selling point" and the "main reason" that they entered deals with Sirius XM. Trial Ex. 42 at ¶ 72 (Lys WRT); *see* 4/27/17 Tr. 1529:8-20 (Lys). [redacted] Trial Ex. 42 at ¶ 72 (Lys WRT) (citing Trial Ex. 165). [redacted]

[redacted] Trial Ex. 42 at ¶ 72 (Lys WRT) (citing Trial Ex. 165). This correspondence indicates to Professor Lys that the artist share was an important motivating factor for [redacted] when signing a direct license. 4/27/17 Tr. 1528:11-1529:7 (Lys).

SEPFF1078. The fact that direct licenses unshackle labels from the statutory 50/50 split of revenues with artists, and allow labels to disburse royalties pursuant to the terms of their artist contracts, substantially undermines any effort to qualify the licenses as a relevant benchmark for market rates under the current statutory environment. Trial Ex. 42 at ¶ 73 (Lys WRT).

3. Indexing

SEPFF1079. Independent labels that sign direct licenses with Sirius XM may be able to increase the royalties they receive if they "over-index" based on share of performances on Sirius XM's webcasting service. Trial Ex. 42 at ¶ 85 (Lys WRT). This is due to the structural difference between the way SoundExchange distributes royalty payments to labels and the way Sirius XM pays royalties under most direct license agreements. Trial Ex. 42 at ¶ 85 (Lys WRT); Trial Ex. 25 at ¶ 284 (Lys Corr. WDT).

SEPFF1080. SoundExchange is required to allocate royalties based on the monthly information it receives from Sirius XM. Trial Ex. 25 at ¶ 285 (Lys Corr. WDT); *see* 37 C.F.R. §§ 382.13(f), 370.4(d). Sirius XM does not report its audience measurement, as it is required to do under the Judges' regulations. Trial Ex. 29 at 7-8 (Bender WDT); 37 C.F.R. § 370.4(d)(2)(vii). SoundExchange must therefore allocate royalties received on the basis of a label's share of "plays" on Sirius XM's satellite radio service. Trial Ex. 25 at ¶ 285 (Lys Corr. WDT). As the regulations define, a "play" refers to each instance a "sound recording is publicly performed by a Service during the relevant period, without respect to the number of listeners

receiving the sound recording." Trial Ex. 25 at ¶ 285 (Lys Corr. WDT); 37 C.F.R. § 370.4(b). This is sometimes referred to as a "spin," because a play takes place each time that Sirius XM spins a sound recording on its satellite radio service. Trial Ex. 25 at ¶ 285 (Lys Corr. WDT).

SEPFF1081. Through its direct licenses, however, Sirius XM offers direct licensors the opportunity to earn royalties based upon a different metric: the label's share of performances on Sirius XM's webcasting service. Trial Ex. 25 at ¶ 286 (Lys Corr. WDT). As the regulations (and Sirius XM's direct licenses) define it, a performance "means each instance in which any portion of a sound recording is publicly performed to a Listener by means of a digital audio transmission or retransmission." Trial Ex. 25 at ¶ 286 (Lys Corr. WDT); 37 C.F.R. § 370.4(b). In other words, a performance refers to the number of users that listen to each sound recording played by Sirius XM on its webcasting service. Trial Ex. 25 at ¶ 286 (Lys Corr. WDT); Trial Ex. 42 at ¶ 86 (Lys WRT).

SEPFF1082. [ ] Trial Ex. 25 at ¶ 287 (Lys Corr. WDT). [ ]. Trial Ex. 25 at ¶ 287 (Lys Corr. WDT). Similarly, [ ] direct licenses that generated at least $0.01 in royalties during February 2016, [ ], were paid based on their share of spins (as would have been the case based on the statutory license) while the rest were paid on the basis of performances. Trial Ex. 25 at ¶ 287 (Lys Corr. WDT).

SEPFF1083. [ ] Trial Ex. 25 at ¶ 288

(Lys Corr. WDT). [ ]:

[ ]

Trial Ex. 642, at SXM_DIR_00000887 at § 2; Trial Ex. 25 at ¶ 288 (Lys Corr. WDT).

SEPFF1084. Sirius XM appears to have switched from the "play-based" to "performance-based" methodology in [ ] Trial Ex. 42 at ¶ 87 (Lys WRT) (citing Trial Ex. 175); *see* Trial Ex. 198 ([ ]). Professor Lys's analysis suggests that this shift was driven by a [ ] Trial Ex. 42 at ¶ 87 (Lys WRT). [ ] Trial Ex. 42 at ¶ 87 (Lys WRT). [ ] Trial Ex. 42 at ¶ 87 (Lys WRT). The change in methodology from "play" to "performance" appears to have been in

response to this fall-off, and a new inducement used by Sirius XM to pitch independent labels on direct licenses. Trial Ex. 42 at ¶ 87 (Lys WRT).

Timing of Sirius XM's new direct license agreements, by quarter [RESTRICTED]

Trial Ex. 42 at Figure 13 (Lys WRT).

SEPFF1085. Professor Lys found it notable that the timing of when Sirius XM entered into new direct licenses is so "lumpy." Trial Ex. 42 at ¶ 88 (Lys WRT). As Professor Lys observed, if the growth in direct licenses had been organic, from an economic standpoint the new agreements would be evenly distributed over time, and gradually rising with the growth in the company's size (as measured by either subscribers, revenue, or profitability). Trial Ex. 42 at ¶ 88 (Lys WRT).

SEPFF1086. With that said, Professor Lys was not surprised that Sirius XM's change in methodology resulted in more labels signing direct licenses. Trial Ex. 42 at ¶ 89 (Lys

WRT). The possibility of "over-indexing" under a Sirius XM direct license provides labels that "over-index" (receive a higher share of performances than plays) with the opportunity to earn more royalties, without any increase in the number of plays that the label receives on satellite radio. Trial Ex. 25 at ¶¶ 286, 289 (Lys Corr. WDT). This is particularly advantageous to labels whose songs are played on Sirius XM's most popular channels (meaning, those channels with the highest listenership). Trial Ex. 42 at ¶ 89 (Lys WRT). For example, Sirius XM's internal documents indicate that [ ]. Trial Ex. 176 at SXM_DIR_00025643; *see* Trial Ex. 178 [ ]. Indies that are played on more popular channels are more likely to "over-index." Trial Ex. 42 at ¶ 89 (Lys WRT); 5/17/17 Tr. 4293:7-20 (White). [ ] Trial Ex. 42 at ¶ 89 (Lys WRT); 5/17/17 Tr. 4290:21-4291:3 (White) (acknowledging that labels can make more money under a below-statutory direct license rate, "[i]f the extent of over-indexing is great enough").

SEPFF1087. To demonstrate the mechanics of over-indexing, Professor Lys presents in the below figure the actual royalties earned by [ ] under its direct license agreement for the month of May 2015, compared to what it would have earned had it opted to be paid under the statutory license. Trial Ex. 25 at ¶ 290 (Lys Corr. WDT).

Over-indexing example, [redacted] [RESTRICTED]

	Line item	Direct license	Statutory license
A	Royalty Rate	[redacted]	10%
B	Revenue Base	[redacted]	[redacted]
C=A*B	Total Royalty Pool	[redacted]	[redacted]
D	Label Spins	[redacted]	[redacted]
E	Total Spins	[redacted]	[redacted]
F	Label Performances	[redacted]	[redacted]
G	Total Performances	[redacted]	[redacted]
H=F/G (direct license) H=D/E (statutory license)	Allocation Basis	[redacted]	[redacted]
I=C*H	Accrued Royalties	[redacted]	[redacted]

Trial Ex. 25 at Figure 70 (Lys Corr. WDT).

SEPFF1088. As this example shows, because the label has a greater share of total performances ([redacted]%) than total spins ([redacted]%), it was able to receive $[redacted] ([redacted]) excess royalties under the direct license than it would have received under the statutory license, for the same number of spins. Trial Ex. 25 at ¶ 291 (Lys Corr. WDT). In other words, simply by being paid on the basis of its share of performances, without any other change, [redacted] was able to increase the royalties received by [redacted]%. Trial Ex. 25 at ¶ 291 (Lys Corr. WDT). Importantly, it was able to earn these extra royalties notwithstanding the fact that it had agreed to a direct license rate ([redacted]%) that was lower than the statutory rate (10%). Trial Ex. 25 at ¶ 291 (Lys Corr. WDT). [redacted] 4/27/17 Tr. 1546:19-1547:21 (Lys).

SEPFF1089. By this arbitrage, Sirius XM offers direct licensors an opportunity to earn a greater share of royalties—without any additional spins. Trial Ex. 25 at ¶ 292 (Lys Corr. WDT). Continuing with the example of [redacted], during May 2015, the label would have earned $[redacted] per spin ([$redacted]) under the statutory license, but was able to

earn $[ ] per spin ([$]) as a result of over-indexing with the direct license. Trial Ex. 25 at ¶ 292 (Lys Corr. WDT). Indeed, from January 1, 2015 through May 2016, [ ] has earned approximately $[ ] more royalties simply by being paid on the basis of share-of-performances, instead of under the statutory rate. Trial Ex. 25 at ¶ 292 (Lys Corr. WDT).

SEPFF1090. [ ] Trial Ex. 25 at ¶ 300 (Lys Corr. WDT); 4/27/17 Tr. 1553:15-23 (Lys). [ ] 4/27/17 Tr. 1556:4-1558:4 (Lys) (discussing Trial Ex. 180.2); *see* Trial Ex. 42 at ¶ 97 (Lys WRT). The spreadsheet is an analysis created by Sirius XM of Top 30 licensor [ ] performance under the statutory license versus a direct license. The spreadsheet shows that, due to indexing, [ ], notwithstanding the direct license's lower royalty rate and without any increase in spins. But the spreadsheet *also* shows that Sirius XM stood [ ]. Trial Ex. 193; Trial Ex. 42 at ¶ 97 (Lys WRT). [ ] 4/27/17 Tr. 1556:7-8 (Lys).

SEPFF1091. Here is how the magic works. When a direct licensor increases its royalties, Sirius XM is permitted to increase the size of its deduction from its statutory royalty obligations. Trial Ex. 25 at ¶ 300 (Lys Corr. WDT); Trial Ex. 42 at ¶ 96 (Lys WRT). That deduction is calculated based on performances, not spins. Trial Ex. 25 at ¶ 300 (Lys Corr. WDT); Trial Ex. 42 at ¶ 96 (Lys WRT). This, in effect, decreases the pool of royalties available to statutory licensors. Trial Ex. 25 at ¶ 300 (Lys Corr. WDT). For example, in the case of

[ ], a direct license in the month of February 2016 would have increased Sirius XM's allowable deduction from [ ]. 4/27/17 Tr. 1556:4-1557:2 (Lys) (discussing Trial Ex. 180.2). But, notwithstanding [ ], Sirius XM would only have owed it [ ] under the direct license for that same month. 4/27/17 Tr. 1556:4-1557:2 (Lys) (discussing Trial Ex. 180.2). [ ] 4/27/17 Tr. 1557:1-2 (discussing Trial Ex. 180.2).

SEPFF1092. As Professor Lys made clear in response to a question from Judge Feder, this [ ] 4/27/17 Tr. 1557:24-1558:3 (Lys). In short, it is the statutory licensors—not Sirius XM—who bear the risk of direct licensors over- or under-indexing. Trial Ex. 25 at ¶¶ 300-01 (Lys Corr. WDT); Trial Ex. 42 at ¶ 96 (Lys WRT). [ ] 5/17/17 Tr. 4301:3-9 (White); Trial Ex. 42 at ¶ 96 (Lys WRT) (citing Trial Ex. 157 at 136:20-138:2).

SEPFF1093. In his written testimony, Professor Lys presented a simple numerical example illustrating how Sirius XM benefits from even direct licenses that overindex. Trial Ex. 25 at ¶ 302 (Lys Corr. WDT). The example assumes a hypothetical scenario in which Sirius XM's total revenue is $100,000, the statutory rate is 10% of revenue, and a direct license is offered at 9% of revenue. Trial Ex. 25 at ¶ 302 (Lys Corr. WDT). The chart shows that the royalties earned by the direct licensor (M) increase the more that it over-indexes. Trial Ex. 25 at ¶ 302 (Lys Corr. WDT). However, the chart shows that independent of whether the indie has

under-indexed or over-indexed, the total royalties paid by Sirius XM (O) is less than it would have been under the statutory rate (J). Trial Ex. 25 at ¶ 302 (Lys Corr. WDT).

Effect of indexing on Sirius XM

	Line item	Under-indexing by 20%	Under-indexing by 10%	No indexing	Over-indexing by 10%	Over-indexing by 20%
A	Total revenues	$100,000	$100,000	$100,000	$100,000	$100,000
B	Statutory rate	10%	10%	10%	10%	10%
C	Direct License royalty rate	9%	9%	9%	9%	9%
D	Indie's spins	10	10	10	10	10
E	Total spins	100	100	100	100	100
F=D/E	Indie's % of spins	10%	10%	10%	10%	10%
G	Indie's web performances	800	900	1000	1100	1200
H	Total web performances	10,000	10,000	10,000	10,000	10,000
I=G/H	Indie % of performances	8%	9%	10%	11%	12%
J=A*B	SXM's statutory royalties absent direct license	$10,000	$10,000	$10,000	$10,000	$10,000
K=J*I	SXM's deduction from statutory royalties based on direct license	$800	$900	$1000	$1100	$1200
L=J-K	SXM's Statutory royalties after direct license	$9,200	$9,100	$9,000	$8,900	$8,800
M=A*C*I	SXM's royalties paid to direct licensor	$720	$810	$900	$990	$1080
N=J*F	Royalties direct licensor would have earned under statutory license	$1000	$1000	$1000	$1000	$1000
O=L+M	SXM's Total Royalties paid with Direct License	$9,920.00	$9,910.00	$9,900.00	$9,890.00	$9,880.00
P = J-O	SXM Savings From Signing DL	$80.00	$90.00	$100.00	$110.00	$120.00

Trial Ex. 25 at Figure 72 (Lys Corr. WDT).

SEPFF1094. [redacted] Trial Ex. 42 at ¶ 90 (Lys WRT); 4/27/17 Tr. 1533:8-1534:19 (Lys); 5/17/17 Tr. 4295:23-4296:2 (White). Of the Top 30 direct licensed labels that Professor Lys examined, the documents provided by Sirius XM indicate that at least [redacted] labels were told that they would either benefit or likely benefit

from over-indexing. [ ]. Trial Ex. 42 at ¶ 90 (Lys WRT).

SEPFF1095. [ ]

Trial Ex. 42 at ¶ 90 (Lys WRT) (quoting Trial Ex. 179).

SEPFF1096. Similarly, at the request of Top 30 licensor [ ], Sirius XM conducted a detailed, numbers-driven analysis demonstrating that the label would achieve [ ] due to indexing. Trial Ex. 42 at ¶ 91 (Lys WRT) (citing Trial Ex. 180.1, at SXM_DIR_00099221); *see* Trial Ex. 193, Trial Ex. 157 at 186:20-22. The results of this analysis were shared with the label. Trial Ex. 157 at 187:3-8. Shortly after this analysis was completed, [ ] signed its direct license. Trial Ex. 42 at ¶ 91 (Lys WRT); Trial Ex. 181 (tab "Labels - 20131001," cell G1442) (indicating date that license was fully executed ("f/e")).

SEPFF1097. Likewise, Sirius XM presented a tailor-made, numbers-driven pitch on indexing to the Top 30 label [ ]. Trial Ex. 192.1; *see* 4/27/27 Tr. 1536:9-1537:18 (Lys); 5/17/17 Tr. 4297:13-4298:20 (White). In an email to executives at that

label, George White presented his [ ] Trial Ex. 192, at SXM_DIR_00060221. Mr. White stated that, [ ] Trial Ex. 192.1, at SXM_DIR_00060221. By contrast, [ ] Trial Ex. 192.1, at SXM_DIR_00060221 (emphasis in original). Mr. White noted that [ ] would have earned this additional money notwithstanding the fact that the direct license rate was 8.5%, compared to the 10% statutory rate during the same period. Trial Ex. 192, at SXM_DIR_00060221.

SEPFF1098. [ ] Trial Ex. 192.3 (native file); 5/17/17 Tr. 4297:13-4299:5 (White). [ ] 4/27/17 Tr. 1541:10-1546:9 (Lys). He explained that, as outlined in the spreadsheet, [ ] share of performances was higher "by a factor of six, approximately" than its share of spins on the satellite service. 4/27/17 Tr. 1543:2-6 (Lys). As a consequence, by shifting to an 8.5% direct license from the 10% statutory license, [ ] stood to gain substantially, even holding constant its numbers of spins and performances. 4/27/17 Tr. 1543:16-1544:1 (Lys).

SEPFF1099. George White acknowledged that he and his team have conducted 28 other data-driven analyses, similar to those provided to [ ], and that for six other labels these resulted in signed licenses. 5/17/17 Tr. 4236:13-21, 4237:15-23 (White).

SEPFF1100. [ ] Trial Ex. 42 at ¶ 92 (Lys WRT). [ ] Trial Ex. 42 at ¶ 92 (Lys WRT) (citing Trial Ex. 182, at SXM_DIR_00027997).

SEPFF1101. [ ] Trial Ex. 42 at ¶ 93 (Lys WRT). [ ]

Trial Ex. 42 at ¶ 93 (Lys WRT) (citing Trial Ex. 183 at SXM_DIR_00051890-91). [ ] Trial Ex. 42 at ¶ 93 (Lys WRT) (citing Trial Ex. 183 at SXM_DIR_00051891).

SEPFF1102. Even when Sirius XM and its agent were unwilling to provide detailed data to prospective licensors, they still assured the label that over-indexing would provide a substantial benefit. For instance, when pitching a direct license to [ ], MRI stated:

[ ]

Trial Ex. 25 at ¶ 297 (Lys Corr. WDT). When the label inquired for [ ], MRI declined, stating that [ ] Trial Ex. 25 at ¶ 299 (Lys Corr. WDT). Nonetheless, MRI [ ] Trial Ex. 25 at ¶ 299 (Lys Corr. WDT). MRI stated:

[redacted]

Trial Ex. 25 at ¶ 298 (Lys Corr. WDT).

SEPFF1103. The below two figures displays a selection of direct licensors who were pitched on over-indexing, both within and outside of the Top 30. Trial Ex. 42 at ¶ 94 (Lys WRT).

Over-indexing pitches by Sirius XM to top-thirty direct licensed indies [RESTRICTED]

Label/Source	Over-indexing "Pitch" by Sirius XM
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Label/Source	Over-indexing "Pitch" by Sirius XM
	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Trial Ex. 42 at Figure 14 (Lys WRT) (citing Trial Exs. 184.1, 185, 183, 186-190, 179, 191, 192.1).

Over-indexing pitches by Sirius XM to certain direct licensed independent labels outside of the Top 30 [RESTRICTED]

Label/Source	Over-indexing "Pitch" by Sirius XM
[redacted]	[redacted]
[redacted]	[redacted]

Label/Source	Over-indexing "Pitch" by Sirius XM
	[redacted]
[redacted]	

Trial Ex. 42 at Figure 65 (Lys WRT) (citing Trial Exs. 228-32). *See also* SoundExchange Ex. 233, at SXM_DIR_00090434 ([redacted]).

SEPFF1104. Some (though, as discussed below, by no means all) labels who were pitched on indexing were able to approach that pitch with a high degree of sophistication. That appears to have been the case for [redacted] Trial Ex. 42 at ¶ 98 (Lys WRT); 5/17/17 Tr. 4306:4-4308:6 (White). [redacted]

[redacted] Trial Ex. 42 at ¶ 98 (Lys WRT) (citing Trial Ex. 194.2, at SXM_DIR_00090571). [redacted] Trial Ex. 157, at 140:13-17; Trial Ex. 42 at ¶ 98 (Lys WRT); 5/17/17 Tr. 4305:16-4307:11 (White). [redacted] Trial Ex. 42 at ¶ 98 (Lys WRT). As George White explained, [redacted] Trial Ex. 157, at 140:23-141:1, 141:8-9; 5/17/17 Tr. 4307:18-4308:6 (White). [redacted] Trial Ex. 42 at ¶ 98 (Lys WRT).

SEPFF1105. Indies like [redacted] have succeeded in over-indexing. However, even those that do not may have executed a direct license based on the *perceived* benefit of over-indexing. Trial Ex. 25 at ¶ 295 (Lys Corr. WDT). Sirius XM uses the prospect of over-indexing—and thus earning more royalties than under the statutory license—as a central tenet of its direct license campaigns. Trial Ex. 25 at ¶ 295 (Lys Corr. WDT). In conversations Professor Lys had with executives from indies, those executives consistently described over-indexing as a focal point of Sirius XM's pitch to sign a direct license. Trial Ex. 25 at ¶ 295 (Lys Corr. WDT). According to those executives, Sirius XM approached them and represented that it would expect

the indie to over-index based on the indie's particular repertoire. Trial Ex. 25 at ¶ 295 (Lys Corr. WDT).

SEPFF1106. Unlike [ ], some of the Top 30 labels to which Sirius XM presented over-indexing as a potential selling point in reality under-indexed. In other words, they did *less* well under Sirius XM's methodology than under the statutory license.

SEPFF1107. [ ] Trial Ex. 9 at 45-46 (Shapiro Corr. WRT); 4/20/17 Tr. 291:7-14 (Shapiro). But Professor Shapiro's conclusion does not follow from his observation. In response to a question from Judge Strickler, Professor Shapiro admitted that his consideration of under-indexed labels did not take into consideration factors other than steering: [ ] 4/20/17 Tr. 292:9-20 (Shapiro). Professor Shapiro did not attempt to answer his own question.

SEPFF1108. Holding that issue aside, Professor Shapiro's conclusion that steering motivated labels who underindexed simply does not hold for labels who *believed* they would over-index (even though they ultimately did not). As Professor Lys put it, "The issue is that there was a pitch and they believed that they will benefit from over-indexing....The question is when you are entered the contract, what did you believe?" 5/1/17 Tr. 1664:21-1665:11 (Lys).

SEPFF1109. [ ] 5/17/17 Tr. 4315:4-15 (White). [

[redacted] 5/17/17 Tr. 4311:17-24 (White). Indeed, George White acknowledged at trial that, in every instance where Sirius XM has provided a label with concrete data demonstrating likely underindexing, the label has declined to enter into a license (or there has not yet been a resolution one way or the other). 5/17/17 Tr. 4237:24-4238:19 (White). George White did not identify *any* instance where a label reacted to information about likely underindexing by securing a guarantee to receive an offsetting increase in plays. *See* 5/17/17 Tr. 4237:24-4238:19 (White).

SEPFF1110. [redacted] 4/20/17 Tr. 473:10-21 (Shapiro). Despite this admission, Professor Shapiro did not in fact consider labels for whom underindexing was unexpected. For example, [redacted] 5/17/17 Tr. 4315:16-4316:2 (White); Trial Ex. 42 at ¶ 98 (Lys WRT). In one email, George White was informed by MRI that [redacted] Trial Ex. 201.1, at SXM_DIR_00092892; 5/17/17 Tr. 4315:16-4316:2 (White); Trial Ex. 42 at ¶ 98 (Lys WRT). This email goes on to indicate that [redacted] Trial Ex. 42 at ¶ 98 (Lys WRT)

(citing Trial Ex. 201.1, at SXM_DIR_00092892). In light of this evidence, there is no reason to think that these labels signed their direct licenses notwithstanding full information about underindexing. There is every reason to think they were simply uninformed when making the decision to enter the contract.

SEPFF1111. Professor Lys's discussion of Top 30 licensor [ ] is similarly telling. Trial Ex. 42 at ¶ 99 (Lys WRT). [ ] Trial Ex. 42 at ¶ 99 (Lys WRT) (citing Trial Ex. 196). [ ] Trial Ex. 42 at ¶ 99 (Lys WRT) (citing Trial Ex. 196). [ ] Trial Ex. 42 at ¶ 99 (Lys WRT) (citing Trial Ex. 197); Trial Ex. 198 (tab "2014-Q1 & Q2 Avg. Summary," row 15) [ ]. Professor Lys saw no indication that Sirius XM disclosed this prediction to [ ] Trial Ex. 42 at ¶ 99 (Lys WRT). [ ] Trial Ex. 42 at ¶ 99 (Lys WRT) (citing Trial Ex. 187, at SXM_DIR_00049936).

SEPFF1112. Professor Lys's analysis indicates that, in the first quarter of 2015, [redacted] Trial Ex. 42 at ¶ 100 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 100 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 100 (Lys WRT). Professor Lys did not observe any examples of Sirius XM communicating to [redacted] (or for that matter any other label) that indexing would have an adverse effect on its royalty payments under the direct license. Trial Ex. 42 at ¶ 101 (Lys WRT). That is true notwithstanding the fact that [redacted] Trial Ex. 42 at ¶ 101 (Lys WRT) (citing Trial Exs. 199.2, 175, 200 at SXM_DIR_00095958).

SEPFF1113. Indeed, [redacted] Trial Ex. 42 at ¶ 102 (Lys WRT). [redacted]

[redacted]

Trial Ex. 202; Trial Ex. 42 at ¶ 102 (Lys WRT).

SEPFF1114. Critically, Sirius XM's witnesses do not dispute that indexing was an important feature of the direct license, for labels that were pitched on overindexing or that in fact

overindexed. [ ] of a direct license. Trial Ex. 42 at ¶ 85 (Lys WRT) (citing Trial Ex. 157 at 112:11-19).

SEPFF1115. In his written testimony, Professor Shapiro acknowledged that [ ] in fact "benefit from 'overindexing' on performances." Trial Ex. 9 at 45-46 (Shapiro Corr. WRT). For these labels, it is "reasonable to believe that at least some of them viewed this as a significant benefit of signing a direct license." Trial Ex. 9 at 45-46 (Shapiro Corr. WRT). Indeed, according to Professor Shapiro, "[t]his conclusion is especially warranted since Sirius XM in some cases pointed out to a label that it would benefit from over-indexing as part of Sirius XM's efforts to encourage that label to sign a direct license, and because MRI, acting on behalf of Sirius XM, told a number of labels that they were likely to benefit from the direct licensing methodology." Trial Ex. 9 at 45-46 (Shapiro Corr. WRT).

SEPFF1116. [ ] 4/20/17 Tr. 471:20-472:1, 472:14-23 (Shapiro).

SEPFF1117. [ ] 4/20/17 Tr. 290:3-7 (Shapiro). [ ]

[redacted] 4/20/17 Tr. 290:16-291:6 (Shapiro); *see also* 4/20/17 Tr. 468:12-17, 474:24-475:2 (Shapiro).

SEPFF1118. [redacted] 4/20/17 Tr. 472:2-12 (Shapiro). (As noted above, Professor Shapiro's 6.4% starting point is erroneous, as it is based on plays rather than performances, and as it is computed based on a single, anomalous month of data. *See supra* Section VII(C)).

SEPFF1119. In sum, between September 2015 and June 2016, [redacted] of the Top 30 direct licensors benefitted from over-indexing, as detailed in the following chart. Trial Ex. 42 at ¶¶ 95, 103 (Lys WRT). These indies received more royalties under the direct license than they would have under the higher statutory rate. Trial Ex. 42 at ¶ 95 (Lys WRT). As the chart indicates, the effective royalty rate for these labels, had they been paid based on spins, ranges from [redacted] to [redacted]. Trial Ex. 42 at ¶ 95 (Lys WRT).

Top-thirty direct licensors that benefitted from over-indexing, September 2015 to June 2016 [RESTRICTED]

Direct Licensor	Royalties Accrued Under Direct License (under discounted rate, not including webcasting or pre-72)	Royalties That Would Have Been Accrued Under Statutory License	Excess Royalties Under Direct License	% Increase in Royalties from Over-indexing	Effective Royalty Rate
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Direct Licensor	Royalties Accrued Under Direct License (under discounted rate, not including webcasting or pre-72)	Royalties That Would Have Been Accrued Under Statutory License	Excess Royalties Under Direct License	% Increase in Royalties from Over-indexing	Effective Royalty Rate
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Trial Ex. 42 at Figure 15 (Lys WRT).

SEPFF1120. The following figure identifies a non-exclusive list of additional independent labels, outside of the Top 30, that have signed direct licenses and generated substantial excess royalties based on over-indexing. Trial Ex. 25 at ¶ 293 (Lys Corr. WDT).

Additional Examples of Labels That Earned Excess Royalties from Over-indexing (all numbers through May 2016) [RESTRICTED]

Direct Licensor	Date of Direct License	Royalties Accrued Under Direct License (under discounted rate)	Royalties That Would Have Been Accrued Under Statutory License	Excess Royalties Under Direct License	% Increase In Royalties from Overindexing
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Trial Ex. 25 at Figure 71 (Lys Corr. WDT). This chart shows that, notwithstanding the discounted rate offered in their direct licenses, these indies were able to earn up to [[redacted]] more royalties than they would have under the higher statutory rate, simply by being paid on the basis

of their share of performances, instead of their share of plays. Trial Ex. 25 at ¶ 294 (Lys Corr. WDT).

SEPFF1121. An additional [] labels in the Top 30 were pitched on over-indexing even though they did not realize this benefit during the period that Professor Lys analyzed. Trial Ex. 42 at ¶ 103 (Lys WRT). Professor Lys was unable to conduct an indexing analysis for an additional four labels ([]) because their licenses were signed very recently and/or because reliable data was unavailable. Trial Ex. 42 at ¶ 103 (Lys WRT).

SEPFF1122. With respect to the [] of the Top 30 direct licensed indies who either benefitted or were pitched the benefits of over-indexing, it is simply not reasonable to assume that steering was the motivation for their decision to accept a direct license, given the fact that indexing more than offset (or the indies were led to believe that indexing might more than offset) the discount from the statutory rate. Trial Ex. 42 at ¶ 104 (Lys WRT). Taken together, these [] labels comprise over [] of Sirius XM's average monthly royalty payments to direct licensors over the most recent 12 months of data available to Professor Lys (September 2015 to August 2016). This number would be even higher were the non-Top 30 labels noted above factored in.

SEPFF1123. For the balance of the Top 30 indies who did not benefit from or were not pitched on overindexing, it does not appear that Sirius XM informed them that they would be disadvantaged by Sirius XM's payment methodology—a fact the labels likely could not have known without disclosure by Sirius XM. Trial Ex. 42 at ¶ 104 (Lys WRT).

4. Royalties For Performances Of Pre-1972 Sound Recordings

SEPFF1124. [] independent labels have agreed to direct licenses in exchange for Sirius XM's agreement to pay royalties for sound recordings fixed prior to February 15,

1972. Trial Ex. 25 at ¶ 314 (Lys Corr. WDT). *See, e.g.*, Trial Ex. 642 at [ ].

SEPFF1125. Sirius XM maintains that it is not required to pay any royalties for pre-'72 sound recordings. Trial Ex. 25 at ¶ 314 (Lys Corr. WDT). It has defended itself "vigorously" in lawsuits alleging that a state law performance right exists for such sound recordings. Trial Ex. 356 at 18.

SEPFF1126. As Professor Lys explained at trial, this has created an economic incentive for labels with substantial pre-'72 catalogs to enter into direct licenses with Sirius XM. Those labels could have participated in the pending class actions against Sirius XM, with the hope of eventually securing a win that entitled them to royalty payments for their pre-'72 recordings. [ ] 4/27/17 Tr. 1563:1-10 (Lys). [ ] 4/27/17 Tr. 1563:1-10 (Lys).

SEPFF1127. In order to obtain certain payment for plays related to pre-'72 sound recordings, [ ] Trial Ex. 25 at ¶ 314 (Lys Corr. WDT). [

[redacted] for pre-'72 sound recordings. Trial Ex. 25 at ¶ 314 (Lys Corr. WDT).

SEPFF1128. The ability to start collecting royalties on Sirius XM's performance of pre-1972 sound recordings has been an important motivator (having nothing to do with steering) for some of the labels signing direct licenses. Trial Ex. 42 at ¶ 74 (Lys WRT). By negotiating direct licenses that are contingent on the payment of royalties for pre-1972 sound recordings, indies earn extra royalties that Sirius XM would otherwise not have paid. Trial Ex. 25 at ¶ 315 (Lys Corr. WDT). This can be a substantial benefit to indies that have a significant repertoire of pre-1972 sound recordings. Trial Ex. 25 at ¶ 315 (Lys Corr. WDT).

SEPFF1129. Concord Music Group is the largest independent record company that signed a direct license with Sirius XM. As discussed above, Concord's average monthly royalties from its direct license with Sirius XM [redacted], and Concord alone accounted for [redacted] of all royalties earned by direct licensors. The undisputed evidence shows that [redacted] Trial Ex. 47 at ¶ 8 (Barros WRT); 5/16/17 Tr. 4098:6:11 (Barros) [(redacted)].

SEPFF1130. The issue of compensation for pre-'72 recordings was important to Concord because ["redacted"] 5/16/17 Tr. 4098:12-14 (Barros). Concord's pre-'72 repertoire includes popular recordings such as the entire body of work from the band Creedence Clearwater Revival, the 1965 album "A Charlie Brown

Christmas," and recordings from John Coltrane, Miles Davis, Thelonius Monk and Sonny Rollins, among many others. Trial Ex. 47 at ¶ 5 (Barros WRT).

SEPFF1131. Concord's approximately [ ] comprise about [ ] of the database of recordings it makes available for licensing to music services. Significantly, however, about [ ] Trial Ex. 47 at ¶¶ 6, 11 (Barros WRT) ("Sirius XM provided us with information showing that, at that time, Concord's recordings accounted for about [ ] of Sirius XM's total music airplay (as measured by Sirius XM's webcasting results), and that approximately [ ]; 5/16/17 Tr. 4097:13-4098:5 (Barros); 5/16/17 Tr. 4102:12-19 (Barros) (Sirius XM [" "").

SEPFF1132. [ ] Sirius XM first contacted Concord about a possible direct license in 2012. During those negotiations, Concord learned "for the first time that Sirius XM was not paying SoundExchange royalties for Pre-72 recordings." Trial Ex. 47 at ¶ 9 (Barros WRT). Because a substantial portion of Concord's catalog consists of pre-'72 recordings, this was a significant issue for Concord. [ ] Trial Ex. 47 at ¶ 9 (Barros WRT). *See also* 5/16/17 Tr. 4114:3-19 (Barros) ([

[redacted]).

SEPFF1133. Sirius XM again approached Concord about a possible direct license in late 2013, after George White joined Sirius XM. Concord "explained to Sirius XM that we would only be interested in a direct license relationship with Sirius XM if they would agree to [redacted]." Trial Ex. 47 at ¶ 11 (Barros WRT). *See also* 5/16/17 Tr. 4098:15-16 (Barros) ([" [redacted]"]; 5/16/17 Tr. 4099:1-4 (Barros) ([" [redacted]"]). As Barros explained, [" [redacted]"].

SEPFF1134. [redacted] 5/17/17 Tr. 4273:14-20 (White). [redacted] 5/17/17 Tr. 4274:2-9 (White); *see also* 5/17/17 Tr. 4273:21-4274:1 (White). [redacted] Trial Ex. 157 at 67:18-21, 69:17-18 (White); Trial Ex. 42 at ¶ 75 (Lys WRT).

SEPFF1135. For its part, Sirius XM indicated that, "[redacted]."]. Trial Ex. 47 at ¶ 12 (Barros

WRT). *See also* 5/16/17 Tr. 4102:20-25 (Barros) (explaining that [ ]).

SEPFF1136. [ ] Trial Ex. 47 at ¶ 8 (Barros WRT); 5/16/17 Tr. 4099:9 (Barros). [ ] Trial Ex. 338 at 10 (SXM_DIR_00060609). As Barros testified, Concord [ ] 5/16/17 Tr. 4099:10-17 (Barros).

SEPFF1137. [."] Trial Ex. 47 at ¶ 15 (Barros WRT). *See* also Trial Ex. 247 (Post-'72 license) at 1 (SXM_DIR_000001046) [ ].

SEPFF1138. Concord viewed the pre-'72 license as [ ]. 5/16/17 Tr. 4108:6-8 (Barros). Trial Ex. 47 at ¶¶ 8, 10 (Barros WRT). In fact, the pre-'72 direct license expressly states that it [ ]:

[ ]

[redacted]]

Trial Ex. 169 (Pre-72 license) at SXM_DIR_00001059.

SEPFF1139. The pre-'72 direct license settled a long-standing dispute between Sirius XM and Concord. Barros testified that while Concord believed "that Sirius XM should be required by law to pay for its performances of Pre-72 recordings, we recognized as a practical matter that it could take years for litigation against Sirius XM to reach a final resolution, and that there was a risk that the courts could ultimately hold that Sirius XM was not required to pay for its use of Pre-72 recordings." Trial Ex. 47 at ¶ 10 (Barros WRT). Concord signed the pre-'72 direct license ["[redacted]."] Trial Ex. 47 at ¶ 10 (Barros WRT). *See also* 5/16/17 Tr. 4101:19-22 (Barros) ([" [redacted]"]).

SEPFF1140. [[redacted]] 5/16/17 Tr. 4114:20-4115:6 (Barros). [[redacted]] 5/16/17 Tr. 4115:7-9 (Barros). In fact, at the time Concord signed the direct license, Sirius XM's appeal of a ruling in the New York *Flo & Eddie* case was pending. 5/17/17 Tr. 4473:20-4474:17 (Frear). Even Sirius XM's David Frear

admitted that by settling the pre-'72 dispute, both parties (including Concord) avoided risk. 5/17/17 Tr. 4474:24-4475:1 (Frear).

SEPFF1141. In addition, while the *Flo & Eddie* settlement had a headline rate of [redacted], that rate "can be reduced if courts do not recognize a performance right in Pre-72 Recordings." Trial Ex. 12 at ¶ 29 (Frear WRT). In fact, as Mr. Frear acknowledged, the *Flo & Eddie* rate has already been reduced to at least [redacted] because the "New York Court of Appeals found no such performance right under New York state law." Trial Ex. 12 at ¶ 29 (Frear WRT). [redacted] 5/16/17 Tr. 4115:13-23 (Barros); 5/17/17 Tr. 4476:17-4477:7 (Frear).

SEPFF1142. [redacted]. 5/16/17 Tr.4106:20-24 (Barros) ([redacted]). The rate in Concord's pre-'72 settlement is [redacted.]

SEPFF1143. Concord was willing to settle the pre-'72 dispute and sign a pre-'72 direct license so long as it "could be reasonably assured" that Concord "would not receive significantly less" for its post-'72 recordings as compared to what it would otherwise receive from SoundExchange per the statutory license. Trial Ex. 47 at ¶ 12 (Barros WRT). Concord's rationale was that "even though [redacted] at the expense of our Post-'72 artists (who might receive lower royalties under the terms of a direct license). Trial Ex. 47 at ¶ 12 (Barros WRT); 5/16/17 Tr. 4103:6-12 (Barros) ([" [redacted]

[redacted]"]).

SEPFF1144. [redacted] Trial Ex. 47 at ¶ 13 (Barros WRT); 5/16/17 Tr. 4103:25-4104:4 (Barros) ("[redacted]"]). Based on information provided by Sirius XM, Concord estimated that for 2016, it would earn about [redacted] from SoundExchange, while Sirius XM estimated that Concord would earn about [redacted] from SoundExchange, for post-'72 recordings. Trial Ex. 47 at ¶ 14 (Barros WRT); 5/16/17 Tr. 4110:8-25 (Barros); Trial Ex. 338 at 5 (SXM_DIR_00060604).

SEPFF1145. Concord wanted assurances that its royalties under a post-'72 direct license would not be significantly less than what it could expect to receive via a statutory license. In order to ensure that Concord and its post-'72 artists would not be materially worse off as a result of signing a direct license, the post-'72 license included [redacted] and provided Concord with additional protection through [redacted]. Trial Ex. 47 at ¶ 14 (Barros WRT).

SEPFF1146. The rates in the pre-'72 license are as follows: [redacted]

[redacted] It does not include automatic renewals after that. Trial Ex. 47 at ¶ 16 (Barros WRT); Trial Ex. 169 at SXM_DIR_00001062.

SEPFF1147. The [redacted]. Trial Ex. 47 at ¶ 18 (Barros WRT); Trial Ex. 169 at SXM_DIR_00001067.

SEPFF1148. The post-'72 license includes the following royalty rates: [redacted]. [redacted]. Trial Ex. 47 at ¶ 19 (Barros WRT); Trial Ex. 247 at SXM_DIR_00001052.

SEPFF1149. Viewed together, the [redacted]. Under the [redacted] Sirius XM also agreed to [redacted] in January 2016 for its performance of [redacted] in 2015. Trial Ex. 47 at ¶ 21 (Barros WRT).

SEPFF1150. Thus, between the two direct licenses, Concord received [redacted] in 2016 alone, [redacted]. 5/16/17 Tr. 4113:1-2 (Barros) ("[redacted]").

SEPFF1151. That [redacted] in payments in 2016 of course is [redacted] that Sirius XM expected Concord would earn under the statutory license

and the [ ] that Concord expected it would earn under the statutory license for 2016. Trial Ex. 47 at ¶ 21 (Barros WRT).

SEPFF1152. In addition, as Barros testified at the hearing, after he submitted his written testimony, Concord received reporting on the amounts it actually earned in 2016 from Sirius XM. Concord earned approximately [ ] in revenue from Sirius XM under the post-'72 direct license for 2016. 5/16/17 Tr. 4113:3-25 (Barros). Thus, Concord [.] 5/16/17 Tr. 4115:24-4116:17 (Barros).

SEPFF1153. The testimony of Professor Lys confirms the preceding findings related to Concord's direct licenses, as follows.

SEPFF1154. Sirius XM engaged in long efforts to negotiate a direct license with [ ]. Trial Ex. 25 at ¶ 316 (Lys Corr. WDT). [ ] Trial Ex. 42 at ¶ 75 (Lys WRT). [ ] Trial Ex. 42 at ¶ 75 (Lys WRT).

SEPFF1155. In 2012, [ ] declined to sign a direct license after Sirius XM refused to include payment for pre-1972 sound recordings in the license. Trial Ex. 25 at ¶ 316 (Lys Corr. WDT). Throughout the negotiations, Sirius XM encouraged [ ] to sign the direct license based on suggestions that [ ] Trial Ex. 25 at ¶ 316 (Lys Corr. WDT).

[ ] rejected the offer for a direct license out of hand, based on Sirius XM's continued position that it would not pay for pre-1972 recordings. Trial Ex. 25 at ¶ 316 (Lys Corr. WDT).

SEPFF1156. Ultimately, in [ ], [ ] agreed to a direct license with a royalty rate of [ ] for post-'72 recordings and a rate of [ ] for pre-'72 works from [ ]. Trial Ex. 25 at ¶ 316 (Lys Corr. WDT).

SEPFF1157. Executives from [ ] told Professor Lys that [ ]. Trial Ex. 42 at ¶ 74 (Lys WRT); 4/27/17 Tr. 1562:17-21 (Lys). These executives explained that [ ] Trial Ex. 25 at ¶ 317 (Lys Corr. WDT). This is reflected in the preamble of [ ] direct license for post-'72 recordings. Trial Ex. 25 at ¶ 317 (Lys Corr. WDT). Furthermore, Professor Lys understands from [ ] Trial Ex. 25 at ¶ 317 (Lys Corr. WDT). George White acknowledged that this was the case. *See* 5/17/17 Tr. 4236:6-12 (White) (overindexing was a "material factor for those licenses where we conducted a specific analysis … like the one that I described with Concord").

SEPFF1158. Upon signing its direct license, [ ] earned over [ ] in royalties for pre-1972 sound recordings between January 2016 and May 2016, for which Sirius XM would have otherwise paid $0. Trial Ex. 25 at ¶ 318 (Lys Corr. WDT). This alone is equivalent to a [ ] increase in [ ] royalties earned from Sirius XM during this period. Trial Ex. 25 at ¶ 318 (Lys Corr. WDT).

SEPFF1159. In August 2016, the most recent month with available data, [ ]. Trial Ex. 42 at ¶ 76 (Lys WRT). Professor Lys's analysis shows that in August 2016, [ ]. Trial Ex. 42 at ¶ 76 (Lys WRT). The economically relevant number is the total amount of royalties earned. Trial Ex. 42 at ¶ 76 (Lys WRT). Given the uncertain outcome over any litigation over pre-'72 rights, and given the prolonged nature of the litigation underway, a direct license that included pre-'72 works was the only practical way for [ ] to monetize that catalog. Trial Ex. 42 at ¶ 76 (Lys WRT). The trade-off of a lower rate on post-'72 sound recordings to obtain previously unavailable payment for pre-'72 sound recordings made economic sense if it resulted in higher total royalties. Trial Ex. 42 at ¶ 76 (Lys WRT).

SEPFF1160. [ ]

Calculation of effective [ ] royalty rate in August 2016 [RESTRICTED]

	Line item	Amount

. Trial Ex. 42 at Figure 10 (Lys WRT). [ ].[102] Trial Ex. 42 at ¶ 77 (Lys WRT); 4/27/17 Tr. 1564:4-1565:3 (Lys).

SEPFF1161. [ ] Trial Ex. 42 at ¶ 78 (Lys WRT). [ ] Trial Ex. 42 at ¶ 78 (Lys WRT).

SEPFF1162. [ ] Trial Ex. 42 at ¶ 79 (Lys WRT); *see* Trial Ex. 169 at §§ 4, 8(c). [ ] Trial Ex. 42 at ¶ 79 (Lys WRT).

[ ] royalties accrual and payments, pre-'72 works license [RESTRICTED]

Period	Accrued royalties	Advance balance	Advance recoupment	Royalty payment

102 [ ] Trial Ex. 42 at ¶ 77 n.68 (Lys WRT).

Period	Accrued royalties	Advance balance	Advance recoupment	Royalty payment
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Trial Ex. 42 at Figure 11 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 80 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 80 (Lys WRT). [redacted] 4/27/17 Tr. 1562:1-1562:11 (Lys). [redacted]

Estimated [redacted] pre-'72 effective royalty rate [RESTRICTED]

	Line item	Value
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

103 [redacted] Trial Ex. 42 at ¶ 80 n.70 (Lys WRT).

Trial Ex. 42 at Figure 12 (Lys WRT). This is yet another example of why taking royalty rates from direct licenses at face value would distort the estimate of overall market rates. Trial Ex. 42 at ¶ 81 (Lys WRT).

SEPFF1163. [ ] is not the only direct licensor that was concerned about pre-'72 sound recordings. Trial Ex. 42 at ¶ 82 (Lys WRT). Mr. White acknowledged that Sirius XM has done [ ] licenses for pre-'72 sound recordings and that, in all but one of those, the licensor also executed a license for their post-'72 catalog. 5/17/17 Tr. 4274:10-4275:1; *see also* 5/17/17 Tr. 4274:10-20 (noting that Top 30 licensor [ ] was among the labels that executed a pre-'72 deal).

SEPFF1164. Like [ ] Trial Ex. 42 at ¶ 82 (Lys WRT). As Professor Lys observed, [ ] Trial Ex. 42 at ¶ 82 (Lys WRT) (citing Trial Ex. 170, at SXM_DIR_00087057). [ ] Trial Ex. 42 at ¶ 82 (Lys WRT) (citing Trial Ex. 171, at SXM_DIR_00071183); *see also* Trial Ex. 172 (pre-'72 rider).

SEPFF1165. Similarly [ ]

[redacted] Trial Ex. 42 at ¶ 83 (Lys WRT) (citing Trial Ex. 173, at SXM_DIR_00086704); Trial Ex. 174 (renewal contract).

SEPFF1166. [redacted] Trial Ex. 42 at ¶ 83 (Lys WRT).

SEPFF1167. According to Professor Lys, labels like [redacted] were faced with incentives to sign a royalty rate below the statutory rate because of their ability to monetize their pre-'72 catalog. [redacted] 4/27/17 Tr. 1563:11-1564:3 (Lys).

5. Advances

SEPFF1168. [redacted] Trial Ex. 42 at ¶ 105 (Lys WRT); Trial Ex. 25 at ¶ 321 (Lys Corr. WDT); 4/20/17 Tr. 477:12-20 (Shapiro) (acknowledging that Sirius XM paid out advances "on at least some occasions, yes"). Professor Lys has examined the potential benefits that are likely to accrue to labels from receiving an advance and the logical impact on the direct license royalty rate. Trial Ex. 42 at ¶ 105 (Lys WRT).

SEPFF1169. [redacted] 4/27/17 Tr. 1559:21-1560:8 (Lys). [redacted] 4/27/17 Tr. 1559:21-22 (Lys). That is, a dollar received today is more valuable than a dollar received tomorrow. Trial Ex. 42 at ¶ 106 (Lys WRT). [redacted] 4/27/17 Tr. 1559:22-24 (Lys). Advances are particularly valuable to small labels

that are more likely to be cash-constrained, as it facilitates their cash-flow management. Trial Ex. 42 at ¶ 106 (Lys WRT). In Professor Lys's discussions with Top 30 licensor [ ], which did not receive an advance as part of its direct license, a label executive told him [ ]. Trial Ex. 42 at ¶ 106 (Lys WRT). [ ] 4/27/17 Tr. 1559:25-1560:8 (Lys).

SEPFF1170. As in any negotiation among rational parties, directly licensed labels were induced to trade something in order to obtain the benefits of a cash advance. In particular, they were willing to accept a below-statutory direct license royalty rate in order to achieve this nonstatutory benefit. Trial Ex. 42 at ¶ 105 (Lys WRT).

SEPFF1171. Professor Lys's analysis shows there are currently [ ] active direct licenses with unique labels that provide for advances on expected future royalty payments, [ ] of which are in the Top 30. Trial Ex. 42 at ¶ 107 (Lys WRT). The labels are: [ ]. Trial Ex. 42 at ¶ 107 (Lys WRT); *see* Trial Ex. 642 at SXM_DIR_00001046, SXM_DIR_00001059, SXM_DIR_00001149, SXM_DIR_00001156, SXM_DIR_00003157, SXM_DIR_00003242, SXM_DIR_00002649, SXM_DIR_ 00000018. In addition, Professor Lys observed that the original direct license for [ ] Trial Ex. 42 at ¶ 107 (Lys WRT) (citing Trial Ex. 642 at SXM_DIR_00001338 and SXM_DIR_00001344).

SEPFF1172. The size of these advances range from [ ] Trial Ex. 42 at ¶ 107 (Lys WRT). [ ] while the median advance was [ ]. Trial Ex. 42 at ¶ 107 (Lys WRT). The key features of the advances for the Top 30 labels are summarized in the figure below. Trial Ex. 42 at ¶ 106 (Lys WRT).

Key provisions of Top 30 direct licenses with advances [RESTRICTED]

Rank	Label	Advance	Status	Recoupable	Notes

Trial Ex. 42 at Figure 16 (Lys WRT); 4/27/17 Tr. 1561:11-1562:11 (Lys).

SEPFF1173. Professor Lys's review of the negotiating documents provided by Sirius XM indicates that it either offered or considered offering advances to at least [ ] other Top 30 licensors, although no advances were mentioned in the final contract. Trial Ex. 42 at ¶ 108 (Lys WRT) (citing Trial Ex. 203 at SXM_DIR_00090261 (indicating that an advance had been discussed with [ ]; Trial Ex. 186 at SXM_DIR_00043475 (indicating that an advance had been discussed with [ ]); Trial Ex. 190 at SXM_DIR_00058418 (indicating that an advance had been pitched to [ ]).

SEPFF1174. [ ] 5/17/17 Tr. 4259:9-22 (White). According to Mr. White,

an advance was an important deal point to [ ] and a very important deal point to [ ]. Trial Ex. 42 at ¶ 108 (Lys WRT); Trial Ex. 157 at 142:12-144:20; 5/17/17 Tr. 4319:8-4320:1 (White). [ ] Trial Ex. 42 at ¶ 108 (Lys WRT). In an October 1, 2014 email to other Sirius XM employees, for example, George White stated that [ ] Trial Ex. 204 at SXM_DIR_00091553; *see* 4/27/17 Tr. 1560:9-1561:3 (Lys).

SEPFF1175. Notably, of the [ ] advances noted in the figure above, [ ] have already recouped and [ ] are expected to recoup within the term of the contract. Trial Ex. 42 at ¶ 109 (Lys WRT). This is consistent with Sirius XM's practice of [ ] Trial Ex. 42 at ¶ 109 (Lys WRT). [ ] 5/17/17 Tr. 4259:23-4260:1 (White) [ ] 5/17/17 Tr. 4259:9-22 (White). *See also* Trial Ex. 42 at ¶ 109 (Lys WRT) (citing Trial Ex. 205 at SXM_DIR_00092138 (calculating the size of a post-'72 advance for [ ] based on its 2015 projected earnings) and Trial Ex. 206 at SXM_DIR_00090681 (calculating the size of an advance for [ ] based on its historical and projected earnings)).

SEPFF1176. If the advance is calibrated to meet Sirius XM's projections, then Sirius XM has no reason to change its programming mix in order to realize value from its

upfront investment. Trial Ex. 42 at ¶ 109 (Lys WRT). Royalties sufficient to pay the advance back will accrue in the ordinary course. Trial Ex. 42 at ¶ 109 (Lys WRT).

SEPFF1177. [ ] Trial Ex. 42 at ¶ 110 (Lys WRT). [ ] Trial Ex. 42 at ¶ 110 (Lys WRT); Trial Ex. 174; Trial Ex. 642 at SXM_DIR_00003001. [ ] Trial Ex. 42 at ¶ 110 (Lys WRT).

SEPFF1178. From an economic perspective, an overpayment is similar to a cash advance in the sense that the label has received money up front from the service, which is paid down over time through royalty streams. Trial Ex. 42 at ¶ 111 (Lys WRT). Unlike in the cash advance situation, however, labels who have been overpaid by Sirius XM have an additional incentive to renew their deals with Sirius XM. Trial Ex. 42 at ¶ 111 (Lys WRT).

SEPFF1179. [ ] 4/27/17 Tr. 1565:8-24 (Lys). By renewing its license, an overpaid label can extend the timeline over which they must reimburse Sirius XM. Trial Ex. 42 at ¶ 111 (Lys WRT). [ ] Trial Ex. 42 at ¶ 111 (Lys WRT); *see* 4/27/17 Tr. 1566:7-24 (Lys) [ ]

[redacted] Trial Ex. 174 at SXM_DIR_0001912-13; Trial Ex. 42 at ¶ 111 (Lys WRT).

SEPFF1180. Outside of the Top 30, [redacted], a direct licensor noted by Mr. White for representing a Grammy winner, also [redacted]. Trial Ex. 207 at SXM_DIR_00002475; Trial Ex. 42 at ¶ 112 (Lys WRT).

SEPFF1181. In short, cash advances and overpayment recoupments are forces that put downward pressure on direct license royalty rates. They are yet another differentiator between direct license agreements and the statutory environment and explain some labels' motivation to enter direct agreements with Sirius XM. Trial Ex. 42 at ¶ 113 (Lys WRT).

6. Distribution Fees

SEPFF1182. When George White was asked at trial to "describe some of the more prominent direct licensing labels," he identified three independent labels that also serve as distributors or aggregators of other labels. Mr. White discussed NAXOS, "the world's largest classical music label," which "also act[s] as a distributor" for other independent labels, including labels run by major symphony orchestras. 5/17/17 Tr. 4248:16-21 (White). He mentioned eOne, a large independent label that also serves as "an independent distributor," distributing other independent labels' works. 5/17/17 Tr. 4248:6-9 (White). Finally, he discussed Empire Distribution, "an extremely successful distributor of independent hip-hop, Latin, and reggae." 5/17/17 Tr. 4248:24-4249:9 (White). [redacted].] Trial Ex. 4 at ¶ 31 (White WDT).

SEPFF1183. In his written testimony, Professor Lys explained in detail how distributors face a different incentive structure when approaching a direct license. These labels clearly and demonstrably faced incentives to enter direct licenses that had nothing to do with steering.

SEPFF1184. A distributor contracts with artists and labels for the right to distribute their recordings to music retailers and services, including services such as Sirius XM. Trial Ex. 42 at ¶ 115 (Lys WRT). Although the distributor passes through to its distributed labels the royalties it collects on their behalf, the distributor collects a fee for doing so. Trial Ex. 42 at ¶ 115 (Lys WRT).

SEPFF1185. When a distributor enters into a direct license with Sirius XM, it acts as a "middleman" between Sirius XM and the labels. Trial Ex. 42 at ¶ 115 (Lys WRT). That is, the distributor receives the royalties from Sirius XM, and then passes on those royalties to the label. Trial Ex. 42 at ¶ 115 (Lys WRT). Significantly, however, before passing on the royalties, distributors extract a contractually agreed-upon "distribution fee." For example, [ ] Trial Ex. 167 at 11 (SoundExchange Response to Interrogatory. No. 3). [ ] 5/15/17 Tr. 3899:22-24 (Walker); *see also* Trial Ex. 42 at ¶ 115 (Lys WRT); 4/27/17 Tr. 1567:5-17 (Lys) (explaining how, under the direct license, distributors can take "off the top their distribution fee and then pass on the rest to the label. And the label then pays the artists.").

SEPFF1186. [ ] 4/27/17 Tr. 1567:5-10 (Lys). Darius Van Arman, who is a co-owner of a distribution

company that distributes about fifty-seven independent labels, explained that the distribution fee is "typically between [ ] of the revenues generated from the usage or sale of the distributed recordings." Trial Ex. 37 at 1, 4 (Van Arman WDT). INGrooves' distribution fee is approximately [ ]. 4/27/17 Tr. 1569:22-1570:5 (Lys). The Orchard's distribution [ ]. 5/15/17 Tr. 3900:22-3901:5 (Walker). Similarly, in one of E1 Entertainment's distribution agreements (which was attached to a complaint filed in a federal lawsuit), E1 specified a 15% share as its distribution commission. Trial Ex. 42 at ¶ 117 (Lys WRT).

SEPFF1187. Of the Top 30 direct licensors, three are distributors rather than traditional record labels. These licensors are [ ]. Trial Ex. 42 at ¶ 114 (Lys WRT). Mr. White has testified that four other direct licensors are distributors—[ ]. Trial Ex. 42 at ¶ 114 (Lys WRT); 5/17/17 Tr. 4248:16-21 (White). All of these entities faced a unique, non-steering motivation for signing a direct license with Sirius XM. Trial Ex. 42 at ¶ 114 (Lys WRT).

SEPFF1188. Distributors thus have an extra incentive to sign direct licenses with Sirius XM—to obtain a distribution fee that would otherwise not be available to them. When a distributor does not have a direct license with Sirius XM, SoundExchange makes the royalty payments directly to the labels and artists, which means that the distribution company does not receive a distribution fee. Trial Ex. 42 at ¶ 115 (Lys WRT). [ ] 5/15/17 Tr. 3899:25-3900:4 (Walker). Indeed, when Professor Lys spoke with a representative from

[[redacted]], a Top 30 licensor/distributor, he was told that [[redacted]]. Trial Ex. 42 at ¶ 116 (Lys WRT).

SEPFF1189. For distributors that signed direct licenses, the potential to obtain an otherwise unavailable distribution fee has to be an important inducement to the direct licensing arrangement with Sirius XM. Trial Ex. 42 at ¶ 117 (Lys WRT).

7. Direct Provision Of Metadata

SEPFF1190. There is yet another nonstatutory benefit that direct licenses provide to indies, allowing those labels to earn more without any increase in their number of plays on Sirius XM. Trial Ex. 25 at ¶ 268 (Lys Corr. WDT). This benefit concerns Sirius XM's offer to provide more accurate reporting than it provides to SoundExchange. Trial Ex. 25 at ¶ 268 (Lys Corr. WDT).

SEPFF1191. Sirius XM offers its direct licensors the opportunity to provide content feeds and metadata directly to Sirius XM. Trial Ex. 25 at ¶ 319 (Lys Corr. WDT). This includes, for instance, the ability to provide Sirius XM with the International Standard Recording Code (ISRC) (a unique identifier of a particular recording) for the indie's entire repertoire of recordings. Trial Ex. 25 at ¶ 319 (Lys Corr. WDT). This increases Sirius XM's accuracy in reporting its plays of the label's content, resulting in increased royalties. Trial Ex. 25 at ¶ 319 (Lys Corr. WDT). By contrast, when Sirius XM pays royalties under the statutory license, it provides SoundExchange with more limited data (and no ISRC) for the purposes of allocating royalties to rights owners, which can lead to labels being underpaid. Trial Ex. 25 at ¶ 319 (Lys Corr. WDT).

SEPFF1192. The direct licenses negotiated by Sirius XM and direct licensors [[redacted]]

[redacted] *E.g.*, Trial Ex. 642, SXM_DIR_00001685 at § 3 ([redacted]); Trial Ex. 642, SXM_DIR_00000162 at § 3 ([redacted]); Trial Ex. 25 at ¶ 319 (Lys Corr. WDT).

SEPFF1193. Moreover, Sirius XM specifically markets that direct licenses "allow you to directly submit your metadata and content to ensure maximum accuracy of reporting," as a benefit to indies in promoting its direct licenses. Trial Ex. 25 at ¶ 320 (Lys Corr. WDT). [redacted] 5/17/17 Tr. 4281:21-25 (White).

SEPFF1194. Professor Lys spoke to indie label executives who stated that the issue of improving the quality of Sirius XM's reporting, and thus the amount of payments to the indie, was a substantial factor in deciding to sign a direct license. Trial Ex. 25 at ¶ 320 (Lys Corr. WDT).

SEPFF1195. Similarly, [redacted] "primary motivation for executing the direct license was to get Sirius XM to accept a metadata feed from [redacted] and use the data to report its usage." Trial Ex. 50 at ¶ 14 (Walker WRT); 5/15/17 Tr. 3826:20-3827:20 (Walker). This was an important issue to [redacted] because it believed that "Sirius XM had historically done a poor job of reporting its usage to SoundExchange accurately," and the direct metadata feed could "improve the accuracy of Sirius XM's reporting" and "therefore increase the amount of revenue [redacted] derived from Sirius XM." Trial Ex. 50 at ¶ 14 (Walker WRT). [redacted]

[redacted] 5/15/17 Tr. 3827:5-8 (Walker). In fact, even after [redacted] decided not to renew its direct license, it negotiated an arrangement to continue providing metadata directly to Sirius XM in order to facilitate more accurate reporting and payment. Trial Ex. 50 at ¶ 15 (Walker WRT).

8. Idiosyncratic Reasons

SEPFF1196. In some cases, the reasons an independent label entered into a direct license with Sirius XM are idiosyncratic—they are specific to a particular label rather than a more widely-shared phenomenon. Trial Ex. 42 at ¶ 118 (Lys WRT).

SEPFF1197. [redacted] Trial Ex. 42 at ¶ 119 (Lys WRT). [redacted] Trial Ex. 208 at § 4.04; Trial Ex. 42 at ¶ 119 (Lys WRT). [redacted] Trial Ex. 208 at § 4.04; Trial Ex. 42 at ¶ 119 (Lys WRT).

SEPFF1198. Furthermore, unlike other licensors, [redacted] Trial Ex. 42 at ¶ 120 (Lys WRT) (citing Trial Ex. 209 at SXM_DIR_00092230). [redacted] Trial Ex. 42 at ¶ 120 (Lys WRT). [redacted]

[redacted] Trial Ex. 208 at § 2.04; Trial Ex. 42 at ¶ 120 (Lys WRT).

SEPFF1199. Finally, unlike other licensors, [redacted] Trial Ex. 208 at § 4.03 ([redacted]); Trial Ex. 42 at ¶ 121 (Lys WRT). [redacted] Trial Ex. 42 at ¶ 121 (Lys WRT).

SEPFF1200. In the context of this unique arrangement, "steering" is not an economically meaningful concept. Trial Ex. 42 at ¶ 122 (Lys WRT). Sirius XM has already paid for the right to play [redacted] recordings, to as great an extent as it pleases, on a dedicated station. Trial Ex. 42 at ¶ 122 (Lys WRT). And [redacted] has secured the exclusivity and extra publicity that comes with having its own channel. Trial Ex. 42 at ¶ 122 (Lys WRT). The economics of this arrangement do not translate into Professor Shapiro's steering paradigm. Trial Ex. 42 at ¶ 122 (Lys WRT). It is not possible for Sirius XM to play [redacted] recordings more (or less) in response to their royalty rate, because no royalty rate has been negotiated and agreed to up front. Trial Ex. 42 at ¶ 122 (Lys WRT).

SEPFF1201. [redacted] 4/27/17 Tr. 1572:20-1573:5 (Lys). [redacted] 4/27/17 Tr. 1572:20-1573:5 (Lys).

SEPFF1202. [ ] Trial Ex. 42 at ¶ 122 n.142 (Lys WRT); 5/17/17 Tr. 4303:16-19 (White). Professor Lys considered a series of emails which made this clear. For instance, he cited [ ] Trial Ex. 42 at ¶ 122 n.142 (Lys WRT) (citing Trial Ex. 210, at SXM_DIR_00090286). He also cited [ )] Trial Ex. 42 at ¶ 122 n.142 (Lys WRT) (citing Trial Ex. 211, at SXM_DIR_00091561). Professor Lys cited a [ ] Trial Ex. 42 at ¶ 122 n.142 (Lys WRT) (cited Trial Ex. 212, at SXM_DIR_00091615). And Professor Lys cited an email from [ ] Trial Ex. 42 at ¶ 122 n.142 (Lys WRT). In this email, as reported by Professor Lys, [ ] Trial Ex. 42 at ¶ 122 n.142 (Lys WRT) (citing Trial Ex. 212, at SXM_DIR_000091612).

SEPFF1203. As described above, [ ]. Trial Ex. 42 at ¶ 122 n.142 (Lys WRT) (citing Trial Ex. 213, at SXM_DIR_000085055).]

SEPFF1204. There is another, very different sort of idiosyncratic reason why some labels may have agreed to a direct license—unawareness of their options. Trial Ex. 42 at ¶ 123 (Lys WRT). [ ] Trial Ex. 42 at ¶ 123 (Lys WRT). [ ] Trial Ex. 42 at ¶ 123 (Lys WRT). [ ] Trial Ex. 42 at ¶ 123 (Lys WRT); *see* Trial Ex. 642 at SXM_DIR_00000989 [ ] and SXM_DIR_00003707 [ ]. [ ] Trial Ex. 42 at ¶ 123 (Lys WRT); *see* 4/27/17 Tr. 1570:13-17 (Lys) [ ] 4/27/17 Tr. 1571:21-1572:4 (Lys) [ ]

SEPFF1205. Professor Lys also observed that ignorance about such issues may be more common among smaller labels, who may be less sophisticated actors and may be "new to

the game" of music royalties. Trial Ex. 42 at ¶ 124 (Lys WRT). He noted that this is especially likely to be the case among the [ ] Trial Ex. 42 at ¶ 124 (Lys WRT) (citing Trial Ex. 157 at 132:16-133:1).

SEPFF1206. Professor Lys noted that, based on his experience in the field of negotiation, it would not be surprising if at least some of these labels shared the misimpressions of the executives from [ ]. Trial Ex. 42 at ¶ 124 (Lys WRT). [ ] 4/27/17 Tr. 1570:18-22 (Lys). [ ] 4/27/17 Tr. 1571:12-14 (Lys).

SEPFF1207. The [ ] Top 30 labels that entered into direct licenses for idiosyncratic reasons plainly were not motivated by the hope of steering benefits. Trial Ex. 42 at ¶ 125 (Lys WRT).

J. The Direct Licenses Prove That The True Market Rate Is Set Above The Statutory Rate.

SEPFF1208. The preceding discussion proves, with concrete and contemporaneous evidence, that the vast majority of direct licenses were entered into for reasons having nothing at all to do with steering—such as the ability to obtain pre-'72 royalties, the ability to obtain an advance, and the ability to retain the featured artists' share. Indeed, the entire difference between the direct license rate and the statutory rate can be accounted for by just two non-steering benefits that were uniformly offered to all direct licensors—the ability to avoid

SoundExchange's administrative fee and the ability to avoid an otherwise-required contribution to a fund for non-featured artists.

SEPFF1209. Sirius XM has offered no empirical evidence that it actually steered to any label. And every Sirius XM witness who was asked expressly disclaimed that Sirius XM guarantees any licensor additional plays.

SEPFF1210. According to Professor Shapiro, if direct licenses were not motivated by steering, they are not informative for purposes of this case. 4/20/17 Tr. 445:1-6 (Shapiro). Given the absence of steering, and the endemic presence of non-steering factors, the direct licenses cannot and do not function as a reliable benchmark.

SEPFF1211. However, the direct licenses may not be *entirely* uninformative. The fact that there is scant evidence that direct licensors were willing to discount below the statutory rate due to price competition is telling. According to Professor Shapiro, competition would not cause record companies to discount below the statutory rate if it is set below the rate that would be negotiated between willing buyers and willing sellers in a workably competitive market. 4/20/17 Tr. 482:25-483:6 (Shapiro). As Professor Shapiro testified in *Web IV*, "[s]uppose the current statutory rate applicable to Pandora is *below* the competitive rate, *i.e.*, the rate that would be negotiated between willing buyers and willing sellers in a workably competitive marketplace, in the absence of any statutory license. In that case, competition would not cause the record companies to discount *below* that rate." Trial Ex. 669 at 36 (Shapiro *Web IV* WDT) (emphasis in original). The flip side of Professor Shapiro's logic, therefore, is that the lack of steering-induced direct licenses suggests that the statutory rate is below the rate that would exist in an unregulated, workably competitive market.[104]

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[104] In *Web IV* the Judges found that the relatively modest amount of steering activity in the marketplace could be explained by the fact that the ability to steer only recently had become technically possible for

SEPFF1212. This is not to say that no label would ever offer a price discount in a market subject to a statutory license, even if the statutory rate is below a competitive rate. As Professor Farrell agreed, the fact that labels are required by the statute to allow the use by Sirius XM of their sound recording catalog means that they will not consider their walk-away opportunity cost in connection with pricing decisions, because their right to walk away was eliminated by the statutory license. 4/24/17 Tr. 663:19-664:12 (Farrell). Nevertheless, as a directional matter, the paucity of evidence suggesting steering-related behavior by labels strongly implies that the current statutory rate is too low, not too high.

Pandora. 81 FR 26367 n. 140. No such excuse is possible here, where Sirius XM has had the technical ability to steer since the inception of its service. 4/20/17 Tr. 450:18-451:7 (Shapiro).

VIII. Professor Shapiro's Proposal To Use The Web IV Per-Performance Rate As A Benchmark Is Fundamentally Flawed

SEPFF1213. Professor Shapiro proposed using the per-performance rate set for noninteractive subscription services in the *Web IV* proceeding as a benchmark in this proceeding. Trial Ex. 8 at 49-59 (Shapiro WDT). In *Web IV*, the Judges set a rate for noninteractive subscription services based on i) a licensing agreement between Pandora and Merlin that has been superseded by an agreement with fundamentally different terms; and ii) market data pertaining to fully-interactive subscription services that are underinclusive relative to the data analyzed by Mr. Orszag.

SEPFF1214. After taking the *Web IV* per-performance rate as a baseline, Professor Shapiro manufactured a proposed percentage-of-revenue rate for this proceeding as follows:

a. He used listener survey results and data from Sirius XM's webcasting service to estimate the average number of performances per Sirius XM subscription as 469 performances per month.

b. He multiplied 469 by the *Web IV* per-performance rate ($0.0022) to arrive at a monthly royalty payment of $1.032 per Sirius XM subscription.

c. He then relied on "a Sirius XM financial document" that forecasted $12.80 in average monthly revenue per user (ARPU) for 2016 and divided $1.032 by $12.80 to generate a proposed 8.1% percentage-of-revenue rate for Sirius XM.

Trial Ex. 8 at 51-55 (Shapiro WDT).

SEPFF1215. Every step in this analysis – and, more importantly, the entire premise of starting with the *Web IV* per-performance rate – is flawed.

SEPFF1216. As a general economic principle – which is undisputed by Sirius XM's experts – when using a benchmark approach, it is "imperative that all pertinent differences between the benchmark product and the 'target' product (Pandora and SXM, respectively, in this case) be considered and taken into account." Trial Ex. 46 at ¶ 28 (Willig WRT).

SEPFF1217. Contrary to Professor Shapiro's view that relevant marketplace conditions have been reasonably static since the *Web IV* proceeding, the evidence reveals material developments that substantially undermine the probative value of the per-play rate set in *Web IV*. Trial Ex. 43 at ¶ 45 (Orszag WRT). As Mr. Orszag explained, "it is a mistake to rely on the *Web IV* rate, as distinguished from the *Web IV* methodology. The rate was derived from marketplace data and information that, with the passage of time, has grown increasingly disconnected from current marketplace realities. The *Web IV* methodology, on the other hand, remains sound and will continue to generate reasonable and reliable results so long as current market data are used." Trial Ex. 43 at ¶ 42 (Orszag WRT); *see also* 4/25/17 Tr. 953:12-16 (Orszag) ("We have more current marketplace agreements to use. And I believe that's more appropriate in terms of measuring what the appropriate price is or the appropriate royalty is in this case.").

A. The Merlin/Pandora Agreement On Which Professor Shapiro Relied Has Been Superseded By An Agreement That Does Not Contain A Per-Play Payment Methodology

SEPFF1218. The Merlin/Pandora agreement, whose per-performance rates were used in setting the *Web IV* rates, no longer exists. It was amended in February 2016, Trial Ex. 304,[105] and replaced by a new mid-tier agreement in September 2016, Trial Ex. 243.[106] Pursuant to the new agreement, [[redacted]]. Trial Ex. 243 at 10. Both of these

[105] The February 2016 amendment provided for (among other things) a one-time advance of $3,631,572 (plus $1,095,238 of pre-1972 royalties) paid by Pandora to Merlin, *see* Trial Ex. 304 at 1-3, which was not included in Professor Shapiro's analysis because it had not been agreed upon at the time of *Web IV*.

[106] The agreement concerns not only a mid-tier service but also Pandora's on-demand and ad-supported service. *See generally* Trial Ex. 243.

rates are far removed from the $1.03 per subscriber and 8.1 percent of revenue that Professor Shapiro calculated for Sirius XM. Trial Ex. 43 at ¶ 47 (Orszag WRT).

SEPFF1219. Equally important, the new agreement for the mid-tier service *does not even include a per-play rate*. 4/25/17 Tr. 1062:18-21 (Orszag). The previous agreement – on which the *Web IV* rates were based – contained a greater-of per-play prong and a percent-of-revenue prong. Trial Ex. 669 at 26. The 2014 per-play headline rates were $.0013 for each ad-supported performance and $.0023 for each subscription performance. Trial Ex. 669 at 26. The 2015 headline per-play rates were $.0014 for each ad-supported performance and $.0025 for each subscription performance. Trial Ex. 669 at 26.[107] It was these rates that Professor Shapiro relied on in deriving Pandora's effective rate, and that were used to set the *Web IV* per-performance rate of $0.0022. *Web IV*, 81 FR at 26405.

SEPFF1220. In the new agreement, however, there is [redacted]. In accordance with this marketplace approach, Mr. Orszag's benchmarking effort starts with the *actual* percentage-of-

[107] These rates were subject to a downward adjustment for music from Merlin labels that Pandora played. Trial Ex. 669 at 26.

revenue royalty rate paid by the fully-interactive subscription services. In other words, Mr. Orszag's testimony, unlike Professor Shapiro's, adopts the same structure as the marketplace, Trial Ex. 43 at ¶ 46 (Orszag WRT), and relies on *actual* (rather than headline) royalties paid by the benchmark services.

SEPFF1221. During the proceeding, Professor Shapiro responded to these criticisms by asserting that "the Pandora/Merlin agreement . . . remains a perfectly good estimate, measure, benchmark for a competitive rate for a subscription webcaster . . . there is no new marketplace data to indicate that the rate for that service charged by record companies has changed. So what has changed is Pandora has changed their service, and they've changed what their subscription service – the features of it." 4/20/17 Tr. 339:14-25 (Shapiro). Professor Shapiro argued that the new agreement (and other recent agreements with Pandora) all concerned non-statutory services and thus "new data points in the interactive services market," not "new data points in the – the noninteractive market." 4/20/17 Tr. 341:16-342:11 (Shapiro). He further contended that he did not see this change to Pandora's mid-tier service "as a change in market rates"; rather, he saw it "as a change in business strategy by Pandora." 4/20/17 Tr. 344:10-15 (Shapiro).[108]

SEPFF1222. But it is simply untrue that there has been no change in market rates. Professor Shapiro himself acknowledged during the proceeding that "the contractual rates upon which [the Judges] relied in *Web IV*" have "been superseded." 4/20/17 Tr. 344:3-8 (Shapiro).

SEPFF1223. And while it is true that the new Pandora-Merlin agreement accounts for some new functionality in the Pandora service, that fact does not undermine the conclusion that the old, superseded agreement cannot be used for purposes of a benchmark where current

[108] We use the term "mid-tier" deals to refer to the portion of each agreement that relates to the subscription service that is offered to consumers for $4.99 and does not provide on-demand functionality.

agreements exist. In addition to the fact that the old rates simply no longer apply, Professor Shapiro overstated the impact and relevance of the change in functionality. There has been no change in the price to customers for Pandora's mid-tier service from the time of the prior agreement to the later agreement – it was $4.99 when the service was Pandora One, and it remains $4.99 as Pandora Plus – "suggesting that consumers' evaluation of that increased functionality, in terms of increased skips, the ability to rewind and some limited caching is not so valuable that it moves it closer to the fully interactive service and that they can move up the price accordingly." 4/25/17 Tr. 1063:3-1064:5 (Orszag). The fact that the price of the service did not increase – even by a dollar – suggests that the increase in functionality is modest.[109]

B. The Evidence In This Proceeding Demonstrates That Marketplace Actors Negotiate Over Revenues For Subscription Services, Not Per-Play Consumption

SEPFF1224. Professor Shapiro's approach assumes that in the unregulated marketplace, royalties for subscription services are determined by the average number of performances per-subscriber. Such an assumption is simply not correct. In fact, as discussed below, per-performance rates almost never determine royalty payments. The agreements between the benchmark fully-interactive services and the three major labels calculate royalties [ ]. In fact, fewer than half of the benchmark agreements Mr. Orszag considered contain per-play rates. 4/25/17 Tr. 981:2-7 (Orszag). Specifically, [ ]. Trial Ex. 43 at ¶ 51 n.63 (Orszag WRT).

[109] These and other reasons why the modest additional functionality has minimal relevance are discussed in more detail in Section VI(B).

SEPFF1225. Moreover, no new fully-interative subscription services agreement entered into after January 2014 contains a per-play provision. 4/25/17 Tr. 980:13-18 (Orszag). And mid-tier agreements rarely contain per-play rates. *See* 4/25/17 Tr. 1033:5-10 (Orszag). The new agreements between [ ],[110] Trial Ex. 43 at ¶ 51 (Orszag WRT), with only one exception.

SEPFF1226. Equally important, in the minority of cases where subscription services agreements [ ].[111] Trial Ex. 43 at ¶ 52 (Orszag WRT).

C. The Economists' Testimony And Economic Theory Further Support The Conclusion That Relying On Per-Play Data Is The Wrong Approach

SEPFF1227. The fact that [

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[110] The exception is [ ]. 5/16/17 Tr. 3963:15-3970:4 (Harrison).

[111] The average is weighted by actual royalty payments made by the services. Trial Ex. 43 at ¶ 52 n.64 (Orszag WRT).

[redacted]. In the case of ad-supported services, it is logical to think that the revenue generated would be directly related to the number of performances, because more performances results in more ad impressions. But that connection between the number of performances and revenues is not as tight for subscription services. Trial Ex. 43 at ¶ 53 (Orszag WRT).

SEPFF1228. Sirius XM's service illustrates this point: That service is used primarily in the car. The fact that most listening occurs in-vehicle plausibly *limits the average number of performances per-subscriber*, for the straightforward reason that time spent in-vehicle is, itself, limited. However, in-vehicle listening (performances) can be particularly valuable because a driver's entertainment options are limited to audio content, and music is the audio content Sirius XM subscribers prefer. Subscription noninteractive streaming services, on the other hand, are used at home, in the office, and *via* various mobile applications, which plausibly would facilitate a subscriber's ability to use the service. Sirius XM surveys indicate [[redacted]]. *See* Trial Ex. 43 at ¶ 53 (Orszag WRT) (citing Trial Ex. 246 at SXM_DIR_00024183). Thus, each individual performance may be relatively *less valuable to the subscriber*, compared to Sirius XM plays. Trial Ex. 43 at ¶ 53 (Orszag WRT).

SEPFF1229. Thus, in response to a question from Judge Strickler, Mr. Orszag agreed that part of the problem with "relying on per-play rates alone" is that "there is a separate access value to any particular service" while the number of plays can go up and down. 4/25/17 Tr. 1069:4-1070:13 (Orszag). Professor Willig made this same point, explaining that it is the availability of music that makes a service valuable to subscribers, regardless of the number of

their plays on that service. This value of a service to subscribers is evidenced not only by the number of subscribers to a service but also by the amount consumers are willing to pay for that service. Trial Ex. 46 at ¶ 39 (Willig WRT).[112]

SEPFF1230. Consumers likely view music from Sirius XM in the car as highly valuable even if the number of plays is limited by the amount of time spent in the car – and a licensor should appropriately share in that value even if the number of plays on Sirius XM is lower than the number of plays on other services. Trial Ex. 46 at ¶ 39 (Willig WRT). In other words, Professor Shapiro's use of the per-play approach can be interpreted as assuming that the value to consumers from a "play" on Pandora is the same as the value from a play on Sirius XM. But in light of the "stark differences in consumption patterns between the two services, such an assumption is unwarranted." Trial Ex. 46 at ¶ 39 (Willig WRT). That fundamental flaw by itself renders Professor Shapiro's approach invalid. Trial Ex. 46 at ¶ 40 (Willig WRT).

SEPFF1231. The value of the service derived from the availability of the music most directly affects how much above full marginal cost the licensor will bargain for and should obtain under public interest pricing principles. That is, per-play rates "are inappropriate even for benchmark calibration because different plays have different values on different platforms for different audiences, and so basing valuation on per-play rates just doesn't make sense from the point of view of consumer welfare." 5/02/17 Tr. 2009:18-23 (Willig). By contrast, "the optimal distribution of sound recordings to the public by subscription services is achieved when the record companies receive a pro rata share of royalties that are calculated on a per-subscriber or percentage-of-revenue basis." 5/02/17 Tr. 1957:16-20 (Willig).

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[112] If the services disagree with this point and believe that all plays are created equal, then Music Choice should also pay *Web IV* rates for plays on its service.

SEPFF1232. The Judges made a similar point in *Web IV*:

> IBS argues that royalty payments for noncommercial webcasters must be proportional to their use of sound recordings. While IBS's argument has a superficial appeal, it suffers from several shortcomings. IBS does not and cannot cite any statutory authority for its argument. . . . Willing buyers and willing sellers may, and often do, agree to rates that are not strictly proportional to usage.

Web IV, 81 FR at 26395-96. The *Web IV* judges also concluded: "In the subscription market where the positive [willingness to pay] and functional convergence engenders strong competition for paying listeners, a willing seller in the subscription market seeks to maximize subscriber revenue and focuses on average revenue per user (ARPU), not revenue per *play*." *Web IV*, 81 FR at 26351.

SEPFF1233. Professor Shapiro's embrace of per-performance rates is especially puzzling given his testimony at the *Web IV* hearing that a percentage-of-revenue rate is preferable (relative to per-performance or per-subscriber) when dealing with an established service, and that a per-performance rate would be "transitional" at most. Trial Ex. 669 at 20-22 (Shapiro *Web IV* WDT). Specifically, he testified:

> while per-play rates . . . would be likely to govern Pandora's payments during at least the early part of the statutory license term, as Pandora develops into a more mature company that is able to more fully monetize its product, it is quite possible that the . . . percent-of-revenue prong ultimately will be the binding prong, allowing the record labels to share in Pandora's success at not less than that revenue percentage as it continues to improve its monetization.Put differently, the per-play rates are effectively transitional rates on the way to Pandora and the webcasting industry becoming more mature, at which point Pandora will pay under the percent-of-revenue prong. Until Pandora reaches this point and is able to sufficiently monetize its service such that the 25 percent-of-revenue prong becomes binding, the record companies are protected with the proposed per-play rates.

Trial Ex. 669 at 21-22. Professor Shapiro viewed per-play rates as appropriate for the webcasting market because it was transitional – *i.e.*, he thought such rates were only appropriate until Pandora's business matured. But if any business is mature, it is Sirius XM. As of

December 2016, Sirius XM had 31.3 million subscribers, *see* Trial Ex. 357 at 2, and $5 billion in revenue in 2016, *see* Trial Ex. 319 at 3; 5/15/17 Tr. 3763:25-3762:11 (Meyer). *See also supra* Section X.B.2.ii. Accordingly, under Professor Shapiro's own logic, per-play rates are no longer appropriate for Sirius XM.

SEPFF1234. Professor Shapiro's testimony in this proceeding demonstrates just how distorting reliance on per-play rates – rather than effective percentage-of-revenue or per-subscriber rates – can be. [ ]. 4/20/17 Tr. 493:24-494:1 (Shapiro). [ ]. 4/20/17 Tr. 493:16 (Shapiro). [ ]. 4/20/17 Tr. 494:2-7 (Shapiro). [ ]. 4/20/17 Tr. 496:14-18 (Shapiro).[113] [ ]. 4/20/17 Tr. 497:2-3 (Shapiro). But, as explained above, it is illogical to think that a consumer's willingness to pay for a service would be directly related to the number of performances on that service; and it is illogical to assume that the value of a play on Sirius XM is the same as the value of a play on Pandora, as discussed above.

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113 [ ], *see* 5/16/17 Tr. 4067:11-15 (Harrison), and simply pushing forward the 2016 *Web IV* rate for noninteractive subscription services of $.0022 per play, Pandora would pay roughly $2.20 per subscriber per month, which is even closer to Mr. Orszag's proposed per-subscriber rate of $2.48 per month.

SEPFF1235. In short, the value of a subscription service to subscribers may not be linked in any direct and linear way to the number of performances per-subscriber. Marketplace agreements leave no doubt that royalties paid to record companies by subscription services are determined [ ]. The conclusion that follows from this analysis is that if Sirius XM and subscription webcasters should pay equivalent royalties, as Professor Shapiro suggests, the equivalency should obtain on a per-subscriber or percentage-of-revenue basis, not on a per-performance basis. Trial Ex. 43 at ¶ 54 (Orszag WRT).

D. If The *Web IV* Rates Are Used, The Effective Per-Subscriber Or Percentage-Of-Revenue Rates Resulting From *Web IV* Should Be Used, Not The Per-Play Rates

SEPFF1236. If the Judges nevertheless opt to use *Web IV* rates to set the rates at issue in this proceeding, for the reasons discussed above, the effective per-subscriber or percentage-of-revenue rates should be used, not the per-play rates. Trial Ex. 43 at ¶¶ 49-59 (Orszag WRT). [ ]. 4/20/17 Tr. 491:5-493:11 (Shapiro). Moreover, as noted earlier, Professor Shapiro acknowledged that the approximately 40% effective percentage-of-revenue rate for Pandora under the *Web IV* rates "would translate into a per-subscriber rate of about dollars per sub." 4/20/17 Tr. 494:2-7 (Shapiro). Although the $2.48 per-subscriber rate proposed by Mr. Orszag is much better supported by marketplace data, if the *Web IV* rates were to be used as a benchmark here, the $2 per-subscriber rate is far better supported by the data than Professor Shapiro's $1.03 per-subscriber rate proposal.

E. Professor Shapiro's Convoluted Approach To Translating A *Web IV* Per-Play Rate To A Percentage-Of-Revenue Rate Is Deeply Flawed And Rests On A False Assumption

SEPFF1237. Professor Shapiro's process for manufacturing a percentage-of-revenue rate from a per-play rate is summarized above. *See* Trial Ex. 8 at 51 (Shapiro WDT). Even leaving aside the individual flaws in each step of that process, Professor Shapiro's entire approach is unsound because he implicitly and incorrectly assumes that each performance on Pandora's subscription service should bear the same royalty as a performance on Sirius XM, and he incorrectly assumes that in the unregulated marketplace, royalties for subscription services are determined by the average number of performances per subscriber. Both assumptions are unsupported and incorrect for the reasons explained above. *See* Trial Ex. 43 at ¶¶ 50-51 (Orszag WRT).

SEPFF1238. Although the decision to use per-play rates as a baseline by itself dooms Professor Shapiro's analysis, there are also flaws in the methods he uses to generate a percentage-of-revenue rate. First, Professor Shapiro relies on estimates of listening time from a "Share of Ear" survey to derive an estimate of the number of hours of performances of sound recordings per week per subscription. Trial Ex. 8 at 51-52 (Shapiro WDT). But as further explained in Section IX.C.1.iv.c, the "Share of Ear" survey is not in evidence and there is no detailed explanation of its methods, so any conclusions based on that non-existent document should be discounted.

SEPFF1239. Additionally, Professor Willig also calculated the number of hours of performances of sound recordings per week per subscription, and derived a much higher number as follows:

a. Sirius XM internal documents provided [ ].

b. Time spent listening to Sirius XM radio outside of vehicle per week is estimated as the product of: (a) total time listening to Sirius XM outside of vehicle (from Sirius XM internal document); and (b) percentage of listening outside of vehicle that is on radio (as opposed to Sirius XM's webcasting service), which is assumed to be 50% radio. This results in [[redacted]] hours per week.

c. Total time listening to Sirius XM radio is sum of in-vehicle and outside-of-vehicle time ([[redacted]] hours per week).

d. Total listening time is then split between music and non-music listening. Survey results show that music accounts for 71.25% of the listening, *see* Trial Ex. 21 at ¶ 73 (Boedeker WDT), yielding [[redacted]] hours per week listening to music on SXM radio.

e. The number of songs broadcast per hour per channel is estimated as follows: Royalty statements for Sirius XM's webcasting service provide aggregate tuning hours by month for 2006-2007 and then provide number of performances by month for 2008-2016. Dividing the number of performances in Jan-2008 by the number of aggregate tuning hours in Dec-2007 yields [[redacted]] songs per hour. For current purposes, Professor Willig assumed that [[redacted]].

f. The result of the above is [[redacted]].

Trial Ex. 28 at App. A-2– A-3 (Willig WDT) (footnotes omitted). Professor Shapiro attempts to dismiss these calculations in a footnote to his written rebuttal testimony with little explanation. *See* Trial Ex. 9 at 20 n.71 (Shapiro Corr. WRT). He faults Professor Willig for relying on one of Sirius XM's own surveys on the basis that it "is not representative of the full distribution of Sirius XM subscribers." Trial Ex. 9 at 20 n.71 (Shapiro Corr. WRT). But it is a survey Sirius XM commissioned in the ordinary course of its business, and the identical document was admitted into evidence as Trial Exhibit 132. Professor Shapiro also claims – with no elaboration or support – that Professor Willig "misrepresents the listening hour results from a second survey." Trial Ex. 9 at 20 n.71 (Shapiro Corr. WRT). He does not say how Professor Willig misrepresented the number or what the number should be instead. In addition, Professor Shapiro argues that "the number of songs played per hour is deficient because the number of plays and

the number of hours are measured for different, non-overlapping time periods." Trial Ex. 9 at 20 n.71 (Shapiro Corr. WRT). But he does not say how using non-overlapping time periods changes the results or otherwise explain this critique.

SEPFF1240. Second, for purposes of converting the per-subscriber-month rate into a percentage-of-revenue rate, Professor Shapiro used an ARPU for Sirius XM of $12.80 per subscriber-month. Trial Ex. 8 at 55 (Shapiro WDT). However, this is inconsistent with the ARPU for Sirius XM as calculated pursuant to the terms of the SDARS license, which is $10.72 per subscriber-month. Trial Ex. 25 at ¶ 151 (Lys Corr. WDT). The measures of ARPU must be employed consistently. Under Professor Shapiro's approach, Sirius XM would undercompensate the content creators if the 8.1% figure were used. Assuming that Professor Shapiro's figure of $1.03 per subscriber-month were correct, which it is not, the appropriate percentage of revenue using the $10.72 ARPU would be 9.6%. Furthermore, if the creator compensation [[redacted]], along with the correct ARPU ($10.72 per subscriber-month), the rate for Sirius XM would be 24.3% of revenue. Trial Ex. 46 at ¶ 57 (Willig WRT).

F. Professor Shapiro's Analysis Also Ignores Differences In The Profitability, Steering Ability, And Elasticity Of Demand Between Pandora And Sirius XM

SEPFF1241. Sirius XM would have to pay higher royalties in arm's-length negotiations than Professor Shapiro's *Web IV* benchmark suggests for a number of additional reasons, including that Professor Shapiro's analysis ignores that Sirius XM earns much higher margins than the noninteractive subscription services, and this would likely result in its having higher royalty obligations. *See supra* Section V(K)(4). Similarly, Professor Shapiro ignores the fact that Sirius XM has a lower elasticity of demand than noninteractive subscription services, which means it is less sensitive to increases in the cost of music rights than noninteractive

subscription services. *See supra* Section V(K)(4). And finally, Professor Shapiro ignores the fact that Sirius XM is less likely to steer, and thus is less likely to be able to secure royalty discounts in exchange for steering. *See supra* Section VII(G)(2)(ii).

SEPFF1242. Taking these points in order: Established economic theory shows that there is a direct inverse relationship between a firm's profit margin and its elasticity of demand. Trial Ex. 43 at ¶ 57 (Orszag WRT). [ ]. Trial Ex. 43 at ¶ 57 (Orszag WRT) (citing Trial Ex. 25 at ¶¶ 119-123 (Lys WDT)).[114]

SEPFF1243. Professor Shapiro acknowledges that the incentive and ability of Sirius XM to steer, compared to noninteractive services, is relevant to the royalty determination, but he asserts he has no empirical data on this point and thus makes no royalty adjustment. In fact, the evidence shows that Sirius XM does not appear to steer at all, *see, e.g.*, *supra* Section VII(H).

SEPFF1244. Moreover, even assuming there is any minimal steering by Sirius XM, the evidence clearly demonstrated that it would have a much lower incentive to steer than the

[114] Professor Willig's analyses – explained in greater length above, *see supra* Section V– also show that Sirius XM's elasticity of demand is lower than that of paid fully-interactive services (*e.g.*, Spotify and Apple) and paid noninteractive services (*e.g.*, Pandora One): Professor Willig explained that services "with low price elasticity of demand will contract less in reaction to higher prices, so that higher prices will have a less consequential distorting impact on the usage decisions made by distribution modes and their consumers." Trial Ex. 28 at ¶ 33 (Willig WDT). Based on the Dhar survey, and using Sirius XM's ARPU ($[ ]), Professor Willig calculated that the price elasticity of demand of Sirius XM's paid service is 0.8; 1.7 for Apple/Spotify, and 1.3 for Pandora One. *See* Trial Ex. 28, App. C (Willig WDT) (providing further details about this calculation). Professor Willig also undertook an econometric study of the price elasticity of demand for Sirius XM, and found that it corroborates the finding of the survey for Sirius XM, with a range of estimates from 0.3 to 0.9 depending on the time frame of the measured response to a price change. Trial Ex. 28 at ¶ 44 (Willig WDT); *see also* Trial Ex. 28, App. D (Willig WDT) (providing details about the econometric analysis).

noninteractive streaming services. First, even if some Pandora users were to have a less favorable view of the service due to steering, it is undisputed that most Pandora listeners use the free version; by contrast, steering that annoys Sirius XM's listeners can result in a much greater penalty to Sirius XM – cancellation of a subscription. *See* 4/20/17 Tr. 455:9-13 (Shapiro). Equally important, in *Web IV,* Professor Shapiro touted Pandora's ability to steer without harming its listeners due to "an optimizing algorithm" that allows Pandora to "selectively increase or decrease performances of recorded music in a manner that is highly attuned to the preferences of its listeners. This may involve little or no steering for listeners who are very picky about their music, or on stations seeded with particular artists, along with a great deal of steering for listeners who are relatively indifferent to the music they hear, or on stations seeded by certain other artists." Trial Ex. 669 at 16. Sirius XM has no such ability: it is a one-way service that cannot be tailored to the listener's tolerance for steering. 4/20/17 Tr. 458:1-461:6 (Shapiro). Thus, in addition to the evidence showing Sirius XM does not in fact steer, it clearly has a much lower incentive to do so than the noninteractive services. Mr. Orszag did not attempt to quantify these effects (nor did Professor Shapiro), but directionally they suggest a higher royalty than those determined by the Judges in *Web IV* for noninteractive subscription services, and indeed a royalty rate that is higher than those observed in the recent Pandora and iHeart deals. Trial Ex. 43 at ¶ 58 (Orszag WRT). *See supra* Section IV(G)(2).

G. Professor Shapiro's Analysis Of Substitution Based On The Lenski Survey Is Fundamentally Flawed

SEPFF1245. Relying on a survey by Joe Lenski of Edison Research, Professor Shapiro analyzes the substitution component of full marginal cost and concludes that the substitution cost is lower for Sirius XM than for Pandora, Trial Ex. 8 at 55-56 (Shapiro WDT),

but the Lenski survey is fatally flawed from an economic perspective and is unreliable based on core principles of survey design.

SEPFF1246. This section (following a general overview of the survey) first explains why Professor Shapiro's use of the Lenski survey is flawed from an *economic* perspective. The next part explains Professor Dhar's and Professor Simonson's conclusions that the Lenski survey is methodologically invalid.

SEPFF1247. The survey conducted by Mr. Lenski survey purports "to provide information about what current SiriusXM listeners listened to before they began listening to SiriusXM and what they would listen to if SiriusXM were no longer available, and about what current Pandora listeners listened to before they began listening to Pandora and what they would listen to if Pandora were no longer available." Trial Ex. 40 at ¶ 4 (Dhar WRT) (quoting Trial Ex. 7 at 2 (Lenski WDT)). The Lenski survey also purports to measure how Sirius XM listeners would divide their listening to other types of audio if Sirius XM were no longer available and how Pandora listeners would divide their listening to other types of audio if Pandora were no longer available. Trial Ex. 40 at ¶ 5 (Dhar Corr. WRT) (citing Trial Ex. 7 at 6-7 (Lenski WDT)). Mr. Lenski explained that he was "asked to conduct a survey to measure among . . . a representative sample of current Sirius XM listeners what they listened to before they listened to Sirius XM and what they would divide their time in terms of listening if Sirius XM no longer existed." 5/4/17 Tr. 2633:6-13 (Lenski).

SEPFF1248. Mr. Lenski stated that measuring willingness to pay was "not part of [his] assignment." 5/4/17 Tr. 2633:21-24 (Lenski); *see also* 5/4/17 Tr. 2663:8-9 (Lenski) ("[W]e were not directed to measure price."); 5/4/17 Tr. 2662:19-20 (Lenski) ("In this survey, we were

not tasked with measuring costs."); 5/4/17 Tr. 2663: 2-4 (Lenski) ("[W]e were not asked to measure cost. That's not part of what this survey was designed to do.").

SEPFF1249. The Lenski survey was designed as a Random Digit Dial (RDD) telephone survey of Americans ages 13 and older. Trial Ex. 7 at 3 (Lenski WDT). Those who qualified to participate were asked up to 29 questions. Trial Ex. 44 at ¶ 29.a (Simonson WRT) (citing Trial Ex. 7 at 3 (Lenski WDT)). As noted above, an RDD telephone survey, despite its name, is not a true random sample. Using the purest definition of probability sampling, a telephone survey with anything less than a 100% response rate is not actually a random sample. 5/8/17 Tr. 2937:9-2938:7 (Boedeker).

1. Professor Shapiro's Use Of The Lenski Survey Is Flawed From An Economic Perspective

SEPFF1250. Professor Shapiro's use of the Lenski survey to assess substitution effect is flawed and unreliable. The Lenski survey focuses on how respondents would spend their Sirius XM *listening time* if they did not have access to Sirius XM. This is the wrong question because it does not capture the impact on creator compensation.[115] Trial Ex. 46 at ¶ 13 (Willig WRT). The structure of the Lenski survey is ill-suited to the purpose at hand.

The table below summarizes the results of the Lenski survey, as reported by Professor Shapiro.[116]

[115] The term "creator compensation" refers to the returns to artists plus the net revenues of the record companies. Trial Ex. 46 at ¶ 13 n.13 (Willig WRT).

[116] Note that the percentage reduction in listening (on average) is the difference between 100% and the total shown in this table: 8.8% for Pandora and 10.0% for SXM. Trial Ex. 46 ¶ 42 n.47 (Willig WRT).

Table D.1: Reallocation of Listening Time to Alternative Audio Media

Allocation to Medium	Allocation of Time From:	
	Pandora	Sirius XM
AM/FM radio	24.4%	40.8%
Interactive streaming	16.6%	7.8%
Non-interactive streaming	11.7%	14.3%
Sirius XM	5.3%	---
Podcasts	2.5%	2.4%
CDs and downloads	26.3%	23.1%
Other	4.4%	1.7%
Total allocation to alternative media	91.2%	90.0%

Source: Trial Ex. 8, Table D-1, at D-5 (Shapiro WDT).

i. Professor Shapiro's Use Of The Lenski Survey

SEPFF1251. Professor Shapiro's use of the above results from the Lenski survey to determine the relative "Full Marginal Cost" for Sirius XM versus Pandora can be summarized as follows.[117] First, Professor Shapiro observes that, for the alternatives with no value to the record companies, the percentage of time shifted from Sirius XM is *higher* than the percentage of time shifted from Pandora (refer to the table above):

- Terrestrial radio: 40.8% for SXM vs. 24.4% for Pandora
- Not listening to music: 10.0% for SXM vs. 8.8% for Pandora

Trial Ex. 46 at ¶ 43 (Willig WRT).

SEPFF1252. Second, Professor Shapiro observes that, for alternatives with positive value for the record companies, the percentage of time shifted is *lower* from Sirius XM than the percentage of time shifted from Pandora (see table above):

[117] This summary is based on Trial Ex. 8 at 56 and App. D (Shapiro WDT).

- Fully-interactive streaming: 16.6% for Pandora vs. 7.8% for SXM
- Noninteractive streaming: 17.0% for Pandora vs. 14.3% for SXM[118]
- CDs and downloads: 26.3% for Pandora vs. 23.1% for SXM
- Podcasts/other: 2.5/4.4% for Pandora vs. 2.4/1.7% for SXM[119]

Trial Ex. 46 at ¶ 44 (Willig WRT).

SEPFF1253. Based on the above two observations, Professor Shapiro concludes that the substitution component of Full Marginal Cost must be greater for Pandora than for Sirius XM, even without quantifying any of the values indicated above. Professor Shapiro's reasoning is that the first set of options above have no value for either service (regardless of the percentages), and each component of the second set must be larger for Pandora than Sirius XM, so the overall total must be larger for Pandora than Sirius XM. In rough terms, there is about 20% more in the "no value" categories for Sirius XM and 20% more in the "positive value" categories for Pandora, according to Professor Shapiro. Trial Ex. 46 at ¶ 45 (Willig WRT).

ii. Flaws In Professor Shapiro's Empirical Analysis

SEPFF1254. With the above background summary, it is possible to make clear the flaws in Professor Shapiro's use of the Lenski survey to assess the substitution effect. The overriding and fundamental flaw is that the Lenski survey does not ask the right questions for the purpose of assessing Full Marginal Cost or Creator Compensation Cannibalization. 5/2/17 Tr. 2065:24-2066:2 (Willig) ("[T]he Lenski survey, whatever its validity for other purposes, is really nowhere near on point for the purpose of calculating opportunity cost."). For this purpose, one

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[118] The figure for Pandora includes switching to Sirius XM. Trial Ex. 46 at ¶ 44 n.49 (Willig WRT).

[119] Professor Shapiro indicates that this category is relevant only to the extent that podcasts and/or "other" generate compensation for the record companies. *See* Trial Ex. 46 at ¶ 44 n.50 (Willig WRT) (citing Trial Ex. 8 at D-6 (Shapiro WDT)).

must determine the extent to which dropping Sirius XM service (or Pandora service) would affect compensation earned by music creators through other forms of music distribution. Because it focuses exclusively on how respondents would otherwise spend their listening *time*, the Lenski survey cannot provide the information needed to assess the relevant effect, namely, the impact on creator compensation. Trial Ex. 46 at ¶ 46 (Willig WRT); 5/2/17 Tr. 2062:19-2063:13 (Willig).

SEPFF1255. Indeed, Mr. Lenski explained that he was "asked to conduct a survey to measure among . . . a representative sample of current Sirius XM listeners what they listened to before they listened to Sirius XM and what they would divide their time in terms of listening if Sirius XM no longer existed." 5/4/17 Tr. 2633:6-13 (Lenski). "The assignment was to measure the allocation of time if . . . SiriusXM no longer existed." Tr. 5/4/17 Tr. 2712:6-9 (Lenski). Mr. Lenski stated that measuring willingness to pay was "not part of [his] assignment." 5/4/17 Tr. 2633:21-24 (Lenski); *see also* 5/4/17 Tr. 2663:8-9 (Lenski) ("[W]e were not directed to measure price."); 5/4/17 Tr. 2662:19-20 (Lenski) ("In this survey, we were not tasked with measuring costs."); 5/4/17 Tr. 2663: 2-4 (Lenski) ("[W]e were not asked to measure cost. That's not part of what this survey was designed to do."). To complete his assignment, Mr. Lenski used questions from the Rosin survey in *Web IV* and "also questions that were asked in other surveys Edison has done." 5/4/17 Tr. 2710:16-21 (Lenski).

SEPFF1256. The remainder of this section discusses specific issues that the Lenski survey fails to address with each of the options for alternative forms of music consumption.

SEPFF1257. First, there are several issues with respect to fully-interactive streaming services that the Lenski survey fails to address. Accordingly, the survey fails to provide the requisite information to assess substitution. While the Lenski survey asks

respondents the extent to which they would replace Sirius XM listening with listening to a fully-interactive streaming service, the impact of that shift on creator compensation would vary depending on the respondent's circumstances. In particular, there are three distinct circumstances:

- Purchasing a new subscription to a paid fully-interactive service;
- Increasing listening to a paid fully-interactive service to which the respondent already subscribes; and
- Increasing listening to an ad-supported fully- interactive service (*e.g.*, the ad-supported version of Spotify).

Trial Ex. 46 at ¶ 47 (Willig WRT); 5/2/17 Tr. 2063:23-2064:9 (Willig).

SEPFF1258. The Lenski survey does not distinguish between increased listening among the three alternatives listed above. Put another way, the survey does not ask respondents to identify whether they would be using a paid-subscription service or an ad-supported service, and it does not ask respondents whether they would be using an existing subscription or purchasing a new subscription. *See* 5/2/17 Tr. 2063:23-2064:9 (Willig); 5/2/17 Tr. 2064:20-23 (Willig). The same is true as to shifting from Pandora to a fully-interactive streaming service. For these reasons, the Lenski survey does not provide any way to assess the relative frequency with which Sirius XM and Pandora respondents experience each of the above three circumstances. This is a critical shortcoming because the impact on creator compensation is very different in the three circumstances. Creators would receive significant compensation from the purchase of a new paid subscription service, whereas there would be no incremental rise in compensation for increased usage of an existing subscription (since its creator compensation is not linked to usage). Increased consumption of an ad-supported fully-interactive service would provide some incremental compensation, since compensation from an ad-supported fully-

interactive service is linked to usage, but the amount could be significantly different from that provided by the paid-subscription option. Trial Ex. 46 at ¶ 48 (Willig WRT).

SEPFF1259. Thus, the Lenski survey does not provide sufficient information to compare the impact on creator compensation of shifting from Sirius XM to fully-interactive services with the impact of switching from Pandora to interactive services. As just one example, it is plausible or perhaps even likely that a greater percentage of the Pandora sample than the Sirius XM sample would shift to an ad-supported fully-interactive service as opposed to a paid-subscription fully-interactive service – because the Pandora sample includes many users of the ad-supported version of Pandora (with no subscription fee), whereas the Sirius XM sample includes only users of an ad-free service, most of whom are paying a subscription fee. As such, even if the percentage of the time shifted toward fully-interactive streaming services were greater for Pandora than for Sirius XM respondents, it could be the case that the Sirius XM respondents would nevertheless generate more creator compensation through that channel through the purchase of new subscriptions. The Lenski survey and, hence, Professor Shapiro's analysis, cannot rule out this or myriad other possibilities that affect creator compensation. Accordingly, they cannot produce a reliable assessment of even the relative Full Marginal Cost for Sirius XM and Pandora, let alone the absolute levels. Trial Ex. 46 at ¶ 49 (Willig WRT).

SEPFF1260. Second, turning to noninteractive streaming services reveals similar flaws in the Lenski survey for purposes of assessing substitution. As with fully-interactive services, there are both paid-subscription and ad-supported versions of noninteractive services. Therefore, the issues discussed above with respect to fully-interactive services are applicable to this component as well. That is, the Lenski survey fails to distinguish among: purchasing a new subscription to a paid-noninteractive service (*e.g.*, Pandora One/Plus), increased usage of an

existing paid-noninteractive service, and increased usage of an ad-supported noninteractive service. And, again, such a distinction is critical because there are different terms or rates for creator compensation across these different possibilities. Thus, here too, Professor Shapiro's approach is unable to provide a reliable assessment of even the relative Full Marginal Cost for Sirius XM and Pandora, let alone the absolute levels. Trial Ex. 46 at ¶ 50 (Willig WRT).

SEPFF1261. With regard to CDs and downloads, which is another component of substitution for which there is potential creator compensation, there are analogous flaws in the Lenski survey for purposes of assessing substitution. For CDs/downloads there are two distinct forms of increased listening: (a) increased listening to music that the respondent already owns (or would have purchased while continuing to subscribe to Sirius XM or Pandora), versus (b) increased listening to music that the respondent would not have purchased (or owned) with the continuation of Sirius XM or Pandora. The Lenski survey cannot and does not distinguish between these two forms of increased listening because it does not ask respondents whether they would change the extent to which they would purchase CDs/downloads in the absence of the Sirius XM or Pandora service. *See* Trial Ex. 46 at ¶ 51 (Willig WRT) (citing Trial Ex. 8 at 14 n.15 (Shapiro WDT) and Trial Ex. 7 at 6 n.4 (Lenski WDT)); 5/2/17 Tr. 2064:23-2065:4 (Willig). In response to Judge Strickler's inquiry, "Did you ask the respondents to distinguish between their existing collection of CDs and downloads or the purchase of new CDs or downloads?" Mr. Lenski admitted, "we didn't ask for a distinction" and "assumed that would include both their current collection or any other downloads they would purchase." 5/4/17 Tr. 2671:21-2672:3 (Lenski).

SEPFF1262. But, again, this distinction is critical because it affects creator compensation: There is no incremental compensation from listening more to music recordings

already owned, but there is incremental compensation from buying more music.[120] Thus, the Lenski survey does not provide the information that would be needed to assess this component of substitution. Trial Ex. 46 at ¶ 51 (Willig WRT). To provide an illustration: It is plausible that Sirius XM subscribers would otherwise buy more new music than Pandora listeners, since the Sirius XM subscribers would be saving more money. *See* Trial Ex. 44 at ¶ 75 & n.36 (Simonson WRT) (discussing mental budgeting); 5/11/17 Tr. 3456:14-3457:1 (Simonson) (same). The Lenski survey's finding that more time would be shifted to CD/downloads from Pandora than from Sirius XM is not inconsistent with this hypothesis. Thus, finding that a higher percentage of Pandora listening shifts to CDs/downloads does not allow one to draw any valid conclusions about the relative effect on creator compensation for this component of possible substitution. Trial Ex. 46 at ¶ 51 (Willig WRT).

SEPFF1263. For purposes of assessing substitution, there is another general shortcoming of the Lenski survey: it does not cover all potentially relevant music consumption. The Lenski survey questions are limited to what the respondent would otherwise do with his/her Sirius XM (or Pandora) listening time. However, that is too limited. Trial Ex. 46 at ¶ 52 (Willig WRT). Not having Sirius XM (or Pandora) could affect music consumption and, as a result, creator compensation – at other times as well. 5/2/17 Tr. 2065:5-23 (Willig). The following are just a few examples:

- A Sirius XM subscriber might listen to Sirius XM only in the car and he/she might shift nearly all of his/her listening time in the car to traditional AM/FM radio. However, at the same time, instead of spending $10-15 per month on the Sirius XM subscription, he/she might spend that money on CDs or downloads that he/she would not otherwise purchase, listening to those additional CDs or downloads at home rather than in the car. The Lenski survey responses would not reflect this effect.

[120] In addition, creator compensation is not identical for CDs and downloads. Trial Ex. 46 at ¶ 51 n.52 (Willig WRT).

- Similarly, the respondent might switch listening from Sirius XM to traditional AM/FM radio in the car, but decide to spend the money saved from not paying for Sirius XM on a subscription to another service – perhaps Apple Music, Spotify Premium, or Pandora One/Plus – and listen to that service only outside the car. Again, the Lenski survey would not capture that effect.

- Suppose that someone were to purchase a subscription to Apple Music or Spotify Premium, but only listen to that service for a portion of his/her car listening time (*e.g.*, suppose a respondent would switch to 75% AM/FM radio and 25% Apple Music). In that case, the respondent would still pay the full subscription price and the creators would still receive the full compensation (in aggregate). The amount of listening time does not affect the record companies' compensation. Record company compensation would be the same whether listening were split 90/10%, 75/25%, 50/50%, or 0/100%. The Shapiro/Lenski approach does not capture this feature of the marketplace.

Trial Ex. 46 at ¶ 52 (Willig WRT).

SEPFF1264. The above situations are just examples to illustrate the general point: by focusing on Sirius XM listening time (and Pandora listening time), the Lenski survey is misaligned with the foundational information needs of assessing the substitution effects, as well as Professor Shapiro's "Full Marginal Cost" concept (which is essentially what Professor Willig termed "Creator Compensation Cannibalization") for the music distribution services. Trial Ex. 46 at ¶ 53 (Willig WRT).

iii. Other Empirical Issues With The Mr. Lenski's Survey

SEPFF1265. In addition to its basic misalignment with the concept of Full Marginal Cost and Creator Compensation Cannibalization, there are two other features of the Lenski survey that make it unsuitable for the purposes for which Professor Shapiro employs it. Trial Ex. 46 at ¶ 54 (Willig WRT).

SEPFF1266. First, the Lenski survey asks whether the respondent has a paid subscription to Pandora One or Sirius XM, but the results that are reported and on which Professor Shapiro relies combine respondents who do and do not have a paid subscription. Professor Shapiro provides no indication as to why the respondents without a paid subscription

are relevant here. Trial Ex. 46 at ¶ 56 (Willig WRT) (citing Trial Ex. 7, App B (Question Q.5 and Q.9) (Lenski WDT) and Trial Ex. 40 at ¶ 24 (Dhar WRT)).

SEPFF1267. Second, Professor Shapiro fails to take into account the expected future trends that he himself indicates are likely. That is, Professor Shapiro indicates that streaming services likely will become more prevalent in the future (during the licensing period for this proceeding). As such, Sirius XM will compete more closely with other streaming services and less closely with AM/FM radio. This trend will tend to increase the Full Marginal Cost for Sirius XM. Trial Ex. 46 at ¶ 58 (Willig WRT) (citing Trial Ex. 28 at ¶ 46 (Willig WDT) and Trial Ex. 8 at 28 (Shapiro WDT)); *see also* 5/15/17 Tr. 3735:1-10 (Meyer) (agreeing with Judge Strickler that increased ease of use of fully-interactive services in cars means increased competition for Sirius XM).

SEPFF1268. In sum, the Lenski survey is incapable from an economic perspective of providing the information needed to assess the substitution effect, which entirely invalidates Professor Shapiro's *Web IV* approach. Trial Ex. 46 at ¶ 59 (Willig WRT).

2. Mr. Lenski's Survey Suffers From Fatal Methodological Flaws

SEPFF1269. On behalf of Sirius XM, both Professors Dhar and Simonson evaluated the survey conducted by Mr. Lenski. Trial Ex. 40 at ¶ 2 (Dhar WRT); 5/8/17 Tr. 2832:6-9 (Dhar); Trial Ex. 44 at ¶ 9 (Simonson WRT); 5/11/17 Tr. 3426:11-14 (Simonson). They determined that the Lenski survey suffered from a number of serious flaws that render its results unreliable. Trial Ex. 40 at ¶¶ 8-9 (Dhar WRT); Trial Ex. 44 at ¶¶ 10, 17 (Simonson WRT). Those flaws are discussed below.

i. Mr. Lenski's Survey Was Too Complicated To Be Conducted Over The Telephone

SEPFF1270. The Lenski survey results are unreliable because the survey should not have been conducted over the telephone. *See* 5/11/17 Tr. 3436:4-12 (Simonson) ("I would not have conducted a survey like this on the telephone."). Telephone surveys are problematic for a number of reasons, especially for surveys beyond a simple public opinion or political poll. .

SEPFF1271. The limitations of telephone surveys are particularly pronounced if, in addition to the complexity of answering questions, the survey is long, especially if respondents are not compensated for their time. The reason is quite simple. While some people are willing to interrupt whatever they were doing and postpone what they were planning to do, patience becomes scarce. As the survey proceeds, the respondents tend to get more impatient and spend less time and cognitive resources on the answers. Naturally, respondents are likely to try to "get it over with." Trial Ex. 44 at ¶ 24 (Simonson WRT); 5/11/17 Tr. 3428:9-10 (Simonson); 5/11/17 Tr. 3433:12-17 (Simonson).

SEPFF1272. Despite the complex and speculative nature of the Lenski survey, the entire interview was conducted by telephone (without offering respondents any compensation for their time). This unsuitable data collection methodology made the respondents particularly susceptible to biases created by the questions asked while exerting as little time and effort as possible. Trial Ex. 44 at ¶¶ 10a, 32, 46a (Simonson WRT); 5/11/17 Tr. 3433:14-21 (Simonson); 5/11/17 Tr. 3427:23-3428:10 (Simonson).

SEPFF1273. The volunteer respondents who participated in the Lenski telephone survey were asked up to 29 questions. These questions (discussed below) called for detailed speculations and "best estimates" about alternative realities. Furthermore, respondents were asked for specific duration and percentage numbers, with the percentages having to add up to

100%. All of these demands applied while respondents were answering an unexpected telephone call, requiring them to interrupt and postpone whatever else they were doing. Trial Ex. 44 at ¶ 33 (Simonson WRT) (citing Trial Ex. 7 at 3 (Lenski WDT)); 5/11/17 Tr. 3432:13-3434:4 (Simonson); 5/11/17 Tr. 3427:23-3428:10 (Simonson); 5/8/17 Tr. 2837:25-2838:3 (Dhar).

SEPFF1274. As discussed in further detail below, a survey, like the Lenski survey, that asks respondents to imagine an alternative reality and asks them to try to predict how that reality would affect their choices requires significant time and cognitive effort. Answering such questions in a reasonably reliable manner is complex and requires the respondents to consider the options carefully and determine the implications of the change. Thus, the likelihood that a person interviewed on a cellphone or landline telephone (even if that survey participant were compensated for his/her time) will make the cognitive effort and take the time to carefully predict what he or she would do under such alternative reality is small. Thus, telephone surveys are not suitable for such surveys. A person who answers such questions at his or her own pace using a computer is in a much better position to carefully consider the implications of the alternative reality and try to provide a thoughtful answer (as long as the questions are answerable with reasonable accuracy). Even computer-based answers may not be perfectly accurate, because making predictions about future choices is inherently challenging. But the likelihood that the provided answers online will be reliable and accurate is much higher compared to the answers generated while a person is interviewed on a cellphone or any other telephone. Trial Ex. 44 at ¶ 22 (Simonson WRT); 5/11/17 Tr. 3432:18-3434:14 (Simonson); 5/8/17 Tr. 2838:4-10 (Dhar).

SEPFF1275. Finally, telephone surveys, especially those that contain questions requiring the respondent to form judgments or predictions, are particularly susceptible to biases

due to so-called "question order effects" and the phrasing of questions. It is thus critical that the order and phrasing of questions avoid any potential biases and make every effort to simplify and minimize the demands from the respondent. Trial Ex. 44 at ¶ 23 (Simonson WRT).

ii. Mr. Lenski's Survey Suffered From Order Bias

SEPFF1276. A key survey principle is that a survey should avoid question order bias (or order effect).[121] In particular, if respondents are asked a series of related questions, such as about their main music source in the past, the answers to these questions are likely to significantly impact and bias answers to subsequent questions about future music services. Trial Ex. 44 at ¶ 25 (Simonson WRT). Mr. Lenski acknowledged the problem that order effect can present, stating that when designing a survey question "[y]ou want to try to minimize the effect of . . . question ordering on the results." 5/4/17 Tr. 2689:23-25 (Lenski).

SEPFF1277. Question order effects reflect primarily (a) the awareness of the previous questions and related answers, which makes them salient or top-of-mind and thus more likely to influence subsequent answers, (b) priming effects,[122] and (c) that respondents are likely to infer that the sequence of questions was designed by the researcher in this manner because the

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[121] For a discussion of order and priming effects, *see* Trial Ex. 44 at ¶ 25 n.9 (Simonson WRT) (citing F. Strack (1992), "'Order Effects' in Survey Research: Activation and Information Function of Preceding Questions," N. Schwarz and S. Sudman (eds.), *Context Effects in Social and Psychological* Research, 23-34; J. Krosnick (1991), "Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys," *Applied Cognitive Psychology*, 5, 213-36; Chapter 7 in Dillman et al. (2014), *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method*, 3rd ed)); *see also* Trial Ex. 40 ¶ 12 n.11 (Dhar WRT) (citing Trial Ex. 279 at 395-396 (Shari Seidman Diamond, "Reference Guide on Survey Research," *Reference Manual on Scientific Evidence*, Third Edition, Federal Judicial Center, 2011); Seymour Sudman and Norbert Schwartz, "Contributions of Cognitive Psychology to Advertising Research," *Journal of Advertising Research*, Vol. 29, Issue 3, 1989, pp. 43-53; Jon A. Krosnick and Stanley Presser, "Question and Questionnaire Design," in *Handbook of Survey Research,* Second Edition, James D. Wright and Peter V. Marsden, eds., (Bingley: UK: Emerald Group Publishing Limited), 2010, pp. 291-294)).

[122] Priming occurs when exposure to one stimulus affects responses to another, subsequently observed stimulus. *See* Trial Ex. 44 at ¶ 25 n.10 (Simonson WRT) (citing Daniel Kahneman (2011), *Thinking Fast and Slow*, pages 52-58; F. Strack (1992), "'Order Effects' in Survey Research: Activation and Information Function of Preceding Questions," N. Schwarz and S. Sudman (eds.), *Context Effects in Social and Psychological* Research, 23-34).

answers to the early and subsequent questions were *meant* to be linked and consistent. For example, in one study, college students were asked two questions: "How happy are you?" and "How many dates did you have last month?" The correlation between answers to these questions depended on the order in which they were asked – the correlation was 0.12 when the question about happiness was asked first, and it increased to 0.66 when the question about the number of dates was asked first. Trial Ex. 44 at ¶ 25 (Simonson WRT) (citing N. Schwarz (1996), *Cognition and Communication: Judgmental Biases, Research Methods, and Logic of Conversation,* Hillsdale, NJ: Erlbaum). Thus, judgments of happiness were strongly influenced by the number of dates only when the question about the number of dates appeared before the question about happiness. Trial Ex. 44 at ¶ 25 (Simonson WRT).

SEPFF1278. Question order effect is related to the important survey concept known as "demand effects." Demand effects[123] pertain to the phenomenon whereby survey respondents use cues provided by the survey procedure and questions to try to figure out the purpose of the survey and what they imagine to be the "correct" answers to the questions they are asked. The respondents then tend to provide what they perceive as the "correct" answers, to make sure that the results "come out right." Demand and order effects can pollute the results of a survey dramatically. Accordingly, courts have recognized the significance of demand effects, and such problems have contributed to the rejection of surveys.[124] Trial Ex. 44 at ¶ 26 (Simonson WRT).

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[123] *See* Trial Ex. 44 at ¶ 26 n.12 (Simonson WRT) (citing "On the Social Psychology of the Psychological Experiment," M. Orne, American Psychologist, 17, 776-783. Itamar Simonson and Ran Kivetz (2012), "Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions," Ch. 11 in *Trademark and False Advertising Surveys*, Edited by Shari Diamond and Jerre Swann, American Bar Association).

[124] *See, e.g.*, Trial Ex. 44 at ¶ 26 n.13 (Simonson WRT) (citing *Simon Property Group L.P. v. MySimon, Inc.*, 104 F. Supp. 2d 1033 (S.D. Ind. 2000); for a review, see Itamar Simonson and Ran Kivetz (2012), "Demand Effects in Likelihood of Confusion Surveys," *Lanham Act Surveys*, Shari Diamond and Jerre Swann, Eds., American Bar Association).

SEPFF1279. The Lenski survey suffers from a severe order effect. Just before asking respondents the key question regarding the music sources they would switch to if Sirius XM was no longer available, respondents were asked to identify the one source that Sirius XM primarily replaced. This question was likely to create a severe order effect and make AM/FM radio top-of-mind, and consequently, contaminate the answers to subsequent questions. Trial Ex. 44 at ¶ 46.b (Simonson WRT); 5/11/17 Tr. 3437:5-24 (Simonson); Trial Ex. 40 at ¶ 11 (Dhar WRT); 5/8/17 Tr. 2832:13-2834:7 (Dhar).

SEPFF1280. Specifically, the Lenski survey purports to measure which audio services respondents would listen to if Sirius XM were no longer available, as posed in the critical Question 8D. Question 8D asks respondents to "Now imagine that SiriusXM were no longer available. What would you do instead of listening to SiriusXM?" and presents them with a list of options related to audio listening. But this question is *preceded by* Question 8B, which asks respondents "Now think about what you used to do before you ever started listening to SiriusXM. Which ONE of the following is SiriusXM **mostly replacing**" (emphasis in original). The respondent is then provided the following options: "Traditional over-the-air AM/FM radio stations"; "CDs or your own music downloads"; "Online radio services such as Pandora, Spotify, Rhapsody, iHeartRadio, or streamed AM/FM stations"; podcasts; new listening time not taken from other sources; or other. Trial Ex. 44 at ¶¶ 36-37 (Simonson WRT); 5/11/17 Tr. 3437:5-24 (Simonson); Trial Ex. 40 at ¶ 12 (Dhar WRT) (citing Trial Ex. 7, App. B at B-3 - B-4 (Lenski WDT)); 5/8/17 Tr. 2832:13-23 (Dhar); 5/8/17 Tr. 2833:18-2834:7 (Dhar).

SEPFF1281. The wording of Question 8B created an obvious and severe order bias on answers to subsequent questions, including Questions 8D and 8F. It biased respondents toward choosing traditional over-the-air AM/FM radio over other options. When respondents

are asked to come up with "ONE music source" that Sirius XM was mostly replacing, AM/FM, which has been used by consumers in vehicles for a long time, is most likely to be the easiest, most available, top-of-mind answer. This language focuses respondents on when they first started listening to Sirius XM, which for some respondents may have been many years ago. Trial Ex. 44 at ¶ 38 (Simonson WRT); Trial Ex. 40 at ¶ 12 (Dhar WRT); 5/11/17 Tr. 3437:5:24, 3438:9-3439:20, 3494:7-24 (Simonson); 5/8/17 Tr. 2832:17-2834:25, 2834:19-2834:7 (Dhar). The order effect in Questions 8B/8D could have been particularly acute for respondents who have been long-time subscribers to Sirius XM. Sirius and XM satellite radio service launched in the United States in 2002 and 2001,[125] respectively, years before streaming services became available (*e.g.*, Spotify launched in the United States in July 2011[126]). Trial Ex. 40 at ¶ 13 (Dhar WRT).

SEPFF1282. Moreover, the sequence of questions was likely to suggest that the answers to music sources used before (8B) and after Sirius XM (8D) should be related, which is an example of a survey demand effect whereby the survey questions suggest the "correct" or "expected" answer. Consistent with basic rules (or norms) of conversation (and the work of Paul

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[125] XM Satellite Radio was the first to launch its U.S. digital satellite radio service on September 25, 2001. *See* Trial Ex. 40 at ¶ 13 n.12 (Dhar WRT) (citing "XM Satellite Radio Launches First U.S. Digital Satellite Radio Service," XM Satellite Radio press release, September 25, 2001, accessed February 13, 2017, https://web.archive.org/web/20020809083230/http://www.xmradio.com/newsroom/screen/pr_2001_09_25_launch.html.) Sirius Satellite Radio started broadcasting in selected markets on February 14, 2002. *See* Trial Ex. 40 at ¶ 13 n.12 (Dhar WRT) (citing "Sirius Begins Service in Denver, Houston, Jackson and Phoenix," Sirius Satellite Radio press release, February 14, 2002, accessed February 13, 2017, http://www.prnewswire.com/news-releases/sirius-begins-service-in-denver-houston-jackson-and-phoenix-76011662.html).

[126] Spotify launched its invite-only beta phase in the U.S. on July 14, 2011. *See* Trial Ex. 40 at ¶ 13 n.13 (Dhar WRT) (citing "Hello America. Spotify here." Spotify News release, July 14, 2011, accessed February 14, 2017, https://news.spotify.com/us/2011/07/14/hello-america-spotify-here/). The invitation requirement was dropped and the service was opened to all users on September 26, 2011. *See* Trial Ex. 40 at ¶ 13 n.13 (Dhar WRT) (citing "Great news for all U.S. users – no more invites!" Spotify News release, September 26, 2011, accessed February 14, 2017, https://news.spotify.com/us/2011/09/26/great-news-for-all-us-users-no-more-invites/).

Grice), especially the "cooperative principle,"[127] a survey respondent who is asked two seemingly similar and linked consecutive questions is likely to believe that similar answers are expected. Trial Ex. 44 at ¶ 39 (Simonson WRT) (citing Grice, Paul (1975) "Logic and conversation," in Cole, P.; Morgan, J. *Syntax and semantics*. 3: Speech acts. New York: Academic Press. pp. 41–58). Consequently, the telephone interviewees were likely to be *preconditioned to simply repeat the reference to AM/FM and/or CDs* (which have also been available for decades) when asked the next question about what and how much they would listen to if Sirius XM were no longer available. Trial Ex. 44 at ¶ 38 (Simonson WRT).

SEPFF1283. There does not appear to be any legitimate purpose for Mr. Lenski to have asked the question about past use, or why he told his respondents to mention just one pre-Sirius XM music type, even though there is little doubt that most consumers obtain music from multiple sources. (Professor Shapiro does not use any data from the Lenski survey concerning the past behavior of Sirius XM listeners.) Trial Ex. 40 at ¶ 15 (Dhar WRT). For example, the Lenski survey respondents who indicated that they subscribed to both Sirius XM and Pandora may very well also occasionally listen to AM/FM radio, subscribe to Apple Music, and watch music videos on YouTube and on TV. Trial Ex. 44 at ¶ 40 (Simonson WRT). Indeed, at the hearing Mr. Lenski admitted that he "certainly could have asked [respondents] to list as many as they wanted to, but [he] didn't do it that way." 5/4/17 Tr. 2690:11-17 (Lenski). This was because he was asked by counsel "to identify the primary source of listening." 5/4/17 Tr. 2691:17-19 (Lenski); *see also* 5/4/17 Tr. 2693:1-4 (Lenski) ("[T]he purpose of this question was to ask respondents which one audio source Sirius XM was mostly replacing.").

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[127] For a review of articles that have discussed instances and consequences of the cooperative principle, *see* Trial Ex. 44 at ¶ 39 n.19 (Simonson WRT) (citing K. Lindblom (2001), "Cooperating with Grice: A cross-disciplinary meta-perspective on uses of Grice's cooperative principle," *Journal of Pragmatics,* 33, 1601-23).

SEPFF1284. Furthermore, it is likely that Question 8B's artificial limitation affects Sirius XM respondents and Pandora respondents differently: When Sirius XM started operating around the year 2001, AM/FM radio was still a main source of music available to consumers, and many other services were not yet available (even to consumers who subscribed to Sirius XM after 2001 but not in the last several years). By the time Pandora started operating years later, consumers had a greater variety of music sources, including online sources.[128] Of course, even more new sources of music have become available in recent years. Trial Ex. 44 at ¶ 37 (Simonson WRT).

SEPFF1285. In addition, the results of Question 8B *themselves* are unreliable (beyond the order effect it created on 8D and 8F). By suggesting that Sirius XM is "mostly replacing" a single option, Question 8B required the respondent to choose a single replacement option and is a highly improper way of uncovering listening habits. Thus, for example, given the nature of the service, respondents who have been long-time subscribers of Sirius XM very likely were "mostly replacing" AM/FM radio, even though they may also have spent significant time listening to CDs, downloads, or other services that they "replaced" with Sirius XM. However, they were not permitted to select any of those options, further exacerbating the priming problems discussed above. Moreover, the use of the phrase "before you ever started listening to SiriusXM" further increases respondents' likelihood of selecting traditional over-the-air AM/FM radio because it may lead respondents to think about their audio listening in the distant past, before other music streaming options were available. Trial Ex. 40 at ¶ 31 (Dhar WRT).

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[128] Notably, Mr. Lenski did not confirm that the Pandora and Sirius XM groups were comparable with respect to relevant characteristics. For example, the Lenski survey did not ask respondents when they first subscribed to Pandora or Sirius XM. Such information might have been relevant in informing their usage of various music categories that have become available over the past fifteen years or so. Trial Ex. 44 at ¶ 37 n.17 (Simonson WRT).

SEPFF1286. The order effect also rendered unreliable the results of Question 8F, which asked respondents to allocate their hypothetical future listening time if Sirius XM no longer existed. Because the response options presented to respondents in Question 8F were constrained by their responses to Question 8D, *if respondents did not choose a streaming option in Question 8D they would not be asked about allocating their listening time to streaming in Question 8F*. Since Question 8F focuses only on options respondents previously reported in response to Question 8D, the responses to Question 8F (used by Professor Shapiro) were systematically influenced by a question about past behavior (Question 8B). The responses to Question 8F are therefore unreliable and systematically biased toward options such as traditional over-the-air radio. Trial Ex. 40 at ¶ 22 (Dhar WRT).

SEPFF1287. Mr. Lenski asserted that his results were not infected by order bias because "there were definitely respondents who listened to one type of audio before they listened to Sirius XM but said they would listen to a different type of audio after." 5/4/17 Tr. 2664:14-17 (Lenski). But of course the fact that *some* respondents chose a different type of audio does not mean there was no order bias – the whole point of the principle is that fewer people would choose a service other than AM/FM in response to Question 8D. 5/11/17 Tr. 3438:21-3439:20 (Simonson).

iii. Mr. Lenski's Survey Omitted Key Pricing Information

SEPFF1288. Mr. Lenski's critical listening question omitted key pricing information regarding Sirius XM alternatives. Question 8D of the Lenski survey asked respondents: "Now imagine that SiriusXM were no longer available. What would you do instead of listening to SiriusXM? Would you replace any of your SiriusXM listening to . . ."; the response options were: "traditional, over-the-air AM/FM radio," "CDs or your own music downloads," "online radio services where <u>you</u> pick specific songs you want to hear, such as

Spotify or Rhapsody," "online streaming radio services such as Pandora, iHeartRadio or the online streams of AM/FM radio stations," "podcasts," or "other types of audio that I have not already mentioned." Trial Ex. 7, App. B at B-4 (Lenski WDT); Trial Ex. 44 at ¶ 29.e (Simonson WRT).

SEPFF1289. Mr. Lenksi did not include any information regarding the price of the services that were listed as option choices. *See* 5/4/17 Tr. 2703:3-7 (Lenski) (agreeing that "[n]othing in this survey provides a respondent with information as to the typical cost of what you are calling an on-line radio service"); *see also* 5/4/17 Tr. 2701:18-19 (Lenski) ("We did not provide pricing information to the respondents in this survey."); 5/4/17 Tr. 2701:23-2702:1 (Lenski); 5/4/17 Tr. 2702:22-2703:1 (Lenski) ("[W]e did not put any prices in front of them, so the respondents in this survey would have whatever information they had before we started the survey in terms of pricing of available options.").

SEPFF1290. Including prices is important, because price is a key attribute determining consumer choice. *See* Trial Ex. 44 at ¶ 48.f & n.25 (Simonson WRT) (citing Stephen Nowlis and Itamar Simonson (1997), "Attribute–Task Compatibility as a Determinant of Consumer Preference Reversals," *Journal of Marketing Research*, 34 (May), 205-218; Kent Monroe (1990), *Pricing*, 2nd ed., McGraw Hill). By not presenting pricing information that is in fact available to consumers in reality, the Lenski survey failed to provide reliable estimates of the choices that consumers would make if Sirius XM were not available. Trial Ex. 44 at ¶¶ 46.c, 48.f, 74 (Simonson WRT). As Professor Dhar testified, "when you're buying something, price is so fundamental [I need] to know the price of something before I can tell you whether or not I want to buy something." 5/8/17 Tr. 2748:15-17 (Dhar); *see also* 5/8/17 Tr. 2835:15-17 (Dhar) (criticizing Lenski for not including prices). Professor Hauser agreed that it was a good survey

practice to inform the respondents about the costs of alternative services; that is a more realistic scenario for consumers. 5/9/17 Tr. 3125:24-3126:11 (Hauser).

SEPFF1291. The decision not to list any prices in a survey designed to measure consumer preferences is puzzling considering that it is well established that many consumers apply budgets for certain categories of entertainment and other expense categories. *See* Trial Ex. 44 at ¶ 75 & n.36 (Simonson WRT) (citing Chip Heath and Jack Sole (1996), "Mental Budgeting and Consumer Decisions," *Journal of Consumer Research*, 23, 40-52; also R. Thaler (1985), "Mental Accounting and Consumer Choice," *Marketing Science*, 4(3), 199-214); 5/11/17 Tr. 3456:14-3457:10 (Simonson). Accordingly, one would expect that, if consumers will no longer spend money on Sirius XM, their music mental budget might allow them to replace it with other paid music services (such as Apple Music). Indeed, an examination of the total cost of the substitutes for Sirius XM indicated by Professor Simonson's survey respondents shows that it is generally comparable to or even less than the cost of the service being substituted (*i.e.*, the Sirius XM subscription fee). Trial Ex. 44 at ¶ 75 (Simonson WRT); 5/11/ 17 Tr. 3456:14-3457:1 (Simonson).

SEPFF1292. Without pricing information, respondents could bring incorrect information to the survey. Mr. Lenski agreed that his survey does not provide any evidence as to whether people actually know how much Sirius XM and Pandora cost. 5/4/17 Tr. 2703:12-19 (Lenski). Indeed, Mr. Lenski acknowledged that a respondent could have incorrect information about a service's price. 5/4/17 Tr. 2703:19-22 (Lenski). At bottom, Mr. Lenski's survey "doesn't provide any evidence whether people are willing to pay $9.99 or any other price for Spotify" or another fully-interactive service. 5/4/17 Tr. 2704:20-23 (Lenski); *see also* 5/4/17 Tr. 2712:20-25 (Lenski) (agreeing that he "ha[s] in the past asked questions in surveys about

people's willingness to pay various prices, but [he] didn't do so in [this] survey in this case"); 5/4/17 Tr. 2704: 20-2705:2 (Lenski) ("[W]e were not tasked in this survey to measure price points for any of these [services].").

SEPFF1293. Importantly, it is well established that when respondents are not provided with critical information for certain response options (here the prices of subscriptions), they may completely avoid choosing those options.[129] Trial Ex. 40 at ¶ 18 (Dhar WRT). That is, here they would be more likely to choose the familiar free services because of a lack of knowledge of the cost of streaming services.

iv. Mr. Lenski's Survey Included An Incomplete Set Of Answer Options

SEPFF1294. The set of response options provided in Lenski Question 8D includes the following: "Traditional over-the-air AM/FM radio"; "CDs or your own music downloads"; "Online radio services where <u>you</u> pick specific songs you want to hear, such as Spotify or Rhapsody"; "Online <u>streaming</u> radio services such as Pandora, iHeartRadio or the online streams of AM/FM radio stations"; "Podcasts"; and "Other types of audio that I have not already mentioned." Trial Ex. 7, App. B at B-4 (Lenski WDT). It does not include several significant potential options such as YouTube, an important source of music. Trial Ex. 44 at ¶ 44 (Simonson WRT); 5/11/17 Tr. 3440:22-23 (Simonson); *see also* Trial Ex. 40 at ¶ 17 n.18 (Dhar WRT) (citing Shelby Carpenter, "More People Are Streaming YouTube Music But It's Paying Artists Less, Report Says," *Forbes*, July 12, 2016, accessed January 23, 2017,

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[129] When faced with ambiguity among choices, studies show that people tend to avoid options that are ambiguous or unfamiliar to them in favor of known or familiar options. *See* Trial Ex. 40 at ¶ 18 n.26 (Dhar WRT) (citing Craig R. Fox and Amos Tversky, "Ambiguity Aversion and Comparative Ignorance," *The Quarterly Journal of Economics,* Vol. 110, No. 3, August 1995, pp. 585-603; A.V. Muthukrishnan, "Decision Ambiguity and Incumbent Brand Advantage," *Journal of Consumer Research*, Vol. 22, June 1995, pp. 98-109; and A.V. Muthukrishnan, Luc Wathieu, and Alison Jing Xu, "Ambiguity Aversion and the Preference for Established Brands," *Management Science*, Vol. 55, No. 12, December 2009, pp. 1933-194).

http://www.forbes.com/sites/shelbycarpenter/2016/07/12/more-people-streaming-youtube-music-paying-less-artists/#24963edc5555).

SEPFF1295. In addition, the Lenski survey does not explicitly mention Apple Music as a potential response option. Trial Ex. 7, App. B at B-4 (Lenski WDT); 5/11/17 Tr. 3440:18-22 (Simonson). Apple Music has brand awareness that is 67 percent, compared with 40 percent for Rhapsody (which the Lenski survey does include), and significantly more consumers listen to Apple Music (12 percent) than Rhapsody (less than 3 percent). Trial Ex. 117 at 24-25 (SoundX_000034495-96). The Lenski survey also fails to mention Google Play, another popular music service. Trial Ex. 44 at ¶ 44 (Simonson WRT); 5/11/17 Tr. 3440:18-22 (Simonson).

SEPFF1296. As noted above, the Lenski Survey also omitted the option to *purchase* new CDs or music downloads. Trial Ex. 40 at ¶ 17 (Dhar WRT) (citing Trial Ex. 7, App. B at B-4 (Lenski WDT)). Mr. Lenski admitted that "if we were trying to tease out the difference between whether people would substitute their old cracked CDs or purchasing new ones . . . from [the] survey result[s], you wouldn't be able to." 5/4/17 Tr. 2701:5-12 (Lenski); *see also* 5/4/17 Tr. 2700:8-12 (Lenski) (agreeing that survey "doesn't distinguish between listening to your existing CDs or downloads or purchasing new CDs or downloads"; "[i]t can include either").

SEPFF1297. Because the Lenski survey failed to list key examples of music categories available to consumers, those music categories were less likely to be selected (and additional options not listed, such as YouTube, could not be selected at all by the respondents). Mr. Lenski does not explain why *key music categories, critical details (e.g., ad free) and pricing information were entirely omitted. See also* Trial Ex. 44 at ¶ 45 (Simonson WRT). Omitting such relevant options leads respondents into selecting one of the available options which they

might not otherwise have selected, thereby biasing the results in the survey in comparison to what one might see in the marketplace. Trial Ex. 40 at ¶ 17 (Dhar WRT).

v. Mr. Lenski's Survey Did Not Separate Paid From Free Services

SEPFF1298. The Lenski survey made no attempt to separate paid music services from unpaid services within the answer choices to Question 8. The Lenski survey only provides *one* response option worded as "Online radio services where you pick specific songs you want to hear, such as Spotify or Rhapsody" (emphasis in original). Trial Ex. 7, App. B at B-4 - B-5 (Lenski WDT); 5/4/17 Tr. 2696:23-2697:17 (Lenski) (Mr. Lenski agreeing that answer options do not distinguish between paid and free versions); Trial Ex. 44 at ¶ 75 (Simonson WRT); 5/11/17 Tr. 3440:25-3441:16 (Simonson).

SEPFF1299. Beyond the problems with this approach from an economic perspective, as discussed above in connection with the economists' testimony, the decision not to separate paid from free services is problematic from a consumer survey perspective because consumers tend to create mental budgets for certain categories of entertainment. *See* Trial Ex. 44 at ¶ 75 & n.36 (Simonson WRT) (citing Chip Heath and Jack Sole (1996), "Mental Budgeting and Consumer Decisions," *Journal of Consumer Research*, 23, 40-52; also R. Thaler (1985), "Mental Accounting and Consumer Choice," *Marketing Science*, 4(3), 199-214); 5/11/17 Tr. 3456:14-3457:10 (Simonson).

vi. Mr. Lenski's Survey Was Ambiguous In Other Ways

SEPFF1300. A hallmark of good survey design is the use of clear, unambiguous, and precise questions. Questions that are unclear "may threaten the validity of the survey by systematically distorting responses if respondents are misled in a particular direction, or by inflating random error if respondents guess because they do not understand the question." Trial Ex. 40 at ¶ 18 & n.24 (Dhar WRT) (citing Trial Ex. 279 at 388; Floyd Jackson Fowler, Jr., "How

Unclear Terms Affect Survey Data," *Public Opinion Quarterly*, Vol. 56, Issue 2, Summer 1992, pp. 218-231).

SEPFF1301. Several response options in Question 8D of the Lenski survey are potentially ambiguous and omit critical information, leading to unreliable answers. For example, the response options included "Online radio services where you pick specific songs you want to hear, such as Spotify or Rhapsody" (emphasis in original) and "Online streaming radio services such as Pandora, iHeartRadio or the online streams of AM/FM radio stations" (emphasis in original). Trial Ex. 7, App. B at B-4 (Lenski WDT). If a respondent is a subscriber to Google Music, for example – a service that the Lenski survey did not list as an example – it could well be unclear that the respondent should select "Online streaming radio services," since "streaming *radio* services" is a strange way to describe such a fully-interactive service. 5/11/17 Tr. 3440:11-25 (Simonson). These ambiguous, ill-defined descriptions were less likely to be selected by the telephone survey respondents. Trial Ex. 44 at ¶ 44 (Simonson WRT).

SEPFF1302. Moreover, Spotify, Pandora, and iHeartRadio offer both free and paid options with different features, so respondents may be uncertain as to whether those response options in the survey refer only to the paid or to the free versions of those services (or both). Survey responses to Question 8D are likely to vary depending on how different respondents interpreted these ambiguous options, therefore making the provided responses unreliable. Trial Ex. 40 at ¶ 18 (Dhar WRT).

SEPFF1303. Specifically, the results of Question 8F, which asked respondents to estimate their future listening time, are likely to be unreliable because some of the response options group together different ways of listening. It is well known from the academic literature that if a response option groups several different options together, respondents are likely to

underreport the proportion of time they would spend engaging in those activities.[130] Because Question 8F does not provide specific types of audio listening services as explicit options and instead groups various options pertaining to On-Demand and Not-On-Demand services together, respondents are likely to underreport the amount of time they allocate to On-Demand and Not-On-Demand music streaming services.[131] Thus, Question 8F likely underestimates the amount of time that respondents would allocate to On-Demand and Not-On-Demand music streaming services in the absence of Sirius XM and cannot be relied on for any additional analyses. Trial Ex. 40 at ¶ 24 (Dhar WRT).

SEPFF1304. Finally, Question 8B also uses wording that can be seen as ambiguous, in asking what Sirius XM was "mostly replacing." The word "mostly" is ambiguous and can have a different meaning for different respondents. Consumers do not ascribe the same quantitative probability to words such as "mostly."[132] For example, while one respondent may

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[130] *See* Trial Ex. 40 at ¶ 24 & n.33 (Dhar WRT) (citing Seymour Sudman and Norbert Schwartz, "Contributions of Cognitive Psychology to Advertising Research," *Journal of Advertising Research*, Vol. 29, Issue 3, 1989, pp. 43-53; Justin Kruger and Matt Evans, "If You Don't Want to Be Late, Enumerate: Unpacking Reduces the Planning Fallacy," *Journal of Experimental Social* Psychology, Vol. 40, 2004, pp. 586-598; and Darryl K. Forsyth and Christopher D.B. Burt, "Allocating Time to Future Tasks: The Effect of Task Segmentation on Planning Fallacy Bias," *Memory & Cognition*, Vol. 36, No. 4, 2008, pp. 791-798).

[131] A study by Kruger and Evans found that people allocated significantly shorter amount of time to single task than the total time they allocated to the individual subtasks. *See* Trial Ex. 40 at ¶ 24 n.34 (Dhar WRT) (citing Justin Kruger and Matt Evans, "If You Don't Want to Be Late, Enumerate: Unpacking Reduces the Planning Fallacy," *Journal of Experimental Social Psychology*, Vol. 40, 2004, 586-598). In a different study, Forsyth and Burt found that allocated time for a single task was significantly smaller than the total time allocated to the individual subtasks. *See* Trial Ex. 40 at ¶ 24 n.34 (Dhar WRT) (citing Darryl K. Forsyth and Christopher D.B. Burt, "Allocating Time to Future Tasks: The Effect of Task Segmentation on Planning Fallacy Bias," *Memory & Cognition*, 2008, Vol. 36, No. 4, 791-798). In addition, Sudman and Schwartz note that respondents reported a 27% increase in restaurant visits when asked to report separately about the number of times they had dinner in Chinese, Greek, Italian, American, Mexican, and fast-food restaurants, than when asked to answer a more general, unpacked question "How many times have you eaten dinner in a regular or fast-food restaurant?" *See* Trial Ex. 40 at ¶ 24 n.34 (Dhar WRT) (citing Seymour Sudman and Norbert Schwartz, "Contributions of Cognitive Psychology to Advertising Research," *Journal of Advertising Research*, Vol. 29, Issue 3, 1989, pp. 43-53).

[132] *See* Trial Ex. 40 at ¶ 32 & n.39 (Dhar WRT) (citing Frederick Mosteller and Cleo Youtz, "Quantifying Probabilistic Expressions," *Statistical Science*, Vol. 5, No. 1, 1990, pp. 2-34; Floyd Jackson Fowler, Jr., "How Unclear Terms Affect Survey Data," *Public Opinion Quarterly*, Vol. 56, Issue 2, Summer 1992, pp. 218-231; Norbert Schwartz, "Self-Reports: How the Questions Shape the Answers," *American Psychologist*, Vol. 54, No. 2, February 1999, pp. 95-97; Norbert Schwartz and Daphna Oyserman, "Asking Questions About Behavior: Cognition,

interpret the word "mostly" to mean "at least 51 percent of the time," another respondent may interpret it to mean "25 percent of the time" if Sirius XM were replacing many different services and that was the highest percentage. The ambiguous wording of this question would lead that person to select traditional over-the-air AM/FM radio if one listens to the traditional, over-the-air radio 51 percent of the time, and online radio services 49 percent of the time. Trial Ex. 40 at ¶ 32 (Dhar WRT). "[I]f it was close or a tie in their minds, they still had to pick one." 5/4/17 Tr. 2693:18-19 (Lenski). When Judge Strickler hypothesized a respondent who used to listen to both AM/FM radio and CDs and "can't figure out which one [he] did mostly," Mr. Lenski said only that the interviewer would repeat the question. As Judge Strickler suggested, it is unclear how this would "give[] [the respondent] a better memory." 5/4/17 Tr. 2694:3-19 (Lenski). By allowing only a single option to be selected, the Lenski survey discounts completely important listening options simply because they are not the largest. Trial Ex. 40 at ¶ 32 (Dhar WRT).

vii. The Results Of Question 8F Regarding Allocating Future Hypothetical Time Are Unreliable

SEPFF1305. Question 8F in the Lenski survey asks respondents "If SiriusXM were no longer available, how would you divide your listening to the other types of audio you just mentioned" in response to Question 8D. Trial Ex. 7, App. B at B-4 - B-5 (Lenski WDT). Responding to this question requires respondents to perform multiple complex mental operations, causing them to employ judgmental heuristics that likely result in inaccurate responses. Putting aside the severe order bias infecting the results of Question 8F, the flaws inherent in this question completely invalidate any conclusions based on this question. Trial Ex. 40 at ¶ 21 (Dhar WRT).

Communication, and Questionnaire Construction," *American Journal of Evaluation*, Vol. 22, No. 2, 2001, pp. 127–160).

SEPFF1306. Moreover, when deciding which questions to include in a survey, the survey designer must determine if respondents can reasonably be expected to know the answers. If respondents are unlikely to know the answers and, therefore, merely guess (which may happen even if the survey follows the standard procedure and instructs respondents not to guess) or offer highly inaccurate answers, then it is a mistake to ask these questions, which will often produce misleading results. Indeed, many respondents try to be helpful even if they do not know the answer to a question, resulting in unreliable answers and survey data. This tendency is magnified in telephone surveys in which, as explained above, respondents are less likely to make the cognitive effort needed for providing reasonable accurate answers. The need to avoid questions that exert unreasonable demands on the respondent applies to questions about the future as well as the past. Trial Ex. 44 at ¶ 27 (Simonson WRT). A recent study that analyzes survey questions about past behavior explains this problem as follows:

> Frequently survey designers want respondents to provide far more detail about past behaviors than can be recalled, and as a result, they write questions respondents find difficult, if not impossible, to answer. Doing this causes respondents to draw even more on features of the questions' context rather than their real experiences in formulating their answers . . . . To avoid this tendency, surveyors should consider three recall problems. First, memory tends to fade over time. Second, individual episodes or occurrences of regular and mundane events are generally not precisely remembered (Rockwood, Sangster, & Dillman, 1997; Tourangeau, Rips, & Rasinski, 2000). And third, people usually do not categorize information by precise month or year. Given these limitations, respondents are unlikely to be able to accurately report how many days they drove more than 1 mile during the past 6 months. But they can probably very accurately report how many days they drove their car during the past week or drove more than 200 miles at a time in the past 3 months.

Trial Ex. 44 at ¶ 27 (Simonson WRT) (quoting Dillman, Don A.; Smyth, Jolene D.; Christian, Leah Melani (2014), *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (p. 98), 3rd ed., Ch. 4, Wiley. Kindle Edition). Thus, when designing a survey, it is important to limit the questions to those for which respondents can reasonably be expected to

know the answer or able to provide reasonably accurate estimates. Trial Ex. 44 at ¶ 27 (Simonson WRT); 5/11/17 Tr. 3433:25-3434:21 (Simonson).

SEPFF1307. Consumers' predictions about how they hypothetically would divide their time across multiple audio services in the future are highly unreliable. Question 8F is particularly difficult to answer reliably (especially on the phone) as estimating the proportion of time for each type of audio requires multiple mental calculations. This is because the amount of time spent listening to audio happens across many different instances (*e.g.*, regular commuting to and from work, other planned and unplanned car trips, variable use of car on weekends), instances out of the home but not in the car (*e.g.*, public transportation, exercising, etc.) and inside home (*e.g.*, before work, after returning from work, during weekends, etc.). In order to reliably answer Question 8F, respondents need to (1) think of <u>all</u> relevant instances of the behavior (*e.g.*, commuting time, exercise time, etc.), (2) assess the amount of time they listen to audio during each of those instances, (3) calculate total listening time for each audio service by adding time spent listening to that specific audio service across all instances (*e.g.*, time spent listening to Spotify while commuting, etc.), (4) add total listening times for services grouped together in response options (*e.g.*, Pandora, Spotify, Rhapsody, and other streaming), and (5) calculate the proportion of time for each audio service. It is absurd to think that respondents in a telephone survey have either the motivation or the ability to perform the cognitive operations required to answer the question reliably. They are likely to guess or rely on cognitive heuristics that the Nobel Laureate Daniel Kahneman has shown can be highly unreliable. Hence, any estimates of time allocation in response to Question 8F are likely to be wholly unreliable. Trial Ex. 40 at ¶ 23 (Dhar WRT) (citing Daniel Kahneman, *Thinking, Fast and Slow* (New York:

Farrar, Straus and Giroux), 2011); 5/11/17 Tr. 2836:15-2838:3 (Dhar); *see also* 5/11/17 Tr. 3436:18-3427:4 (Simonson).

SEPFF1308. Detailed time predictions and time allocation estimates are susceptible to a wide range of influences and biases. For example, academic research has found that people are better at predicting financial behavior than time allocation.[133]

SEPFF1309. These questions are inherently unreliable and inappropriate for any survey; they are especially inappropriate for telephone interviews. Trial Ex. 44 at ¶ 41 (Simonson WRT); 5/11/17 Tr. 3433:25-3434:21 (Simonson).

SEPFF1310. Even under the best conditions but particularly when asked about durations under some alternative reality, it is highly unlikely that time estimates and predictions can provide reliable information (and the use of telephone surveys makes such estimates even less reliable). Thus, while survey respondents may be able to predict with some accuracy the choices they would make, they certainly cannot offer reliable estimates regarding the amount of time they would hypothetically spend listening to various "audio types." As indicated, the inability to offer reliable estimates does not mean that respondents would not answer the questions given to them. Once they start answering survey questions, many respondents would try to satisfy the interviewer ("satisficing" discussed above) whether or not they have any clear

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[133] *See* Trial Ex. 40 at ¶ 23 & n.30 (Dhar WRT) (citing Gal Zauberman and John G. Lynch, Jr., "Resource Slack and Propensity to Discount Delayed Investments of Time Versus Money," *Journal of Experimental Psychology: General*, Vol. 134, No. 1, 2005, pp. 23–37); *see also* Trial Ex. 44 at ¶ 42 n. 21 (Simonson WRT) (citing M. Roy et al. (2005), "Underestimating the Duration of Future Events: Memory Incorrectly Used or Memory Bias?," *Psychological Bulletin*, 131, 738-756; B. Fredrickson and D. Kahneman (1993), "Duration Neglect in Retrospective Evaluations of Affective Episodes," *Journal of Personality and Social Psychology*, 65, 45-55; D. Zakay (1993), "Relative and Absolute Duration Judgments Under Prospective and Retrospective Paradigms," *Perception & Psychophysics*, 54, 656-654; R. Block and D. Zakay (1997), "Prospective and Retrospective Duration Judgments: A Meta-Analytic Review," *Psychonomic Bulletin & Review*, 4, 184-197).

idea as to how much time they would spend on each activity they are asked about. Trial Ex. 44 at ¶ 42 & n.21 (Simonson WRT); 5/11/17 Tr. 3433:25-3436:3 (Simonson).

SEPFF1311. Thus, asking respondents to estimate the time they previously spent and allocate future hypothetical time across multiple music types is *unrealistic and bound to produce unreliable "data."* Accordingly, there is nothing to learn from the answers to the Lenski survey questions pertaining to future projections of duration of listening to music types that might replace Sirius XM. Trial Ex. 40 at ¶ 23 (Dhar WRT); Trial Ex. 44 at ¶ 43 (Simonson WRT). It is therefore no surprise that Mr. Lenski testified that in his "20-plus years at Edison" he did not "know of a single survey that included [this] question." 5/4/7 Tr. 2709:1-8 (Lenski).

viii. Mr. Lenski's Survey Yielded Illogical Responses

SEPFF1312. Questions 3 and 8A ask respondents how much time they spend listening to music and Sirius XM, respectively. Specifically, Question 3 asks "Thinking about all of the different ways you might listen to music, approximately how much time in hours or minutes do you spend listening to music in a typical day?", and Question 8A asks "Now I'd like you to think about your current listening to SiriusXM Satellite Radio. How much total time, in hours or minutes, would you say you spend listening to SiriusXM in a typical WEEK" (emphasis in original).[134] Trial Ex. 7, App. B at B-2, B-3 (Lenski WDT). Questions that attempt to elicit "how much time in hours or minutes" people engage in activities such as listening to music are likely to generate unreliable data. Trial Ex. 40 at ¶ 26 (Dhar WRT).

SEPFF1313. Evidence of the unreliability of the responses in the Lenski survey can be seen in the responses to Question 3. For example, 31 respondents in the Lenski survey

[134] Question 10A asks Pandora users a parallel question about how much time they spend listening to Pandora in a typical week. Trial Ex. 40 at ¶ 26 n.35 (Dhar WRT) (citing Trial Ex. 7, App. B at B-5 (Lenski WDT)).

reported listening to music for 24 hours or more in a typical day. Plainly impossible responses such as these undermine the validity of the data. Trial Ex. 40 at ¶ 27 (Dhar WRT).

SEPFF1314. In addition, for a number of respondents, the responses to Question 3 cannot be reconciled with their responses to Question 10A. Among survey respondents who were Pandora users, 164 (12 percent of Pandora users) reported spending more time listening to Pandora, in Question 10A, than they did listening to music *overall,* in Question 3. It is not possible for the responses to both of these questions to be valid. That so many respondents provided responses that cannot be reconciled with one another indicates that it was difficult for survey respondents to provide accurate responses to the Lenski survey, or that respondents did not understand the questions and could not provide meaningful answers. Trial Ex. 40 at ¶ 28 (Dhar WRT). Mr. Lenski attempted to explain this away by stating that Pandora includes some non-music content. 5/4/17 Tr. 2657:14-15 (Lenski). But Pandora is quite obviously primarily a music service, *see* 5/1/17 Tr. 2657:5-12 (Lenski) (Judge Barnett observing that focus on music was "implied by the use of Pandora"), and it is simply fanciful to think that a significant number of these 164 users – especially after being asked about their music listening habits in Question 3 – answered Question 10 with both music and non-music listening on Pandora, let alone significant non-music listening time.

SEPFF1315. Respondents also provided potentially inconsistent responses to other questions in the Lenski survey, underscoring that the questions relating to listening time ask respondents to perform difficult mental tasks and/or that the survey is confusing. For example, respondents who answered Question 8D by saying that they would "listen to less audio overall …" if Sirius XM were no longer available were then asked to estimate "In hours or minutes, how much less time would you listen in a typical week" (Question 8E). Trial Ex. 7, App. B at B-4

(Lenski WDT). Twenty respondents reported that they would reduce their listening by *more* time than they reported listening to Sirius XM. These responses can be reconciled only if those respondents would not replace their listening to Sirius XM with any other audio service *and* they would further reduce listening to other audio services if Sirius XM were no longer available. There is no logical reason for this to happen. Moreover, respondents themselves suggested this would not happen: 19 of those 20 respondents also reported that they would replace Sirius XM with another service.[135] What is more logical is that the pattern of responses further highlights that one cannot rely on the survey results to draw meaningful conclusions about consumer use of audio services. Trial Ex. 40 at ¶ 29 (Dhar WRT).

3. The Lack Of Adequate Reporting Of Survey Implementation Impedes The Ability To Assess The Reliability Of The Survey

SEPFF1316. In order to assess whether the data in the Lenski survey can be relied upon to be representative of the marketplace, it is necessary to understand whether the survey followed accepted survey practice. In telephone surveys, it is good survey practice to report what happened to each telephone number included in the initial sample. This information allows a reviewer to assess whether the sample is representative or contains non-response error. This is usually accomplished with a call log, which typically provides information about every dial attempt, including the date and time the call was made, whether it was answered, and the disposition of the call.[136] Mr. Lenski did not retain a call log file that shows the result of each dial attempt. Without such a call log, it is impossible to know whether the survey was executed

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[135] Responses of Pandora listeners exhibit the same problematic pattern: 28 respondents indicated that they would reduce their listening by *more* time than they reported listening to Pandora. Moreover, 27 of those 28 respondents also indicated that they would replace Pandora with another service. Trial Ex. 40 at ¶ 29 n.37 (Dhar WRT).

[136] Trial Ex. 40 at ¶ 33 n.40 (Dhar WRT) (citing "Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys," American Association for Public Opinion Research, Ninth Edition, Revised 2016, pp. 8, 14-22; Trial Ex. 279 at 415-16.

as intended. For example, for numbers that never answered the telephone, such a file would show when numbers were dialed to ensure that (a) a sufficient number of attempts were made and (b) that those call attempts were made at different times of day and on different days of the week to minimize the chance of bias. More generally, the call log would allow one to determine whether the sampling protocol was followed properly and understand the time of day that the calls were made. Reviewing the call log is the only way to know if the survey was implemented according to best practices. Trial Ex. 40 at ¶ 33 (Dhar WRT).

* * *

SEPFF1317. Putting aside all the flaws in Question 8D discussed above, some of which artificially deflate the number of respondents who choose streaming services and others that decrease the reliability of the data, it is important to note that Mr. Lenski still finds that a significant percentage of Sirius XM listeners would replace Sirius XM with a streaming music service: He finds that 49 percent of Sirius XM listeners would "replace [their] SiriusXM listening" with a Not-On-Demand music streaming service such as Pandora, iHeartRadio, or online streams of AM/FM radio stations, and 32 percent of respondents would substitute for an On-Demand music streaming service such as Spotify or Rhapsody. Trial Ex. 40 at ¶ 20 (Dhar WRT) (citing Trial Ex. 7 at 5, & App. B at B-4 (Lenski WDT)).

IX. Adjusting The Prevailing *SDARS II* Rate Does Not Produce A Reliable Benchmark

SEPFF1318. In *SDARS II*, the Judges concluded that, for the year 2017, the appropriate statutory rate for Sirius XM's satellite radio service would be 11%. Professor Shapiro proposes that the Judges start with this 11% rate and consider whether there have been marketplace changes that warrant adjusting the rate that Sirius XM should pay during the 2018-2022 rate period. Trial Ex. 8 at 27 (Shapiro WDT). After purportedly analyzing whether there have been pertinent changes in the marketplace since the resolution of *SDARS II*, Professor Shapiro concludes that the 11% rate does not need to be adjusted upward and should be viewed as the upper bound of a reasonable royalty rate in this proceeding. Trial Ex. 8 at 34 (Shapiro Corr. WRT).

SEPFF1319. Professor Shapiro's approach is improper and his conclusion is incorrect. As an initial matter, Congress has determined that the statutory rates payable by Sirius XM should be determined anew for each licensing period. Thus, Professor Shapiro's assertion that the Judges should in this proceeding begin with rates set in *SDARS II* should be rejected as a matter of law.

SEPFF1320. Even if it were permissible to begin with the *SDARS II* rates, doing so would be imprudent for two reasons. First, it makes little conceptual sense to push forward rates that were calculated using marketplace data that are now many years out of date, rather than starting afresh with current marketplace data. Trial Ex. 43 at ¶ 9 (Orszag WRT). That is particularly true here because the rates set in *SDARS II* were based to a material degree on the rates set in *SDARS I*, which in turn were predicated on royalty rates and consumer prices that are now a decade old. Trial Ex. 43 at ¶ 9 (Orszag WRT) (citing *SDARS II*, 78 FR at 23068).

SEPFF1321. Second, pertinent marketplace conditions have shifted and evolved dramatically in the decade since the trial in the *SDARS I* case took place, rendering Professor

Shapiro's *SDARS II* benchmark ill-advised. Even in the five years since the *SDARS II* proceeding, the digital music marketplace has proven highly dynamic, in particular with respect to the rapid and widespread consumer acceptance of interactive subscription services, as well as Sirius XM's continued growth and profitability. Trial Ex. 43 at ¶ 9 (Orszag WRT).

SEPFF1322. For each of these reasons, elaborated below, the statutory rate set in prior proceedings should not be viewed as the upper bound of a reasonable royalty rate in this proceeding.

A. Congress Has Instructed That The Statutory Rate For Sirius XM's Satellite Radio Service Must Be Determined Anew For Each Licensing Period

SEPCL3. Professor Shapiro's suggestion that the Judges begin with the prevailing statutory rate and then consider whether changes in the marketplace since *SDARS II* warrant making adjustments – which we term the "SDARS II Benchmark" for ease of exposition – is inconsistent with the rate-setting procedures crafted by Congress. The statutory text, and historical practice, indicate that Congress intended the rates covering Sirius XM's satellite radio service be determined de novo for each licensing period. Because Professor Shapiro's SDARS II Benchmark is inconsistent with the regulatory scheme that Congress created, it should be disregarded.

SEPCL4. The Copyright Act is clear on this point. Congress delegated ratemaking authority over SDARS and PSS to the Judges in Section 114(f), which provides that the Judges "shall *determine* reasonable rates and terms of royalty payments" for these services. 17 U.S.C. § 114(f)(1)(A) (emphasis added). "The schedule of reasonable rates and terms *determined* by the Copyright Royalty Judges" is binding on all copyright owners subject to the statutory license. 17 U.S.C. § 114(f)(1)(B) (emphasis added). And the Judges' final rule and order at the culmination of this proceeding, in which the Judges "announc[e] their final

determination of the rates and terms" for SDARS and PSS, will be entitled "*Determination* of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Series." *SDARS II*, 78 FR 23054 (emphasis added). "[I]n *establishing* rates and terms" for the SDARS and PSS, the Judges consider benchmark rates alongside the section 801(b)(1) objectives. *SDARS II*, 78 FR 23081 (emphasis added). Congress's use of the verbs "determine" and "establish," rather than "reexamine" or "adjust," belie Sirius XM's proposal for the Judges to merely ratify the rates from the prior ratesetting period.

SEPCL5. The distinction between determining and adjusting rates is also visible in other portions of the statutory framework that govern rate-making proceedings before the Judges. Congress delegated to the Judges two separate powers: the power to make "determinations" and the power to make "adjustments." For example, Congress prescribed for the Judges to "have full independence in making determinations concerning adjustments and determinations of copyright royalty rates and terms." 17 U.S.C. § 802(f)(1)(A)(i). Here, in a Section 114 ratemaking proceeding, they are tasked with the latter. In contrast, certain royalties are to be determined on the basis of negotiation, but adjusted for voluntary agreements and inflation. 17 U.S.C. § 119(c)(1)(B), (1)(F), (2). Indeed, while some licenses, like Section 112 and 114 licenses, are to be *determined*, *see* 17 U.S.C. §§ 112(e)(3), 114(f)(1)(A); 804(b)(2), (3), others – like Section 111 rates and AHRA rates – are to be *adjusted*, *see* 17 U.S.C. §§ 801(b)(2), 804(b)(1), (b)(7).

SEPCL6. Congress's careful distinction between the Judges' duties to "determine" in some situations and "adjust" in others must be accorded respect. "Different words used in the same, or a similar, statute are assigned different meanings whenever possible." 2A Norman Singer & Shambie Singer, *Sutherland Statutes and Statutory Construction* § 46:6,

Westlaw (7th ed. database updated Nov. 2016). Moreover, that Congress used "adjust" in some places in the Copyright Act but notably *not* in Section 114 is significant. "When the legislature uses a term or phrase in one statute or provision but excludes it from another, courts do not imply an intent to include the missing term in that statute or provision where the term or phrase is excluded. Instead, omission of the same provision from a similar section is significant to show *different legislative intent* for the two sections." 2A *Sutherland Statutes and Statutory Construction* § 46:6 (emphasis added) (footnote omitted).

SEPCL7. Moreover, the distinction between determining and adjusting rates is reflected in Congress's longstanding practice. When the Copyright Act of 1976 was enacted, Section 801(b)(1) empowered the Copyright Royalty Tribunal to make decisions "concerning the *adjustment* of reasonably copyright royalty rates as provided in sections 115 and 116, and . . . *determinations* as to reasonable terms and rates of royalty payments provided in section 118." 17 U.S.C. § 801(b)(1) (1976). And although Section 115 rates historically have been adjusted, because the 1978 rate was set forth in the Copyright Act of 1976, Congress amended the provision to provide for determination when adding digital rights in 1995, through enactment of the Digital Performance Right in Sound Recordings Act. *See* 17 U.S.C. §§ 115(c)(2), (3)(C), 804(b)(4).

SEPCL8. The Judges' past practice indicates that they have understood their task in setting Section 114 rates as one of *determining* first and *adjusting* second. Specifically, the Judges have approached SDARS ratemaking by first determining an appropriate rate by looking at marketplace benchmarks and then making any adjustments mandated by the Section 801(b) factors. *See SDARS II*, 78 FR at 23066 ("In analyzing the Section 801(b) factors the Judges determine whether adjustments to the rate indicated by marketplace benchmarks, if any, are

warranted and, if so, whether there is sufficient evidence in the record to support such adjustments."); *SDARS I*, 73 FR at 4084 ("[W]e begin with a consideration and analysis of the benchmarks and testimony submitted by the parties, and then measure the rate or rates yielded by that process against the statutory objectives to reach our decision."). Were the Judges entitled to simply rely on the existing rate and push it forward there would be no reason to *determine* a rate using the marketplace benchmarks at all; under this alternative scheme the Judges would start with the current rate and simply adjust it.

SEPCL9. In short, Congress has carefully constructed a statutory scheme that distinguishes between rates that must in the first instance be determined, and rates that can simply be adjusted. Rates for Sirius XM's satellite radio service are to be *determined* under Section 114. 17 U.S.C. § 114(f)(1)(A). By urging the Judges to adjust a previously determined statutory rate, Sirius XM and Professor Shapiro depart from this instruction and, for this reason, Professor Shapiro's SDARS II Benchmark should be disregarded.

B. Starting With Current Market Rates Is Preferable To Starting With Regulated Rates Predicated On Stale Data

SEPFF1323. Professor Shapiro offers no defensible explanation why, as a matter of economics, a prior analysis of now stale marketplace agreements should be used to determine rates for the 2018 to 2022 period. Simply put, relative to older marketplace information that grows increasingly outdated with the passage of time, data and marketplace information from today will be far more informative about a reasonable royalty rate for Sirius XM to pay for the 2018 to 2022 period. Trial Ex. 43 at ¶ 15 (Orszag WRT).

SEPFF1324. This is especially so given that the *SDARS II* rates were in turn largely derived from the rates determined in the *SDARS I* proceeding, concluded roughly a decade ago. Indeed, in *SDARS II,* the Judges concluded that the "most likely ceiling" of the zone of

reasonable rates was 12 to 13%. *SDARS II*, 78 FR at 23071. The 13% figure was derived from the *SDARS I* decision. *SDARS II*, 78 FR at 23068; *see also* Trial Ex. 43 at ¶ 15 (Orszag WRT) (citing *Web IV* Katz WDT at 61 ("The figure reached in the SDARS II Decision was based on the SDARS I analysis.")).

SEPFF1325. In the decade since the *SDARS I* trial, the digital distribution of sound recordings has undergone rapid and material changes along numerous dimensions, including the terms of royalty compensation found in license agreements, how consumers overall allocate their spending across available distribution channels, the entry and exit of services, and consumer prices. Trial Ex. 43 at ¶ 15 (Orszag WRT). In such a dynamic environment, it defies economic reason to suggest, as Professor Shapiro effectively does, that information from a decade ago should undergird the determination of rates for Sirius XM over the five-year period beginning in 2018. Trial Ex. 43 at ¶ 15 (Orszag WRT). It is far more appropriate to use current marketplace agreements in evaluating the range of reasonable rates for the upcoming licensing period. 4/25/17 Tr. 953:7-16 (Orszag).

C. The Marketplace Has Changed Since *SDARS II*

SEPFF1326. Putting aside the disconnect between a rapidly evolving market for digital music and Professor Shapiro's support for a licensing rate rooted in decade-old information, his suggestion that the Judges adopt a benchmarking method predicated on adjusting the *SDARS II* rates should be rejected because of his flawed assessment of marketplace changes. Relevant changes are discussed in turn.

1. Changes in Opportunity Cost

SEPFF1327. The first change in the marketplace that Professor Shapiro analyzes is the growth of streaming. Professor Shapiro concludes that the growth of streaming since *SDARS II* does not provide a basis for an upward adjustment to the prevailing statutory rate. Trial Ex. 8

at ¶ 29 (Shapiro WDT). Professor Shapiro is mistaken. The growth in streaming has an impact on opportunity cost and, as Professor Shapiro recognized in *Web IV*, when opportunity costs rise, so too should royalties. Trial Ex. 669 at 6.

SEPFF1328. Below, we review record evidence indicating that the transition to streaming has increased the opportunity cost of licensing Sirius XM since *SDARS II*. We also address deficiencies in Professor Shapiro's analysis of how the growth of streaming affects the appropriate range of royalties in this proceeding. This evidence and analysis demonstrates that Professor Shapiro is wrong to conclude that the growth of streaming provides no basis for an upward adjustment to the prevailing statutory rate, and thus demonstrates that his SDARS II Benchmark is unreliable.

i. Professor Shapiro Agrees That Use Of Streaming Services Has Grown Substantially Since *SDARS II*

SEPFF1329. Professor Shapiro correctly notes that, today, streaming services have achieved substantially greater consumer acceptance – and are much more important to record industry revenues – relative to 2012, when the *SDARS II* proceeding took place. Trial Ex. 8 at 28 (Shapiro WDT).

SEPFF1330. More specifically, Professor Shapiro notes that the share of record company revenue from streaming increased from 12% in 2012 to 43% in the first half of 2016. Trial Ex. 8 at 28 (Shapiro WDT). Professor Shapiro also recognizes that the share of record company revenue attributable to fully interactive services increased from 8% to 35% of record company revenue over the same period. Trial Ex. 8 at 28 (Shapiro WDT). And he acknowledges that this trend is "likely to continue" during the statutory licensing period for the present proceeding (2018-2022). Trial Ex. 8 at 28 (Shapiro WDT).

ii. The Growth Of Streaming Has Increased Opportunity Cost Because Sirius XM Substitutes For Streaming Services That Generate More Revenue On A Per Subscriber Basis

SEPFF1331. The growth of subscription streaming services has increased the opportunity cost of licensing Sirius XM. As discussed below, and at length in Section V *supra*, this is because subscription streaming services generate significantly more per-user revenue than Sirius XM and because Sirius XM substitutes for other subscription services.

SEPFF1332. At the current rates, Sirius XM pays the record companies only $12 to $14 per year per subscriber. Trial Ex. 32 at ¶ 27 (Harrison WDT). By contrast, subscription fully interactive services and subscription non-interactive services generate [[redacted]] and [[redacted]] per year per subscriber, respectively. Trial Ex. 32 at ¶ 27 (Harrison WDT). This matters because Sirius XM substitutes for subscription streaming services. As Professor Dhar's survey indicates, 31% of Sirius XM subscribers would switch to a fully interactive service if they left Sirius XM, while 15% of Sirius XM subscribers would switch to a subscription non-interactive service in the same circumstance. Trial Ex. 46 at ¶ 76 (Willig WRT).

SEPFF1333. The results of Professor Dhar's survey are corroborated by substantial evidence. *See* Section V(J)(2)-(4) *supra*. For example, Professor Simonson's survey indicates that the same number of Sirius XM subscribers would choose a subscription fully interactive service (31%) and indicates that 33% would choose a subscription non-interactive service if Sirius XM were no longer available. Trial Ex. 46 at ¶ 76 (Willig WRT). Professor Willig's econometric analysis also confirms that the creator compensation opportunity cost of Sirius XM's access to the music is substantial, largely arising from cannibalization of paid streaming services which have the largest level of creator compensation. Ex. 28 at ¶ 43 (Willig WDT); *see also* Trial Ex. 28, App. F (Willig WDT) (providing further details about this econometric analysis).

iii. The Growth Of Streaming Has Increased Opportunity Cost Because Sirius XM Now Competes More Directly With Subscription Streaming Services

SEPFF1334. The record contains overwhelming evidence that subscription streaming services have become more competitive with Sirius XM. For example, streaming services that offer fully interactive experiences are shifting towards an emphasis on lean-back functionality like that offered by Sirius XM. *See* Section V(J)(4) *supra*. Subscribers to fully interactive services now listen more regularly to playlists, and those services now complete on curatorial features like discover playlists or browse features. *See* Section V(J)(4) *supra*.

SEPFF1335. [5/16/17 Tr. 3988:18-3989:6 (Harrison). [ ] 5/16/17 Tr. 3988:18-3989:6 (Harrison). [ ] 5/16/17 Tr. 3988:18-3989:6 (Harrison).

SEPFF1336. Sirius XM has long acknowledged that developments in mobile and network technology would increase competition between its satellite radio service and various streaming services. The company's 2013 Form 10-K stated: "We expect that improvements from higher bandwidths, wider programming selection, and advancements in functionality are likely to continue making Internet radio and smartphone applications an increasingly significant competitor, particularly in vehicles." Trial Ex. 353 at 5.

SEPFF1337. Another development has also increased the extent to which Sirius XM competes with subscription services in the car, namely, that many of the services have been working with automotive companies to become more fully integrated into the dashboard. *See* Section V(J)(4) *supra*. As Sirius XM put it in publicly filed documents: "Nearly all automakers have deployed or are planning to deploy integrated multimedia systems in dashboards. . . . These systems enhance the attractiveness of Internet-based competitors by making such applications more prominent, easier to access, and safer to use in the car." Trial Ex. 356 at 6 (Sirius XM 2015 10K).

SEPFF1338. That these developments have increased competition between Sirius and streaming services is evident on the face of Sirius XM's public filings. Over time, Sirius XM has gone from predicting competition in the car, to announcing it. The company's 2013 Form 10-K represents that streaming services "may become integrated into connected cars in the future." Trial Ex. 353 at 5 (Sirius XM 2013 10-K). In the following year's Form 10-K, Sirius XM revised that language to note that streaming services "are increasingly becoming integrated into vehicles." Trial Ex. 354 at 5 (Sirius XM 2014 10-K). And in its recent 10-K filings, Sirius XM states that streaming services "are easily integrated into vehicles." Trial Ex. 356 at 6 (Sirius XM 2015 10-K).

SEPFF1339. Increased competition between Sirius XM and subscription streaming services is reflected in Sirius XM's decision to bring a complaint alleging that one of its former programmers breached a non-compete clause by, among other things, taking a position that required curating playlists for Spotify. Trial Ex. 282 at 7 (SoundX_000151700).

SEPFF1340. Testimony developed at trial confirms that Sirius XM is increasingly concerned with competition from subscription streaming services, including fully interactive

ones. In response to questions posed by Judge Strickler, Sirius XM's CEO, James Meyer, expressly acknowledged that he is concerned about the future competition from paid interactive services that make prepackaged playlists available for ease of use in the car. 5/15/17 Tr. 3735:1-10 (Meyer).

iv. Professor Shapiro's SDARS II Benchmark Is Not Reliable Because He Does Not Consider How The Expansion Of Streaming Affects Opportunity Cost

SEPFF1341. Although Professor Shapiro recognizes the tremendous growth that streaming services have experienced since *SDARS II*, Professor Shapiro never considers how this growth affects the opportunity cost of licensing Sirius XM. Instead, Professor Shapiro offers a conclusory assertion that "[t]he shift in record-company revenue toward streaming services does not, in and of itself, warrant any change in the rate currently charged to Sirius XM under the 801(b)(1) objectives." Trial Ex. 8 at ¶ 29 (Shapiro WDT). This analysis is plainly deficient.

SEPFF1342. Professor Willig, in his written rebuttal testimony, attempted to discern whether Professor Shapiro implicitly offered some basis for dismissing the relevance of streaming's explosive growth. Professor Willig identified two potential rationales, one related to trends in record company revenue and the other related to the "availability" objective under Section 801(b)(1)(A). Trial Ex. 46 at ¶¶ 63-65 (Willig WRT). Below, we present evidence indicating that neither of these rationales withstand scrutiny. We also address Professor Shapiro's assertion, made when he testified at trial, that the growth of streaming has not affected how music is consumed in the car, the primary location in which Sirius XM's satellite radio service is used.

a. Total Record Company Revenues Are An Inappropriate Metric For Measuring Whether The Growth Of Streaming Warrants An Upward Adjustment To The Prevailing Statutory Rate

SEPFF1343. Professor Shapiro's assertion that record company revenues were "stable" from 2012 to 2015, and increased in the first half of 2016, lends no support to his conclusion that the prevailing statutory rate represents the upper bound of a reasonable royalty for the upcoming licensing term. Trial Ex. 8 at 29 (Shapiro WDT). As an initial matter, Professor Shapiro does not appear to draw any conclusions from data regarding total record company revenues. Trial Ex. 8 at 29 (Shapiro WDT). In any case, this purported trend in gross revenue is not the appropriate metric for assessing the impact of the shift in distribution mix towards streaming. Trial Ex. 46 at ¶ 64 (Willig WRT). As Professor Willig explained in his written rebuttal testimony, this is so for three reasons, each predicated on basic economic principles.

SEPFF1344. First, gross revenue is not the pertinent measure for assessing incentives – rather, the pertinent measure is returns. Trial Ex. 46 at ¶ 67 (Willig WRT).

SEPFF1345. Second, examining the simple time trend is not the correct approach for measuring the impact of the shift in distribution mix. The reason is that the change over time can, and almost inevitably will, be affected by changes in other factors besides the shift in distribution mix, such as overall macroeconomic trends. Trial Ex. 46 at ¶ 67 (Willig WRT). As a result, the correct approach is to examine the actual value of creator compensation in 2016 versus what it would have been in 2016 but-for the shift in distribution mix (*i.e.*, keeping all other factors constant). Trial Ex. 46 at ¶ 67 (Willig WRT).

SEPFF1346. Third, in examining trends, it is important to pick the correct "baseline" period. The *SDARS II* proceeding commenced in January 2011, and evidence presumably was collected before written direct testimony was submitted in November 2011. Trial Ex. 46 at ¶ 67 (Willig WRT). In *SDARS III*, Professor Shapiro only presents data starting

in 2012. Trial Ex. 8 at 29 (Shapiro WDT). Accordingly, Professor Shapiro's data may not capture how the market has evolved for the entire period following the collection, submission, and review of data in *SDARS II*, and the data does not constitute an appropriate baseline. Trial Ex. 46 at ¶ 67 (Willig WRT).

SEPFF1347. Professor Willig, in analyzing how the explosive growth of streaming has affected creator compensation, makes none of these mistakes. *See* Section V(K)(4)(i)(b) *supra*. His analysis focuses on the returns that a creator would have received but for the growth of streaming, for the period 2010-2016. Trial Ex. 28 at § IV (Willig WDT). This analysis is pivotal to understanding whether the market for sound recordings has changed since the conclusion of *SDARS II*, and indicates that the shift in distribution mix has resulted in a creator compensation shortfall in 2016 of about $800 million per year. Trial Ex. 28 at ¶ 29 (Willig WRT). Thus, contrary to Professor Shapiro's conclusion, there is powerful evidence indicating that the growth of streaming since *SDARS II* supports an upward adjustment to the currently applicable statutory rate.

b. Professor Shapiro's Failure To Present Empirical Evidence Regarding How The Growth Of Streaming Affects The Availability Of Sound Recordings Renders His SDARS II Benchmark Unreliable

SEPFF1348. Professor Shapiro recognizes that, to the extent the growth of streaming has affected the availability of sound recordings, analyzing that growth would be relevant when determining whether it is necessary to adjust the prevailing statutory rate. Trial Ex. 8 at 32 (Shapiro WDT). Professor Shapiro also recognizes that returns to music content creators are a relevant component in assessing the availability of sound recordings under Section 801(b)(1). Trial Ex. 8 at 31-32 (Shapiro WDT).

SEPFF1349. After laying out the economic framework for assessing whether changes in the marketplace have affected availability since the *SDARS II* proceeding, Professor Shapiro simply states he is "not aware of any evidence indicating that such a change has occurred in recent years." Trial Ex. 8 at 32 (Shapiro WDT). Professor Shapiro did not conduct, and certainly did not present, any corresponding empirical analysis of the availability factor.

SEPFF1350. This is problematic because if the growth of streaming has affected compensation to the artists and labels that create sound recordings, the incentives to make those sound recordings may likewise be affected. Indeed, as discussed above, and elaborated at length in Section V *supra*, Professor Willig's analysis indicates that the growth of streaming has created a substantial shortfall in creator compensation. For this reason, Professor Shapiro's failure to conduct any empirical analysis of whether the growth of streaming has affected the availability of sound recordings renders his SDARS II Benchmark unreliable.

c. Professor Shapiro's Use Of Unreliable Data To Assess Downstream Consumption Renders His SDARS II Benchmark Unreliable

SEPFF1351. In his trial testimony, Professor Shapiro asserted that whether there have been meaningful changes in the downstream consumption of digital sound recordings since *SDARS II* depended on how listening in the car has evolved over the five-year licensing period. 4/20/17 Tr. 234:5-15, 235:4-8 (Shapiro). But Professor Shapiro relied on a single survey, which is not in evidence, for purposes of measuring downstream listening in the car. 4/20/17 Tr. 233:14-17 (Shapiro).

SEPFF1352. According to Professor Shapiro, this study – which is called the Share of Ear Survey and was conducted by the same firm retained by Sirius XM to field surveys for use in this litigation – suggests that Sirius XM comprises 16% of in-car listening, while other forms of subscription and ad-supported streaming comprise only 6% of in-car listening. 4/20/17 Tr.

235:9-17 (Shapiro). To Professor Shapiro, this indicates that Sirius XM continues to compete primarily with terrestrial radio, not streaming.

SEPFF1353. As an initial matter, Professor Shapiro does not dispute that the amount of in-car listening to interactive services is going to rise during the coming licensing period because of improvements in connected car technology. 4/20/17 Tr. 238:4-5 (Shapiro). And though Professor Shapiro indicated that he would "tend to put more weight on the growth of the ad-supported services in the connected car than the paid interactive services," he recognized that "people will differ about their projections on that." 4/20/17 Tr. 238:18-22 (Shapiro).

SEPFF1354. In any event, Professor Shapiro's reliance on the Share of Ear Survey is problematic for several reasons. First, there is no evidence that the survey is reliable. No Sirius XM witness has explained in any detail the methodology used to conduct the survey,[137] and because the survey is not in evidence, the Judges cannot examine any methodological issues that might undermine the survey's validity, including: the phrasing of each question, the order of questions, the breadth and order of responses, the logic of the survey design (*e.g.* rotation of answer choices, the omission of questions depending on previous responses), and the screening criteria.

SEPFF1355. Second, Professor Shapiro does not analyze whether the Share of Ear survey is more reliable than actual record evidence regarding the same issue; such evidence indicates that streaming services other than Sirius XM comprise a more significant portion of in-

[137] Mr. Lenski in his written direct testimony states that the Share of Ear survey uses a "diary" method of data collection. Trial Ex. 7 at 1 (Lenski WDT). At trial he added that the Share of Ear survey involved asking respondents to record what they listen to over a 24-hour period, as well as some other information, including where the respondent listens, what device they use, for how long listening occurs, and at what time of day listening occurs. 5/4/17 Tr. 2629:19-2630:7 (Lenski). As discussed below, this description does not provide the Judges, or SoundExchange, with nearly enough information to scrutinize the survey's methodology or draw any conclusion about whether they survey is reliable.

car listening. For example, a [ ]. Trial Ex. 122 at 72 (SoundX_000033362). Critically, the study found that [ ]. Trial Ex. 122 at 72 (SoundX_000033362). [ ]. Trial Ex. 122 at 25 (SoundX_000033315).

SEPFF1356. Third, Professor Shapiro's data, like the Lenski survey, is concerned with the incorrect question. Professor Shapiro relies on the survey to suggest that Sirius XM substitutes primarily for terrestrial radio. 4/20/17 Tr. 236:3-19 (Shapiro). However, the operative question for assessing substitution is not how consumers allocate their listening *time*, but how they will allocate the *money* they devote to consuming music. *See* Sections V(J)(2), VIII(G) *supra*. The Share of Ear survey on which Professor Shapiro relies has nothing to say on this score.

SEPFF1357. Moreover, there is record evidence indicating that, notwithstanding the *amount* of time consumers spend listening to streaming services in the car, a more substantial number of consumers do *use* streaming services in the car. For example, the [ ]. Trial Ex. 123 at 2 (SoundX_000034822). Similarly, [

[redacted]. Trial Ex. 117 at 22 (SoundX_000034493). [redacted]. Trial Ex. 294 at 19 (SoundX_000488945). Indeed, more respondents indicate that they have [redacted].[138] Trial Ex. 117 at 48-49 (SoundX_000034520-21). And while it is true that these figures do not disaggregate subscription and ad-supported listening, they do indicate, at the very least, that there is a significant and growing opportunity to monetize in-car listening to streaming services other than satellite radio.

SEPFF1358. Finally, Professor Shapiro's reliance on the Share of Ear survey is misplaced because he incorrectly assumes that the percentage of listening time devoted to Sirius XM would otherwise be devoted to terrestrial radio, rather than forms of streaming. This assumption is incorrect because Sirius XM subscribers have a willingness to pay not characteristic of consumers who listen only to terrestrial radio. *See, e.g.*, 4/24/17 Tr. 670:21-671:21 (Farrell); 5/11/17 Tr. 3438:2-8, 3462:2-9 (Simonson). Sirius XM's other economic expert, Professor Farrell, acknowledged that the willingness to pay exhibited by Sirius XM subscribers reflects their belief that Sirius XM offers benefits that terrestrial radio simply does not:

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[138] Although the Edison study includes a dedicated AM/FM radio option, it apparently included online streams of AM/FM radio stations or internet only radio in the category of online radio. Trial Ex. 117 at 48-49 (SoundX_000034520-21). It is not clear whether the study allowed respondents to answer that they use fully interactive services in the car. Trial Ex. 117 at 48-49 (SoundX_000034520-21).

> Q: Now, we can agree, can't we, that people who listen to Sirius XM in the car also have AM/FM radio available to them in the car, right?
>
> A: I would think so, yes.
>
> Q: And they have AM/FM radio available to them for free, right?
>
> A: Yes.
>
> Q: And yet they have chosen to pay 10 to 20 dollars per month for Sirius XM, right?
>
> A: If they are subscribing versus on a free trial, yes.
>
> Q: Okay. And so can't we reasonably infer that people are motivated to spend that money because there is either something they really don't like about AM/FM radio or something they do like about Sirius XM, right?
>
> A: Certainly, yes.
>
> Q: And so if Sirius XM goes away, can't we reasonably expect them to be spending their money on other things that either avoid what they don't like about terrestrial radio or give them the same things they like about Sirius XM?
>
> A: Well, if those things were readily available in the car, sure. If they are not readily available in the car, it becomes a little more problematic.

4/24/17 Tr. 670:21-671:21 (Farrell); *see also* Trial Ex. 5 at 3 (Blatter WDT) (emphasizing that Sirius XM "attracts knowledgeable and sophisticated music fans who appreciate, and who are willing to pay for, [Sirius XM's] more tailored channel offerings and deeper playlists").

SEPFF1359. Indeed, it is for this reason that Sirius XM subscribers are more likely to replace Sirius XM with a subscription fully interactive or non-interactive streaming service than they are to replace their Sirius XM usage by listening (or returning to) terrestrial radio. *See, e.g.*, Trial Ex. 28, Table 2 at 27 (Willig WDT) (indicating that 46% of users abandoning Sirius XM would choose a subscription fully interactive or non-interactive streaming service, whereas 32% would choose a distribution channel that does not compensate the record companies, like terrestrial radio); Trial Ex. 44 at ¶ 69 (Simonson WRT) (indicating that, if Sirius XM were no longer available, 64% of Sirius XM users would subscribe to fully interactive or non-interactive

services that they do not currently subscribe to, whereas 59% would listen to more AM/FM radio). For each of these reasons, Professor Shapiro's conclusion that developments in the downstream consumption of sound recordings do not warrant an upward adjustment to the prevailing statutory rate should be disregarded.

d. Summary

SEPFF1360. Although Professor Shapiro does not dispute the general growth in streaming – or the particular growth of subscription fully interactive streaming – he summarily disregards the impact it may have on opportunity cost. Professor Shapiro offers no empirical analysis of how the pivot from ownership to access has affected the availability of sound recordings, or returns to creators. These issues, together with Professor Shapiro's use of unreliable data to assess changes in downstream consumption, renders his SDARS II Benchmark unusable.

SEPFF1361. So too does overwhelming record evidence demonstrating that the growth of streaming has increased the opportunity cost of licensing Sirius XM. Because streaming services have grown increasingly popular, now compete more closely with Sirius XM radio, and generate higher average revenues per user than Sirius XM, Professor Shapiro is wrong to conclude that explosive growth of streaming since the *SDARS II* decision does not warrant an upward adjustment to prevailing statutory rates.

2. Change In Sirius XM's Financial Performance

SEPFF1362. The second marketplace change Professor Shapiro identifies as relevant is the growth of Sirius XM. Trial Ex. 8 at 29-30 (Shapiro WDT). According to Professor Shapiro, Sirius XM's growth and the improvement in its financial condition since the *SDARS II* proceeding does not warrant a change to the extant statutory rate because the company's basic service has not changed, and copyright holders earn greater royalties as Sirius

XM's revenues grow due to the percentage-of-revenue rate that governs the determination of royalties. Trial Ex. 8 at 29-30 (Shapiro WDT); 4/19/17 Tr. 215:19-216:3 (Shapiro). Professor Shapiro offers both "an empirical piece of analysis and a theoretical piece" in support of this conclusion. 5/3/17 Tr. 2480:149-21 (Shapiro). Both elements of Professor Shapiro's analysis are fundamentally flawed.

SEPFF1363. As a matter of theoretical economics, Professor Shapiro argues that "the key financial metric that drives the rate that would be negotiated between the record companies and Sirius XM under conditions of workable competition is the contribution margin," meaning "the percentage of Sirius XM's receipts from a subscriber . . . that drops to their bottom line." 5/3/17 Tr. 2479:24-2480:13 (Shapiro). According to Professor Shapiro, "the level of Sirius XM's overall profits . . . simply do not affect the negotiated royalty rate." Trial Ex. 9 at 52 (Shapiro Corr. WRT).

SEPFF1364. Professor Shapiro is wrong. As Professor Lys explained at trial, Professor Shapiro's conclusion is driven by an unfounded and erroneous assumption built into his modeling. That assumption converts his model into a "special case" situation that fails to describe the general conditions under which a record label would bargain with Sirius XM free of regulatory overhang. 4/24/17 Tr. 1414:3-1424:24, 1426:18, 1427:20-23 (Lys).

SEPFF1365. Appendix D to Professor Shapiro's written rebuttal testimony purportedly "provides a simple model of bargaining between Sirius XM and a record company in the absence of any statutory license." Trial Ex. 9 at 51 (Shapiro Corr. WRT) (emphasis removed). This model presents three related equations:

1) "The extra profits that Sirius XM earns from signing a license at royalty rate r": $sNP(t - r) + sNP\gamma(1 - a - t)$

2) "The extra profits that the record company earns by signing a license at royalty rate r": $sNP(r - c)$

3) "The combined gains from trade": $sNP(t - c) + sNP\gamma(1 - a - t)$

Trial Ex. 9, App. D at D-2 (Shapiro Corr. WRT).

SEPFF1366. Sirius XM's profitability is represented in Professor Shapiro's model through the variables "*sNP*," which denote a label's share of Sirius XM's gross revenues. However, because these variables appear in all three equations, they can be divided out. This results in the following equation that expresses the "combined gains from trade": $(t - c) + \gamma(1 - a - t)$. In this equation, Sirius XM's contribution margin $(1 - a - t)$ is the *only* Sirius XM financial metric that matters to the negotiation – Sirius XM's overall profitability ceases to be a relevant variable. "[W]hat this equation says is if the contribution margin doesn't change, then there is no reason to have a different rate." 4/27/17 Tr. 1426:13-22 (Lys).

SEPFF1367. At trial, Professor Lys explained how Professor Shapiro's model presents a "special case" because the assumptions underlying his second equation are not realistic. 4/27/17 Tr. 1426:18, 1427:20-23 (Lys). Specifically, Professor Shapiro's second equation posits that a record company's extra profits are *exclusively* the product of a label's share of Sirius XM's revenues (*sNP*) and its rate minus opportunity costs $(r - c)$. 4/27/17 Tr. 1427:14-1428:14 (Lys). Professor Shapiro's equation does not consider the existence of *any other* benefits that might accrue to a label through a license with Sirius XM—which Professor Lys denotes by the variable *B*. 4/27/17 Tr. 1428:4-9, 1582:11-23 (Lys).

SEPFF1368. As Professor Lys explained, "Professor Shapiro builds a model where everything is proportioned to quantity" and "[t]here are no benefits that are not a function of quantity." 4/27/17 Tr. 1417:1-18 (Lys). "[T]he question is, is that a reasonable model? And

what I have done is I have actually gone out and talked to labels and looked at label contracts and came to the conclusion this is not a reasonable model. There are benefits that are not direct[ly] proportionate. The moment you have benefits to the labels that are not directly proportionate to quantity and price . . . . [t]hen the model breaks down." 4/27/17 Tr. 1417:1-18 (Lys).

SEPFF1369. Professor Shapiro conceded at trial that his "model does not account for" benefits that are not proportional to a label's share of plays on Sirius XM. 5/4/17 Tr. 2583:25-2584:10 (Shapiro). Professor Lys's review of the negotiation history between Sirius XM and actual direct licensors – the only such analysis conducted by any expert in this proceeding – confirms that this was an error. As detailed above, there are numerous advantages to a direct license with Sirius XM that are distinct from "quantity times price" and in fact have nothing to do with gaining additional plays or performances on satellite radio. 4/27/17 Tr. 1416:9 (Lys); *see* Section VII(I) *supra*.

SEPFF1370. For instance, Professor Lys has described how a license with Sirius XM allows a label to experience improved reporting of plays and more accurate metadata management. Trial Ex. 25 at ¶ 319 (Lys Corr. WDT). There is no variable in Professor Shapiro's equation $sNP(r - c)$ that accounts for this benefit.

SEPFF1371. Similarly, a direct license with Sirius XM allows a label to recoup costs and expenses before passing on royalties to artists. Trial Ex. 42 at ¶ 64 (Lys WRT). [redacted] 4/27/17 Tr. 1522:17-1523:9 (Lys). 4/27/17 Tr. 1522:22-1523:3 (Lys) [redacted]

[redacted] 4/27/17 Tr. 1523:4-1524:5 (Lys).

[redacted] 4/27/17 Tr. 1523:18-1524:1 (Lys).

SEPFF1372. At trial, Professor Shapiro acknowledged that cash advances were yet another benefit that Sirius XM could offer to a label without increasing or decreasing a label's share of plays. 5/4/17 Tr. 2577:15-24 (Shapiro).

SEPFF1373. Because Professor Shapiro's special-case model does not consider benefits that are not proportional to the quantity of spins, it should be rewritten as follows:

1) "The extra profits that Sirius XM earns from signing a license at royalty rate r": $sNP(t - r) + sNP\gamma(1 - a - t)$

2) "The extra profits that the record company earns by signing a license at royalty rate r": $sNP(r - c) + B$

3) "The combined gains from trade": $sNP(t - c) + sNP\gamma(1 - a - t) + B$

4/27/17 Tr. 1427:5-1428:23 (Lys). In this rewritten model, the second equation describes the more general scenario in which a record company stands to gain from a license with Sirius XM *not only* through a proportional share of plays on the service, but in other non-proportional ways (such as an advance, or the ability to recoup costs, or improved reporting of plays relative to what it could otherwise obtain).

SEPFF1374. Once Professor Shapiro's equations are rewritten correctly, the label's share of Sirius XM's revenues (sNP) no longer divides out of the equations and "the general proposition that profits matter in a negotiation holds." 4/27/17 Tr. 1415:2-7, 1418:14-17, 1428:15-1429:6, 1429:15-19 (Lys). Consider the last rewritten equation. This equation shows

that, as Sirius XM's revenues increase (*NP*), the combined gains from trade also increase, affecting the royalty rate to which a willing buyer and willing seller would agree. 4/27/17 Tr. 1414:14-1415:7, 1424:15-21 (Lys).

SEPFF1375. Notably, in this revised model, Sirius XM's contribution margin ($1 - a - t$) ceases to be the only factor related to its financial health that is relevant to a negotiation with a record label. 4/27/17 Tr. 1426:7-1427:9, 1429:20-22 (Lys). This is consistent with what David Frear, Sirius XM's Chief Financial Officer, had to say about the overall relevance of contribution margin as a financial metric. [ ] 5/17/17 Tr. 4494:17-24 (Frear). As Professor Lys likewise explained, "contribution margin, without the number of sales revenue, tells you nothing," as it does not reveal whether a company's overall profitability is increasing or decreasing (or by how much). 4/26/17 Tr. 1316:17-19 (Lys). For that assessment, additional information, such as subscriber growth and revenues, must be considered. 4/26/17 Tr. 1320:18-1321:5 (Lys).

SEPFF1376. At trial, Judge Strickler posed the following question: "[T]o the extent there are profits now that Sirius XM did not have before . . . isn't there a larger surplus now to be divided" between Sirius XM and the label? 4/19/17 Tr. 217:20-218:8 (Shapiro). Professor Lys's rewrite of Professor Shapiro's model proves that "the answer is in general of course." 4/27/17 Tr. 1414:14-1415:1 (Lys). In a setting free of regulatory overhang, Sirius XM's growing profits would increase the surplus for the negotiating parties to divide up and would result in an increased royalty rate. 4/27/17 Tr. 1414:22-25, 1590:22-1591:3 (Lys). "[I]n a ceteris paribus situation, if Sirius XM is more profitable, the skilled negotiator negotiating with Sirius XM will

be able to negotiate a better rate." 4/27/17 Tr. 1595:20-23, 1597:10-17 (Lys). Put succinctly: "Profits matter. There's more to share." 4/27/17 Tr. 1428:15-1429:6 (Lys).

SEPFF1377. As discussed extensively below, Sirius XM has experienced unparalleled financial success since *SDARS II*, beating its forecasted guidance four years running. 5/15/17 Tr. 3755:13-15 (Meyer); *see* Section X(B)(2) *infra*. In 2016, for example, Sirius XM set records for subscribers, revenue, adjusted EBITDA, and free cash flow. 5/15/17 Tr. 3759:13-23 (Meyer). [4/27/17 Tr. 1585:19-24 (Lys).

SEPFF1378. Professor Shapiro claims to offer "an empirical piece of analysis" in support of his argument that Sirius XM's increasing profitability is irrelevant to a willing buyer willing seller royalty rate. 5/3/17 Tr. 2480:19-21 (Shapiro). This analysis fares no better than Professor Shapiro's flawed theoretical model.

SEPFF1379. According to Professor Shapiro, "Sirius XM's non-music content payments as a percentage of its subscription revenue has fallen from over 11 percent in 2009 to approximately 5 percent in 2015." Trial Ex. 9 at 52 (Shapiro Corr. WRT). Professor Shapiro claims that "[t]his supports my conclusion that the increase in Sirius XM's overall profitability, in and of itself, does not imply that the percentage-of-revenue royalty rate that Sirius XM would negotiate with the providers of music content should increase." Trial Ex. 9 at 52 (Shapiro Corr. WRT).

SEPFF1380. First, Professor Shapiro's data is flawed. Remarkably, he excluded "payments to Howard Stern" from his analysis. Professor Shapiro offers the following justification: "The exclusion of Howard Stern does not impact my time-series analysis, as

Howard Stern has been offered exclusively by Sirius XM throughout the period I have analyzed." Trial Ex. 9 at 52 n.166 (Shapiro Corr. WRT). This is a non sequitur. Professor Shapiro offers no valid explanation why "exclusive" non-music content should be sheared off from his analysis, any more than "non-exclusive" or "semi-exclusive" content.

SEPFF1381. In any event, Professor Shapiro has excluded Howard Stern in an entirely arbitrary manner. At trial, Sirius XM's CEO acknowledged that Howard Stern is hardly the only exclusive non-music content that Sirius XM offers on its satellite radio service. Indeed, Howard Stern is one of a long list of exclusive non-music content providers, including "Dr. Laura, Hoda Kotb, Jenny McCarthy, Andy Cohen, Larry The Cable Guy, Jamie Foxx and others." 5/15/17 Tr. 3752:25-3753:8 (Meyer).

SEPFF1382. Professor Shapiro's exclusion of Howard Stern appears to be an attempt to rig the result of his analysis of non-music costs by excluding one of Sirius XM's most highly paid non-music content providers. Indeed, Sirius XM's interrogatory responses reveal that Howard Stern is handsomely compensated for his talents, and increasingly so over time. In 2012, Mr. Stern was paid [[redacted]]; by 2015 this number had risen to [[redacted]]; and by 2016 it had escalated to [[redacted]]. Trial Ex. 306. This number will only increase, given that [[redacted]]. Trial Ex. 306.

SEPFF1383. The flaws in the analysis do not end there. Professor Shapiro also failed to consider [[redacted]]. Indeed, Professor Shapiro admitted that he did not even know these were phenomena to be factored in to

his analysis. 4/20/17 Tr. 489:11-14 (Shapiro) ("Q: And you don't know whether Sirius XM compensates some non-music content providers with stock, do you? A: With stock? No, I don't know about that.").

SEPFF1384. Furthermore, Professor Shapiro failed to consider the *reasons* that certain non-music costs may have decreased; namely, cost savings achieved as a result of the merger of Sirius and XM. [ ] 4/27/17 Tr. 1379:12-15 (Lys). [ ] 4/20/17 Tr. 484:21-485:1, 486:3-20 (Shapiro). [ ] 4/20/17 Tr. 487:17-22 (Shapiro). During the rebuttal phase of the economists' testimony, Professor Shapiro conceded that "some or perhaps a lot of the decline shown from 2009 through 2013 may be attributable to the Sirius XM merger." 5/3/17 Tr. 2484:18-24 (Shapiro).

SEPFF1385. In sum, Sirius XM's runaway profits since *SDARS II* can and should be considered by the Judges, and Professor Shapiro presents no credible evidence to the contrary.

3. Changes In The Upstream Market For Digital Sound Recording Rights

SEPFF1386. The final change identified by Professor Shapiro concerns developments in the upstream market for digital sound recording rights. Here, Professor Shapiro focuses on the role played by steering in licensing negotiations across different digital music distribution channels. He concludes that purported differences in steering across channels

necessitate no increase to the current statutory rate, and, if anything, support a downward adjustment. Professor Shapiro's conclusion is unsupported for two reasons.

SEPFF1387. First, although Professor Shapiro argues that direct licenses negotiated by Sirius XM evince an emergence of competition for plays, *see* Trial Ex. 8 at 30 and § 9 (Shapiro WDT), he concedes that he "cannot quantify the value of steering," 4/20/17 Tr. 448:20-21 (Shapiro), and that he lacks the quantitative evidence needed to make an adjustment for steering. 4/20/17 Tr. 450:1-2 (Shapiro). Nor has Professor Shapiro reviewed or produced any quantitative evidence that rate discounts in Sirius XM's direct licenses are attributable to steering. 4/20/17 Tr. 450:13-17 (Shapiro). Indeed, when Judge Strickler asked Professor Shapiro how, if he could not quantify the value of steering, he knew the value of steering was not zero, Professor Shapiro was unable to respond with any quantitative or empirical evidence.[139] 4/20/17 Tr. 449:9-21 (Shapiro).

SEPFF1388. Second, Professor Shapiro argues that steering in direct licenses executed by certain statutory webcasters since the *SDARS II* proceeding is "highly informative" in assessing the appropriate statutory rate for Sirius XM's satellite radio service. Trial Ex. 8 at 30-31 (Shapiro WDT). But Professor Shapiro does not explain why this supposed change is relevant in assessing whether the statutory rate currently applicable to Sirius XM's satellite radio service should be adjusted upward or downward. Trial Ex. 8 at 30-31 (Shapiro WDT). He failed to analyze whether rates in the agreements that underlie the currently applicable benchmark (that is, rates in agreements evaluated during *SDARS I*) reflect competition or not. Trial Ex. 8 at 30-31

[139] Professor Shapiro attempted to marshal qualitative evidence that some portion of the rate discount in Sirius XM's direct licenses was attributable to steering, but that evidence is not only unpersuasive, *see* Section VII *supra*, but also unsuitable for use in assessing whether and to what extent a downward adjustment to previous rates is appropriate.

(Shapiro WDT). Rather, Professor Shapiro simply directs the Judges to his *Web IV* benchmark, which is unreliable for reasons elaborated thoroughly in Section VIII *supra*.

4. Changes Relevant To The *SDARS II* Decision

SEPFF1389. In the *SDARS II* decision, the Judges expressed concerns with the interactive services benchmark. For example, the Judges noted that the market for fully interactive services was in flux. 78 FR at 23065-66. The Judges also noted that the interactive services benchmark did not reflect analysis of rates paid to independent record companies. *SDARS II,* 78 FR at 23065-66. As a result of these concerns, the Judges in *SDARS II* relied on the benchmarking analysis that SoundExchange performed during the previous proceeding to establish the upper bound of reasonable rates for the *SDARS II* licensing period. *SDARS II*, 78 FR at 23068, 23071.

SEPFF1390. Since the conclusion of the *SDARS II* decision, the market has changed in ways that address the Judges' concerns with the interactive services benchmark presented in that proceeding. Below, we discuss the relevant marketplace changes, which weigh heavily against relying on the prevailing statutory rate as a starting point for this rate-making. We also discuss why the financial growth that Sirius XM has experienced since *SDARS II* renders the prevailing statutory rate an unreliable place to begin analysis, namely, because it obviates the need for a downward departure for satellite costs under Section 801(b)(1)(C).

i. The Interactive Services Market Is Not In Flux And Is Now Composed Of Large, Financially Stable Companies

SEPFF1391. As previously discussed, the market for fully interactive services is now dominated by a small number of large services, including Spotify, Apple, Google, and Amazon. Trial Ex. 39 at ¶ 16 (Blackburn WRT); *see also* Section IV(G)(1) *supra*. By 2015,

Spotify, Apple, and Google accounted for over [ ] percent of premium subscriptions, with Spotify alone accounting for almost [ ] percent. Trial Ex. 39, Figure 1 at 9 (Blackburn WRT).

SEPFF1392. Companies like Apple, Google, and Amazon are financially stable and well-diversified. Trial Ex. 39 at ¶ 17 (Blackburn WRT). For example, Apple is the largest retailer of digital download sales, while Amazon is one of the largest retailers of physical music sales. Trial Ex. 39 at ¶ 17 (Blackburn WRT). [ ] *See* 5/16/17 Tr. 3953:21-25 (Harrison).

SEPFF1393. In short, the market for fully interactive services is now dominated by large and mature companies.[140] Trial Ex. 39 at ¶ 17 (Blackburn WRT); Trial Ex. 42 at ¶ 4 (Harrison WRT). Many of these services were not in the market when *SDARS II* was decided. Trial Ex. 39 at ¶ 18 (Blackburn WRT); 5/1/17 Tr. 1733:10-14 (Blackburn). [ ] 5/16/17 Tr. 3954:3-12 (Harrison), [ ] 5/16/17 Tr. 3953:21-25 (Harrison).

SEPFF1394. Nor is there any doubt that the market for fully interactive streaming services has matured. Since 2012, subscription and on-demand services have grown from 8% of record label revenue to 40% of record label revenue. *See* Trial Ex. 8, Figure 5 at 28 (Shapiro WDT); 5/1/17 Tr. 1712:19-1713:17 (Blackburn). Moreover, since 2014, the share of record company revenues attributed to interactive services has more than doubled, all while total

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[140] Although Spotify is not publicly traded, it is currently valued at $8.5 billion. Trial Ex. 39 at ¶ 18 (Blackburn WRT) (citations omitted). [ ] 4/20/17 Tr. 524:25-525:11 (Shapiro).

industry revenue remained relatively flat. Trial Ex. 39 at ¶ 18 (Blackburn WRT) (citing Trial Ex. 8, Figure 5 at 28 (Shapiro WDT)).

SEPFF1395. This growth is expected to continue. Between 2015 and 2021, Spotify is projected to more than triple its number of subscribers in the U.S. Trial Ex. 39 at ¶ 18 (Blackburn WRT) (citation omitted). Similarly, between 2015 and 2021, U.S. subscribers to interactive streaming services are expected to grow from 12.5 million subscribers in 2015 to 30.9 million subscribers in 2021. Trial Ex. 39 at ¶ 18 (Blackburn WRT). Put simply, the recent and forecasted growth in the market for fully interactive services indicates that this distribution mode is widely accepted among consumers, Trial Ex. 43 at ¶ 17 (Orszag WRT); *see also* Trial Ex. 8 at 28 (Shapiro WDT), and critical to record company revenues. In light of those marketplace developments, and the size and stability of the companies now offering fully interactive services, the market has matured and can no longer be said to be in flux.

ii. Indie Rates Have Been Accounted For In The Current Benchmark

SEPFF1396. The interactive services benchmark presented in this proceeding reflects the rates paid for content owned by independent record companies in two separate respects, both of which indicate that fully interactive services pay comparable rates to major and independent record companies.

SEPFF1397. First, 63.4% of independent record companies distribute their sound recordings through the major record companies, Trial Ex. 26 at ¶ 102 (Orszag Am. WDT). In fact, in 2015 the major record companies' distribution companies distributed about 87% of the albums sold in the United States, which includes independent record label recordings. Trial Ex. 26 at ¶ 102, Figure One at 46 (Orszag Am. WDT).

SEPFF1398. [ ]. Trial Ex. 26 at ¶ 103 (Orszag Am. WDT); *see also* Trial Ex. 36 at 3 (Sirota WDT) ("an independent record label or artist that uses ADA as its distributor is distributed under the same streaming agreements, and according to the same terms, as a record label wholly owned by Warner"). In other words, independent record label recordings distributed by the majors are compensated at the same royalty rates as major label recordings.

SEPFF1399. Benchmark interactive services [ ] and upon which Mr. Orszag relied in deriving his benchmark. Trial Ex. 26 at ¶ 104 (Orszag WDT). Accordingly, Mr. Orszag's benchmark reflects royalties paid by interactive services to the major record companies and the majority of royalties paid to independent record labels. Trial Ex. 26 at ¶ 104 (Orszag WDT).

SEPFF1400. Second, benchmark interactive services [ ]. Trial Ex. 26 at ¶ 105 (Orszag WDT). These recordings are distributed through independent distributors or aggregators. Trial Ex. 26 at ¶ 105 (Orszag WDT). Mr. Orszag reviewed licensing agreements between benchmark interactive services and [ ]. Trial Ex. 26 at ¶ 105 (Orszag WDT); *see also* Trial Ex. 37 at 4-5 (Van Arman WDT) (noting that Merlin

negotiates digital music licensing agreements on behalf of over 20,000 independent labels). After completing his review, Mr. Orszag concluded that [ ].

Trial Ex. 26 at ¶ 105 (Orszag WDT).

iii. The Prevailing Statutory Rate Reflects A Departure From Market Rates Rendered Unnecessary By Sirius XM's Considerable Financial Growth

SEPFF1401. In *SDARS II*, the Judges determined that a downward departure from marketplace benchmarks was justified on the basis of Sirius XM's satellite costs. *SDARS II*, 78 FR at 23069. More specifically, the Judges concluded that evidence of the "unique and substantial financial costs that Sirius XM has incurred and anticipates incurring over the license period to maintain and upgrade its distribution system" justified a downward departure from 12-13% to 11%. *SDARS II*, 78 FR at 23069.

SEPFF1402. As discussed at length in Section X(B)(2)(ii)(a), such a departure is no longer necessary because Sirius XM has enjoyed incredible financial success since *SDARS II*. The company has surpassed forecasted guidance for the last several years, 5/15/17 Tr. 3755:13-15 (Meyer), and, in 2016, recorded remarkable financial performance across several metrics. Indeed, as Sirius XM's CEO Jim Meyer testified at trial, the company in 2016 set records for subscribers, revenue, adjusted EBITDA, and free cash flow. 5/15/17 Tr. 3759:13-3760:1 (Meyer). Its year over year revenue grew by 10%, its EBITDA grew by 13%, and its free cash flow per share grew 26%. Trial Ex. 42 at ¶ 166 (Lys WRT). What is more, the company's net income increased by a staggering 46%, reaching $746 million. Trial Ex. 42 at ¶ 166 (Lys WRT)

SEPFF1403. Given that Sirius XM has experienced dramatic financial growth throughout the *SDARS II* rate period, and is now exceptionally profitable, no downward adjustment to market benchmarks is necessary to account for its satellite costs. The company's satellite costs now comprise a small and steadily decreasing percentage of the company's overall revenues. *See* Section X(C)(2) *infra*. Because the prevailing statutory rate reflects a downward adjustment for Sirius XM's satellite costs, and because such an adjustment is no longer warranted, Professor Shapiro is incorrect when he asserts that the prevailing statutory rate is a reliable place to begin analysis in this proceeding; accordingly, his SDARS II Benchmark should be disregarded.

iv. Summary

SEPFF1404. Professor Shapiro suggests that the Judges should look at marketplace developments to determine whether it is necessary to adjust the prevailing statutory rate, decided in *SDARS II*. But marketplace developments since that proceeding illustrate that the prevailing statutory rate does not provide a reliable starting point for analysis of rates properly payable during the forthcoming licensing period for two reasons.

SEPFF1405. First, the rapid growth of streaming has stabilized the market for fully interactive streaming services, now comprised of mature and profitable companies like Apple, Amazon, and Google, and now generating 40 percent of record company revenue. Moreover, marketplace evidence presented in this proceeding indicates that benchmark interactive services pay the same or highly similar royalties to independent and major record companies. Taken together, this evidence indicates that the interactive services benchmark can provide a reliable measure of market rates, addressing concerns that led the Judges to reject that benchmark in *SDARS II*, and obviating the rationale for beginning any analysis with a rate determined in that proceeding.

SEPFF1406. Likewise, marketplace developments indicate that Sirius XM's satellite costs no longer warrant any downward adjustment to market rates. Because Professor Shapiro's SDARS II analysis requires starting with a rate that reflects such an adjustment, it is unreliable and should be disregarded.

D. The Starting Point For Considering Whether To Push Forward *SDARS II* Rates Should Be A Per-Subscriber Rate Of $1.40

SEPFF1407. For reasons described above, Professor Shapiro's *SDARS II* benchmark is flawed in concept and implementation, and should be rejected. But even if the Judges determine that it is appropriate to push forward any previously-considered rate (adjusted or otherwise), then the 11 percent rate from *SDARS II* is an inappropriate starting point. Trial Ex. 43 at ¶ 23 (Orszag WRT).

SEPFF1408. Rather, the appropriate starting point is the per-subscriber rate identified by the Judges in *SDARS I*. Trial Ex. 43 at ¶ 23 (Orszag WRT). As explained in detail in the following paragraphs, when adjusted to 2018-2022 dollars, that rate converts into a per-subscriber rate of $1.74 to $1.92 during the coming rate period or, alternatively, a 15.7% percentage of revenue rate (in 2016 dollars).

SEPFF1409. In *SDARS I*, the Judges used marketplace agreements to conclude that a royalty rate of $1.40 per subscriber represented "the upper boundary most strongly indicated by marketplace data" in 2006. *SDARS I*, 73 FR at 4097. The Judges further held that, "based strictly on marketplace evidence, a rate close to the upper boundary is more strongly supported than one close to the lower boundary." *SDARS I*, 73 FR at 4094; *see* Trial Ex. 25 at ¶ 144 (Lys Corr. WDT).

SEPFF1410. As Professor Lys explained at trial, "the beauty of SDARS I was that we actually had a glimpse of what the Judges ruled as being the market rate before applying any

801(b) factors. And the number that they named there was $1.40, the most likely representative of the market rate." 4/26/17 Tr. 1306:9-14 (Lys). By contrast, "[i]n SDARS II, we simply didn't get that. We got the statutory rate after adjustments. So it is impossible to know, at least from the ruling, what the Judges believed was the market rate at that time." 4/26/17 Tr. 1310:21-25 (Lys).

SEPFF1411. Professor Lys has updated the market-derived $1.40 per subscriber rate from *SDARS I* to today's dollars. He has done this by adjusting the rate for increases in the cost of living since it was identified over ten years ago. Trial Ex. 25 at ¶ 144 (Lys Corr. WDT). This is consistent with the approach taken by the Judges in *Web IV*. There, the Judges determined that they would adjust any effective benchmark rates that were relied upon to reflect inflation or deflation. *Web IV*, 81 FR at 26316, 26404. In considering the effects of inflation, the Judges used data from the Bureau of Labor Statistics' Consumer Price Index (CPI-U), between the year when the data for the benchmark was collected and the first year when the rates in *Web IV* would be effective. *Web IV*, 81 FR at 26316, 26404; Trial Ex. 25 at ¶ 145 (Lys Corr. WDT).

SEPFF1412. Consistent with *Web IV*, Professor Lys has used the CPI-U to adjust the $1.40 per subscriber per month royalty benchmark from the original *SDARS I* decision. Trial Ex. 25 at ¶ 146 (Lys Corr. WDT); *see also* Trial Ex. 43 at ¶ 25 (Orszag WRT). The below figure calculates the adjusted royalty rates for each year based on the CPI-U, beginning with the $1.40 per subscriber benchmark in 2006.

Per subscriber per month royalty rates, adjusted using CPI-U, 2006-2022

Year	Inflation growth	Adjusted per subscriber per month royalty rate
2006	N/A (baseline)	$1.40
2007	1.97%	$1.43
2008	4.31%	$1.49
2009	1.07%	$1.51
2010	1.84%	$1.53
2011	1.14%	$1.55
2012	3.39%	$1.60
2013	1.76%	$1.63
2014	1.24%	$1.65
2015	1.32%	$1.67
2016	0.50%	$1.68
2017	1.33%	$1.70
2018	2.33%	$1.74
2019	2.38%	$1.79
2020	2.39%	$1.83
2021	2.42%	$1.87
2022	2.42%	$1.92

Trial Ex. 25, Figure 37 at 50 (Lys Corr. WDT); 4/26/17 Tr. 1309:9-18 (Lys).

SEPFF1413. As this chart shows, the *SDARS I* marketplace-derived $1.40 per subscriber rate is the equivalent of $1.74 per subscriber in 2018 and will increase to $1.92 per subscriber in 2022. Trial Ex. 25 at ¶ 147 (Lys Corr. WDT).

SEPFF1414. As noted, the Judges derived a per-subscriber rate in *SDARS I* using the benchmarking analysis presented by SoundExchange. Trial Ex. 25 at ¶ 148 (Lys Corr. WDT). However, the Judges then converted that per-subscriber rate into a percentage of revenue rate of 13%. The Judges accomplished this by dividing the calculated per-subscriber rate by Sirius XM's SEC-reported average revenue per user ("ARPU"). *See SDARS I*, 73 FR at 4093.

This calculation yielded a percentage-of-revenue rate of 13%.[141] Trial Ex. 43 at ¶ 24 (Orszag WRT).

SEPFF1415. The *SDARS I* per-subscriber rate (adjusted to 2016 dollars) can likewise be converted into a percentage of revenue rate. Professor Lys performed this calculation by dividing the $1.68 per subscriber rate ($1.40 per subscriber adjusted for inflation) into Sirius XM's average monthly gross revenues per subscriber (using the term "gross revenues" as the royalty-generating pool of Sirius XM's revenues, as defined by 37 C.F.R. Part 382 Subpart B). Trial Ex. 25 at ¶ 148 (Lys Corr. WDT); Trial Ex. 43 at ¶ 25 (Orszag WRT). Professor Lys determined that this denominator was $10.72, and hence that the adjusted percentage of revenue rate is 15.7% ($1.68/$10.72). Trial Ex. 25 at ¶ 151 (Lys Corr. WDT).

SEPFF1416. Professor Lys calculated the "denominator" in this equation through three steps. First, he started with the revenue reported by Sirius XM to SoundExchange in the course of paying out royalties. Trial Ex. 42 at ¶ 155 (Lys WRT).

SEPFF1417. Second, he adjusted this number to account for Sirius XM's exclusion of revenues that it attributes to the performance of directly licensed and pre-1972 sound recordings. Trial Ex. 25 at ¶ 149 (Lys Corr. WDT). (Professor Lys followed Sirius XM's performance-based methodology for these exclusions.) The current regulations already permit Sirius XM to take a deduction for these works, by excluding a portion of its royalty fee at the "back end." *See* 37 C.F.R. § 382.12(d), (e). This exclusion should happen only once (either through a back-end exclusion *or* a reduced royalty rate, but not both).

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[141] In his written rebuttal testimony, Mr. Orszag noted that such an analytical process is obvious from a reading of the *SDARS I* decision. Trial Ex. 43 at ¶ 24 n.30 (Orszag WRT). Sirius XM has acknowledged this in other contexts: "In *Satellite I*, the Judges determined the top end of their reasonable rate range (13%) by taking the adjusted monthly per subscriber fee from interactive music services ($1.40) and dividing it by Sirius XM's average monthly subscription revenue (then $11.25)." Written Merits Rebuttal Submission of Sirius XM Radio Inc. 7, *SDARS I*.

SEPFF1418. The below figures demonstrate how Professor Lys was able to back in to Sirius XM's understanding of total "gross revenues" under the regulations by trueing up Sirius XM's SoundExchange-reported revenue by its direct license and pre-'72 exclusions. Trial Ex. 25 at ¶ 150 (Lys Corr. WDT).

Calculation of Sirius XM's exclusions from reported revenues to SoundExchange, first half of 2016 [RESTRICTED]

2016	Total performances	Pre-'72 performances	Direct License performances	Pre-'72 percentage	Direct License percentage	Total percentage
JAN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
FEB	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
MAR	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
APR	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
MAY	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
JUN	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Trial Ex. 42, Figure 19 at 55 (Lys WRT) (citing Trial Ex. 149) (native file).

Calculation of Sirius XM's Gross Revenue, first half of 2016 [RESTRICTED]

2016	Sirius XM revenue reported to SoundExchange on monthly statements of account	Adjustment percentage	Gross revenue
JAN	[redacted]	[redacted]	[redacted]
FEB	[redacted]	[redacted]	[redacted]
MAR	[redacted]	[redacted]	[redacted]
APR	[redacted]	[redacted]	[redacted]
MAY	[redacted]	[redacted]	[redacted]
JUN	[redacted]	[redacted]	[redacted]
TOTAL			[redacted]

Trial Ex. 42, Figure 20 at 55 (Lys WRT) (citing Trial Ex. 149) (native file). By adding revenue back to Gross Revenues in order to obtain a conceptually accurate ARPU, Professor Lys was able to determine that Sirius XM's Gross Revenues were [[redacted]]. Trial Ex. 42 at ¶ 158 (Lys WRT).

SEPFF1419. Third, Professor Lys divided gross revenues into Sirius XM's paid subscriber base (30.04 million for the comparable period). Trial Ex. 25 at ¶ 151 (Lys Corr.

WDT). This yielded an average monthly gross revenues per subscriber of $10.68. Trial Ex. 42 at ¶ 159 (Lys WRT).

SEPFF1420. In sum, Professor Lys was able to determine that, when adjusted to 2016 dollars, the marketplace-derived $1.40 per subscriber rate converts into a per-subscriber rate of $1.74 to $1.92 during the coming rate period, or a 15.7% percentage of revenue rate in 2016. Trial Ex. 25 at ¶¶ 148, 151 (Lys Corr. WDT); Trial Ex. 42 at ¶ 159 (Lys WRT).

SEPFF1421. Importantly, at the time the Judges arrived at a $1.40 marketplace-derived per-subscriber rate in *SDARS I*, Sirius and XM were separate companies engaged in fierce competition. Trial Ex. 25 at ¶ 144 (Lys Corr. WDT). The companies claimed that any increase in rates would pose an existential threat and that they were on the brink of bankruptcy. Because neither Sirius nor XM had achieved financial stability, the Judges found it appropriate under the fourth Section 801(b)(1) objective to "adopt a rate from the zone of reasonableness that is lower than the upper boundary most strongly indicated by marketplace data." *SDARS I*, 73 FR at 4097.

SEPFF1422. Now that Sirius XM is highly and consistently profitable across numerous relevant measures, the justification for such a deduction no longer exists. *See* Section X(B)(2)(ii) *infra*; Trial Ex. 25 at ¶ 144 (Lys Corr. WDT). Nor is there any reason under the third Section 801(b)(1) objective to reduce rates to account for Sirius XM's anticipated satellite costs. *See* Section X(C)(2) *infra*. Consequently, insofar as the determination of rates in *SDARS I* and *SDARS II* might inform the setting of rates in this proceeding, the appropriate starting point is the $1.40 per-subscriber market rate from *SDARS I*. Trial Ex. 43 at ¶ 24 (Orszag WRT).

E. Professor Shapiro's Computation Of A Percentage Of Revenue Rate Based On A Per-Subscriber Basis Is Flawed

SEPFF1423. Professor Shapiro has proposed his own approach to computing a percentage of revenue royalty rate based on a per-subscriber rate. Professor Shapiro begins with a per-subscriber rate of $1.032, then divides this into Sirius XM's SEC-reported ARPU of $12.80, to arrive at an 8.1% of revenue royalty rate. Trial Ex. 8 at 54-55 (Shapiro WDT). Professor Lys has explained why there are many methodological problems with Professor Shapiro's execution of an otherwise sound approach. *See* Trial Ex. 42 at ¶¶ 147-159 (Lys WRT).

SEPFF1424. First, Professor Shapiro uses an inappropriate royalty rate per subscriber. His $1.032 rate is derived from the per-play royalty rates determined by the Judges in the *Web IV* proceedings. Trial Ex. 42 at ¶ 147 (Lys WRT) (citing Trial Ex. 8 at 54 (Shapiro WDT)). Leaving aside the question of whether the *Web IV* rates have any applicability here, the Judges already determined in *SDARS I* that the then-appropriate royalty rate per subscriber for the SDARS was $1.40. Trial Ex. 42 at ¶ 147 (Lys WRT). As Professor Lys observed at trial, $1.03 is "40 percent less" than "if you simply adjusted $1.40 for inflation." 4/26/17 Tr. 1309:19-1310:10 (Lys). Professor Shapiro offers no analysis or support for how or why the appropriate royalty rate per subscriber would have dropped so precipitously since the time of *SDARS I*. Trial Ex. 42 at ¶ 147 (Lys WRT). Professor Shapiro has not answered a simple but critical question—"What has changed since 2006 that would make it lower?" 4/26/17 Tr. 1313:12-13 (Lys).

SEPFF1425. Second, there is no sound basis for the ARPU figure used by Professor Shapiro. He divides his $1.032 per subscriber rate into an ARPU figure of $12.80. Trial Ex. 42 at ¶ 149 (Lys WRT) (citing Trial Ex. 8 at 54 (Shapiro WDT)). Professor Shapiro devotes one paragraph to justifying his decision to use a monthly ARPU of $12.80, which he finds in an unnamed and unreferenced document described as a "Sirius XM financial document created in

the ordinary course of business." Trial Ex. 8 at 54 (Shapiro WDT). The document at issue appears to be Sirius XM's [ ] *See* Trial Ex. 663 (native file) (tab "consolidated outputs," cell HN79).

SEPFF1426. There is no evidence that Professor Shapiro conducted any analysis of this number. Trial Ex. 42 at ¶ 150 (Lys WRT). The [ ] figure is [ ]. Thus it is not clear how Professor Shapiro concluded that, "[a]s is detailed in this document, ARPU includes all subscription related revenues (including the separate subscriber invoice line item for U.S. Music Royalty Fees), but excludes other revenue sources, such as those earned from the sale of radios." Trial Ex. 8 at 54 (Shapiro WDT).

SEPFF1427. As detailed in his written rebuttal testimony, Professor Lys conducted further investigation and determined that this [ ] ARPU figure may originate with Sirius XM's SEC filings. *See* Trial Ex. 42 at ¶ 151 & Figure 18 at 54 (Lys WRT). But if that is the case, it is unclear why Professor Shapiro elected to use the forecasted 2016 ARPU figure from the [ ] [ ] as opposed to the actual figure of $12.72, which was published in Sirius XM's Q2-2016 10-Q and available at the time of his written direct testimony. Trial Ex. 42 at ¶ 152 (Lys WRT).

SEPFF1428. Regardless of the provenance of Professor Shapiro's [ ] ARPU figure, that number is flawed conceptually and, as Professor Lys has explained, constitutes the wrong revenue metric to use in calculating a percentage of revenue rate. Trial Ex. 42 at ¶ 153. Under the regulations promulgated by the Judges, the percentage of revenue rate paid by Sirius XM is applied to a specific revenue base—what the regulations define as "Gross Revenues." Trial Ex. 42 at ¶ 154 (Lys WRT); *see* 37 C.F.R. § 382.11.

SEPFF1429. Professor Shapiro agrees that the revenue number used to calculate a percentage of revenue royalty rate should match Gross Revenues (the revenue base defined by the Judges). Trial Ex. 42 at ¶ 154 (Lys WRT) (citing Shapiro deposition). As he testified at trial, the appropriate ARPU is "the ARPU associated with the royalty base." 4/19/17 Tr. 213:17-21 (Shapiro).

SEPFF1430. However, instead of following through with this approach, Professor Shapiro uses an ARPU figure that includes revenue that *cannot* be included in "Gross Revenues" according to the regulations. Trial Ex. 42 at ¶ 154 (Lys WRT). For example, Sirius XM's SEC-reported ARPU includes revenue from equipment sales. Trial Ex. 42 at ¶ 154 (Lys WRT). That revenue stream is not included in Gross Revenues, under the clear language of 37 C.F.R. § 382.11. Professor Shapiro has erred by inflating his ARPU number with revenue streams that must be excluded when Sirius XM calculates its royalty obligations. Trial Ex. 42 at ¶ 154 (Lys WRT).

SEPFF1431. A conceptually accurate method starts instead from the "Gross Revenues" figure reported by Sirius XM to SoundExchange in the course of paying out royalties. Trial Ex. 42 at ¶ 155 (Lys WRT). This number must then be trued up to account for the exclusion of revenue that Sirius XM attributes to directly licensed works and pre-'72 works. Trial Ex. 42 at ¶ 155 (Lys WRT). The reason for this true-up is that the current regulations already permit Sirius XM to take a deduction for these works, by excluding a portion of its royalty fee at the "back end." Trial Ex. 42 at ¶ 155 (Lys WRT) (citing 37 C.F.R. § 382.12(d), (e)). This exclusion should happen only once—either through a reduced royalty rate *or* through a back-end exclusion, but not both. Professor Lys's calculation of the "denominator" in his percentage of revenue formula correctly includes all revenue that Sirius XM attributes to the

performance of sound recordings, regardless of whether those sound recordings are pre-'72 or post-'72, and regardless of whether they are directly licensed or statutorily licensed. This is the only way to obtain a conceptually accurate ARPU and, from there, an accurate royalty rate. Trial Ex. 42 at ¶ 155 (Lys WRT).

SEPFF1432. Obviously, as a simple matter of arithmetic, it matters whether the "ARPU" number put forward by Professor Lys or Professor Shapiro is the right number. Professor Shapiro's $1.032 per-subscriber rate results in a percentage of revenue rate of 8.1% when the ARPU of [redacted] from Sirius XM's [redacted] is used. However, if the average revenue per subscriber from Professor Lys's report is used ($10.68), then Professor Shapiro's 8.1% royalty rate rises to 9.6% (before any of his other inputs are corrected). Professor Shapiro acknowledged as much at trial. 4/19/17 Tr. 212:11-15 (Shapiro) (noting that, if an "ARPU of $10.72 is used," then "we get 9.6 percent of revenue; that is, the $1.03 per sub per month is 9.6 percent of that $10.72"); 4/20/17 Tr. 315:1-3 (Shapiro).

X. Analysis And Application Of The 801(b)(1) Factors To Sirius XM

SEPCL10. The following four policy objectives govern rate-setting for the SDARS license at issue in this proceeding:

a. To maximize the availability of creative works to the public;

b. To afford copyright owners a fair return for their creative work and copyright users a fair income under existing economic conditions;

c. To reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication; and

d. To minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices.

SEPCL11. In this proceeding, the Judges must adopt royalty rates that satisfy all of the objectives set forth in Section 802(b)(1)(A)-(D). The first step in determining an appropriate rate under Section 801(b)(1) is to look at voluntary transactions in comparable markets — *i.e.*, marketplace benchmarks — making appropriate adjustments to account for differences between the benchmark and target markets to best reproduce a rate that would represent a hypothetical marketplace transactions between a willing SDARS buyer and a willing record company seller. *See SDARS II*, 78 FR at 23066.

SEPCL12. After determining appropriate marketplace benchmarks, the next step in calculating reasonable rates pursuant to Section 801(b)(1) is to "measure the rate or rates yielded by that process against the statutory objectives to reach [the Court's] decision." *SDARS I*, 73 FR at 4084; *accord In re Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings*, 63 FR 25394, 25399, 25404 (1998) (hereinafter "*PSS I*"). This is not a "beauty pageant where each factor is a stage of competition to be evaluated individually to determine the stage winner and the results aggregated to determine an overall

winner." *SDARS I*, 73 FR at 4094. Instead, "the issue at hand is whether these policy objectives weigh in favor of divergence from the results indicated by the benchmark marketplace evidence." *SDARS I*, 73 FR at 4094; *see also In re Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding*, 74 FR 4510, 4523 (2009) (hereinafter "*Mechanicals II*"). Thus, the Judges review "the other evidence in the record offered with respect to the four policy considerations" to determine if the result of the benchmark analysis "requires any adjustment." *SDARS I*, 73 FR at 4094. The D.C. Circuit has approved this basic approach. *SoundExchange, Inc. v. Librarian of Congress*, 571 F.3d 1220, 1222-24 (D.C. Cir. 2009).

SEPCL13. Consideration of the Section 801(b)(1) objectives warrants an adjustment only when a "relative difference between the benchmark market and the hypothetical target market would necessitate an adjustment." *SDARS I*, 73 FR at 4094-95. Where a marketplace benchmark adequately addresses the statutory objectives, adjustments to that benchmark are unnecessary. *See, e.g.*, *Mechanicals II*, 74 FR at 4523 ("available evidence . . . related to these policy objectives does not reasonably weigh in favor of any further adjustments"); *SDARS I*, 73 FR at 4094-95 (finding that the record does not support any adjustment for the first objective); *In re 1980 Adjustment of the Royalty Rate for Coin-Operated Phonorecord Players*, 46 FR 884, 889 (1981)(same).

SEPCL14. An adjustment under Section 801 must be supported by sufficient evidence in the record. *SDARS II*, 78 FR at 23066. For a proposed adjustment to be proper, it must be supported by the evidence, and within the limits of reasonable estimation, account for key differences between the proposed benchmark market and the target market so as to resolve the lack of comparability. *See SDARS I*, 73 FR at 4089, 4093. "The absence of solid empirical

evidence that might suggest a difference between the benchmark and target markets cautions against the need for an adjustment." *SDARS II*, 78 FR at 23066.

A. The Interactive Services Benchmark Satisfies The First Three Statutory Objectives

SEPFF1433. The first three statutory objectives promote policies that are generally advanced through market transactions. According to Mr. Orszag, "market-based rates are consistent with the first three of the 801(b) factors." 4/25/17 Tr. 954:1-3 (Orszag). Professor Willig likewise addressed "the economics of pricing based on [the] public policy or public interest considerations" found in Section 801(b). 5/2/17 Tr. 1956:13-15 (Willig). As a general proposition, Professor Willig concluded that, from an economic perspective, the Section 801(b) policy objectives "require rates, royalty rates and terms generally, that perform the economic function of motivating the record companies and the artists to create desirable sound recordings." 5/2/17 Tr. 1956:25-1957:3 (Willig). "[A]t the same time," Professor Willig concluded, "those rates and those terms should motivate . . . the distribution Services, to distribute those recordings to the public in a way that reflects consumer preferences." 5/2/17 Tr. 1957:4-8 (Willig).

SEPFF1434. An effective market will tend to set prices that appropriately maximize the availability of creative works, provide a fair return to copyright owners and a fair income to copyright users, and reflect the relative roles of the parties. Thus, there will not tend to be a difference between a proper benchmark market and the hypothetical target market as to these objectives that would require an adjustment to the benchmark rate. Trial Ex. 26 at ¶¶ 23-24 (Orszag WDT); Trial Ex. 28 at 4-5 (Willig WDT).

SEPFF1435. The first statutory factor concerns maximizing the availability of creative works to the public. Stated differently, the first policy objective directs that licensing rates should be high enough to foster the creation of new content, but not so high as to jeopardize

the forward-looking viability of a service that has gained acceptance among consumers in the marketplace. There are no sound economic reasons to adjust market-based rates because of this statutory objective. Professor Willig explained that the first Section 801(b)(1) objective is consistent with "public interest pricing" or "Ramsey pricing": "The defining objective of Ramsey pricing is the maximization of consumer welfare, and this is an economic concept fully consistent with the portion[] of the Section 801(b)(1) criteria that call[s] for the maximization of the availability of creative works to the public." Trial Ex. 28 at 7 (Willig WDT); *see also* 5/2/17 Tr. 1981:18-22 (Willig) ("Ramsey pricing by definition . . . . says the price has got to be high enough to be financially sustainable on the supply side, but balanced across uses in a way that maximizes consumer welfare.").

SEPFF1436. Likewise, Mr. Orszag explained that "market-based rates are sufficiently high to incentivize copyright holders to create content, as reflected in content distributors' — and by extension consumers' — willingness to pay for sound recordings." Trial Ex. 26 at ¶ 15 (Orszag WDT). In addition, "market-based rates are not so high as to prevent content distributors from earning economic returns sufficiently attractive to induce the undertaking of the investments required to transmit content to consumers, to broaden their distribution networks, and to develop quality enhancements and a richer menu of features and functionality." Trial Ex. 26 at ¶ 15 (Orszag WDT). In short, "market-based rates will produce rates that are high enough to incent artists and labels to create their product," and "are high enough for the content distributors to earn sufficiently high returns that they will want to distribute that content." 4/25/17 Tr. 956:20-957:4 (Orszag).

SEPFF1437. The second statutory factor counsels the Judges to consider whether the rate set will afford the copyright owner a fair return for his creative work and the copyright

user a fair income under existing economic conditions. As Professor Willig testified, "public interest pricing" or "Ramsey pricing" is consistent with the second Section 801(b) objective. "The defining objective of Ramsey pricing is the maximization of consumer welfare, and this is an economic concept fully consistent with the portion[] of the Section 801(b)(1) criteria that call[s] for . . . affording the copyright user a fair income under existing economic conditions." Trial Ex. 28 at 7 (Willig WDT); *see also* Trial Ex. 28 at 6-7 (Ramsey pricing "consistent with the Section 801(b)(1) objective that calls for affording the copyright owner a fair return for his creative work"). Mr. Orszag explained that "[a]n outcome that is 'fair' from an economic perspective reasonably is one that arises through arm's length dealings in an effectively competitive marketplace." Trial Ex. 26 at ¶ 16 (Orszag WDT); *see also* 4/25/17 Tr. 958:1-6 (Orszag). He concluded that "[a] fair outcome in this proceeding, therefore, could be considered one where the rate aligns with the rates earned by record companies in distribution channels not subject to the compulsory licensing regime." Trial Ex. 26 at ¶ 16 (Orszag WDT).

SEPFF1438. Importantly, Mr. Orszag explained, "the second objective should not be employed to install a floor under the rate of return earned by the content distributor. In fact, absent a demonstration that benchmark rates somehow have been inflated by the exercise of monopoly power, any reduction to benchmark rates in the name of "fairness" will amount to nothing more than a subsidy to Sirius XM that confers upon the company an unwarranted competitive advantage *vis-à-vis* rival distributors of sound recordings, and that weakens the incentives to create new sound recordings and to undertake investments in the distribution of sound recordings (which would, of course, contradict Factor One)." Trial Ex. 26 at ¶ 17 (Orszag WDT).

SEPFF1439. The third statutory factor addresses the relative roles of the copyright owners and the copyright user with respect to their relative creative and technological contributions, cost, risk, and contribution to the opening of new markets for creative expression. This factor, too, is addressed by a market-based rate. Trial Ex. 26 at ¶ 18 (Orszag WDT). Mr. Orszag testified that "market-based rates are going to reflect the value of the investments that each party brings to . . . create a product for the consumer." 4/25/17 Tr. 960:10-15 (Orszag).

SEPFF1440. This factor should not be applied so as to provide either Sirius XM or the record labels with a guaranteed minimum return on investments. Trial Ex. 26 at ¶ 18 (Orszag WDT). Although both Sirius XM and the record companies have invested significant sunk costs, Mr. Orszag explained that "such investments will be rewarded only insofar as they generate products and services that consumers find attractive relative to the available alternatives." Trial Ex. 26 at ¶ 18 (Orszag WDT). In no case should the third statutory factor be invoked in a way that one party is compelled to prop up the risk-adjusted return on investment of another. Trial Ex. 26 at ¶ 19 (Orszag WDT). In short, "market-based rates do not guarantee somebody success." 4/25/17 Tr. 960:25-961:1 (Orszag). Finally, application of the third statutory factor should proceed with the clear understanding that music is essential to Sirius XM's success in the marketplace and its broad-based acceptance by consumers. Trial Ex. 26 at ¶ 20 (Orszag WDT).

SEPFF1441. SoundExchange's proposed interactive benchmark satisfies the first three Section 801(b) objectives. In *SDARS I*, the Judges accepted a benchmark that was similarly based on interactive services, and determined that no deviation from the marketplace benchmarks was necessitated by any of the first three statutory factors. *SDARS I*, 73 FR at 4093, 4094-97. In *SDARS II*, the Judges concluded that no deviation was warranted from marketplace benchmarks based on the first two statutory objectives, but that the third factor did justify a

departure. *SDARS II*, 78 FR at 23068. As discussed below, the evidence in the record shows that a similar downward departure based on the third factor is not justified in the current proceeding. Nor do any of the other statutory objectives support a downward departure.

SEPFF1442. In fact, if anything, as discussed below, an upward departure is justified.

B. The Section 801(b) Objectives Suggest That An Upward Departure, Or At Least A Rate At The Upper End Of The Range Of Market Rates, Is Warranted

SEPFF1443. Even if the Copyright Royalty Judges do not agree with Mr. Orszag and Professor Willig that the first three Section 801 factors necessarily support a market rate, each factor weighs in favor of artists and copyright owners, and will not support a downward deviation from the market rate.

1. First Objective: Maximizing Availability Of Creative Works To The Public

SEPCL15. Section 801(b)(1)(A) seeks to "maximize the availability of creative works to the public." This objective reflects the purpose of copyright, which is to advance public welfare by providing economic incentives to stimulate the creation and dissemination of new works. *See, e.g., In re Adjustment of Royalty Payable Under Compulsory License for Making and Distributing Phonorecords; Rates and Adjustment of Rates*, 46 FR 10466, 10479 (1981) (hereinafter "*Mechanicals I*") (the first objective is to provide "an economic incentive and the prospect of pecuniary reward" for the copyright owner's "creative efforts"). As the Supreme Court has recognized — and the Librarian has affirmed — the goal of maximizing the availability of creative works "is achieved by allowing the copyright owners to receive a fair return for their labors." *Twentieth Century Music v. Aiken*, 422 U.S. 151, 156 (1975) ("The immediate effect of our copyright law is to secure a fair return from an 'author's' creative labor.

But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good."); *PSS I*, 63 FR at 25406.

SEPCL16. Compensating copyright owners and performers stimulates both the creation of copyrighted works *and* their dissemination. *Eldred v. Ashcroft*, 537 U.S. 186, 205-06 (2003). In addition, ensuring additional income for existing works also helps to "finance the production and publication of new works." *Eldred*, 537 U.S. at 207 & n.15 (quoting testimony of Marybeth Peters, Register of Copyrights).

SEPFF1444. In order to maximize the availability of creative works to the public, the Judges should depart upwards from the benchmark rate, or at least set a rate at the upper end of the range of market rates. A higher royalty rate will incentivize record companies and artists to make more works available to the public. As discussed below, record companies bear significant financial risks and make significant investments to create, produce, market, manufacture, distribute, and license sound recordings to Sirius XM. Without the substantial investment and creative efforts of record companies, it would not be possible to introduce to the marketplace new recordings and new artists. In order to encourage record companies to make sound recordings available to the public, it is more critical than ever that they are fairly compensated when their recordings are performed on Sirius XM's satellite radio service.

SEPFF1445. In contrast, as argued below, a lower royalty rate will not lead Sirius XM to increase the availability of works to the public. In *SDARS II*, the Judges rejected the argument that Sirius XM was entitled to a downward adjustment under the first statutory factor based on the alleged promotional effect of its satellite radio service. And there is no evidence in the record that Sirius XM would play more recordings if the statutory rate were lower. Indeed,

as the royalty rate has increased over the past ten years, there is no evidence that Sirius XM today plays fewer recordings than it did in the past.

i. A Higher Royalty Rate Will Incentivize Record Companies And Artists To Make More Works Available To The Public

SEPFF1446. The Judges have previously recognized "the long-established pattern of investment in the recording industry" in which "not only are there some initial sunk investments, but there is a requirement of repeated substantial outlays year after year or, in other words, the repeated 'sinking' of funds." As the Judges have correctly observed, if record companies are "faced with the prospect of not recovering such sunk costs, then the incentive to produce such sound recordings is diminished." *Web II*, 72 FR at 24094.

SEPFF1447. The record in this case supports the same conclusion. Record companies bear significant financial risks and make significant investments to create, produce, market, manufacture, distribute and license the sound recordings that provide Sirius XM with the music content for its service. Trial Ex. 30 at 2 (Gallien WDT). Record companies make large investments, at significant risk, to sign artists, create recordings, release them to the market, help them find an audience, and build a fan base for their artists. Sirius XM bears none of these risks, and instead has the privilege of choosing from among all the most successful recordings to attract and retain subscribers who are fans of our artists. Trial Ex. 34 at ¶ 4 (Kushner WDT).

SEPFF1448. Without the substantial investment and creative efforts of record companies, it would not be possible to introduce to the marketplace new recordings and new artists. The recordings that record companies and artists create constitute the core of the consumer offerings provided by Sirius XM. Trial Ex. 34 at ¶ 4 (Kushner WDT).

SEPFF1449. Record companies' investments fuel artists' careers and fund their creative efforts. Their investments ensure the world's music fans have the opportunity to hear

and discover new artists and new music, thereby increasing the number of performers able to release sound recordings to a mass audience, allowing fans to discover their next favorite artist. Trial Ex. 30 at 7 (Gallien WDT).

SEPFF1450. In order to incentivize record companies to make sound recordings available to the public, it is more critical than ever that they are fairly compensated when their recordings are performed on Sirius XM's satellite radio service. Trial Ex. 30 at 2 (Gallien WDT). As this Court recognized in *SDARS I*, "recording companies will necessarily make future investment decisions based on their best estimates of the revenue sources available to them in the future from all sources including revenue streams derived from the SDARS' use of sound recordings." *SDARS I*, 73 FR at 4090.

SEPFF1451. The need for an increased royalty rate in order to maximize the availability of creative works to the public is particularly acute with respect to niche musical genres. By way of example, Bruce Iglauer submitted testimony about the experience of his label, Alligator Records, which releases blues recordings. As he explained, Alligator "can only survive and release music if its sound recordings generate enough revenue to cover its costs and to provide profits that we can use to develop our artists." Trial Ex. 33 at 5 (Iglauer WDT).

SEPFF1452. Unfortunately, changes in the marketplace for recorded music have made it increasingly difficult for smaller independent labels like Alligator to survive, which is threatening the ability of record companies and artists to release new blues recordings to the public. Trial Ex. 33 at 5-6 (Iglauer WDT). Several years ago, Alligator was one of several independent labels releasing blues albums. Other blues labels included Blind Pig, Arhoolie and Delta Groove. But none of those labels has any plans to release new albums. Last year, Blind Pig shut its doors after thirty-eight years in business, and sold its catalog to The Orchard. Earlier

this year it was announced that after being in business since 1960, Arhoolie Records had sold its catalog to Smithsonian Folkways Recordings, which is a nonprofit label associated with the Smithsonian Institute. While that transaction will preserve the Arhoolie catalog of over 350 albums, there are no plans to release new Arhoolie albums. And last year, the founder of Delta Groove passed away. It is unclear whether the label will continue to release new albums. Trial Ex. 33 at 5-6 (Iglauer WDT).

SEPFF1453. Thus, in a very real sense, Alligator Records is perhaps the last remaining label releasing new blues recordings. Facing these facts, Mr. Iglauer testified that "I am concerned that as the number of blues labels dwindles, there are fewer opportunities for blues artists to share their music with the public. While artists today sometimes produce and release their own albums, producing a quality recording is beyond the financial reach of many blues artists. Even if they are able to produce their own CDs, it is virtually impossible for blues artists to generate media attention, distribute their recordings and gain visibility in the marketplace." Trial Ex. 33 at 5-6 (Iglauer WDT).

SEPFF1454. Alligator Records is not immune to market forces; it operates on thin margins and is sensitive to changes in sales. Whereas in the first few years of the 2000s, its best-selling new releases each sold approximately [redacted] physical units in the United States, today its best-selling new releases sell approximately [redacted] physical units in the United States (including CDs and LPs), and most of its releases sell significantly less — approximately [redacted] physical units in the U.S. Alligator's gross revenue from physical sales (before returns) has [redacted]. Trial Ex. 33 at 6-7 (Iglauer WDT).

SEPFF1455. Part of the reason for the decline in physical sales was the growth of digital downloads. But even at their peak, digital sales did not offset the loss of physical sales.

Alligator's digital sales have been [redacted] and generated [redacted] in revenue in 2015, as compared to [redacted] in 2012 and [redacted] in 2013. Trial Ex. 33 at 6 (Iglauer WDT).

SEPFF1456. Alligator is hardly unique in this respect. It has been widely reported in the press and by groups like the RIAA that digital download revenue has been decreasing across the U.S. music industry since 2012, with no signs of a reversal. Trial Ex. 33 at 6 (Iglauer WDT).

SEPFF1457. As the marketplace has shifted over time, Alligator Records has adjusted its business to keep pace. As streaming services have grown over the years, Alligator has made sure that its tracks are available to them. Its increased revenue from streaming services, however, has not be sufficient to make up for decreased sales. Trial Ex. 33 at 7 (Iglauer WDT).

SEPFF1458. These trends have made it more difficult for Alligator to release new recordings to the public. As Iglauer explained: "I rely on sales of past and current albums to finance the recording and production of future albums. When profits decrease, so does the pool of money that Alligator can invest in recording and releasing new music. As a result, we can afford to take fewer risks in signing, recording and promoting new artists, and new artists have fewer opportunities to release their music. In this environment, it is hard to invest our limited resources in anything but a sure thing, and even when we do invest, our budgets tend to be smaller than in the past." Trial Ex. 33 at 7-8 (Iglauer WDT).

SEPFF1459. Alligator's annual releases peaked in 1990 with fourteen new releases and one anthology. In 2014, Alligator released seven new albums, and in 2015 Alligator released only three new albums and two vinyl LPs of previously recorded material. According to

Iglauer, "our margins are thinner than ever. This puts more pressure on each release and reinforces our incentive to rely on artists who have a demonstrated record of commercial success. It also means making albums on tighter budgets and finding ways to save on other expenses." Trial Ex. 33 at 8 (Iglauer WDT).

SEPFF1460. Even as the music industry has undergone transformations, one thing has remained the same in the industry — the need for great music. Iglauer explained the threat of setting below-market rates: "I am proud that through all these years, Alligator has continued to release some of the best blues recordings around. In order to continue making sound recordings available to the public, we need a fair return for our contributions. The survival of labels such as Alligator Records and the preservation of American music like the blues depends on our ability to capture new revenue streams." Trial Ex. 33 at 17 (Iglauer WDT).

SEPFF1461. As Mr. Kushner summarized, in order for record companies to continue to achieve returns on their investments to find and support the artists and music of tomorrow, it is imperative that they receive returns from those services' use of copyrighted sound recordings that are commensurate with the value that record companies and artists contribute to those services. Trial Ex. 34 at 1-2 (Kushner WDT).

ii. A Lower Royalty Rate Will Not Incentivize Sirius XM To Increase The Availability Of Works To The Public

SEPFF1462. In *SDARS II*, Sirius XM made (and the Judges rejected) the same argument that it has raised in the current proceeding — namely, that it was entitled to a downward adjustment under the first statutory factor based on the alleged promotional effect of its satellite radio service. *SDARS II*, 78 FR at 23066. The Judges noted that it was "not surprising that record labels seek airplay for the artists they represent" and that it would not "be surprising to learn that increased airplay on Sirius XM can enhance phonorecord sales." *SDARS*

II, 78 FR at 23066. The Judges squarely held that Sirius XM failed to justify a downward departure: "Those facts alone, even if assumed to be true, would not provide the type of substantial empirical evidence that might support a downward adjustment from the rates most strongly suggested by the evidence in the record." *SDARS II*, 78 FR at 23066.

SEPFF1463. Likewise, in prior proceedings the Judges and their predecessors repeatedly rejected claims by copyright users that those who use and disseminate copyrighted works are entitled to a below-market rate based on the first statutory objective. The Judges have dismissed the idea "that simply lowering the . . . rates . . . will necessarily increase the public's access to . . . creative works." *Mechanicals II*, 74 FR at 4524. In *Mechanicals I*, the Copyright Royalty Tribunal rejected arguments that § 801(b)(1)(A) benefited those who use copyrights, finding instead that this objective focused on encouraging the creation and dissemination of copyrighted works and that such encouragement "takes the form of an economic incentive" for the copyright owners. 46 FR at 10479; *see also PSS I*, 63 FR at 25407 ("the record companies and the performers make the greater contribution in maximizing the availability of the creative works to the public").

SEPFF1464. Nor is there any evidence in the record that Sirius XM would play more recordings if the statutory royalty rate were lower. Indeed, as the royalty rate has increased over the past ten years, there is no evidence that Sirius XM today plays fewer recordings than it did in the past.

2. Second Objective: Affording A Fair Return To Copyright Owners And A Fair Income To Copyright Users Under Existing Economic Conditions

SEPCL17. The second statutory objective requires the Judges to adopt a rate that results in a fair return for the copyright owner and a fair income for the copyright user. The Judges and their predecessors have consistently held that fairness to both parties under this

provision is best accomplished by replicating to the greatest extent possible the returns that would exist in workably competitive markets, where producers and distributors are rewarded for their risks and for the value of what they bring to the market. *See, e.g.*, *SDARS II*, 78 FR at 23067 (noting the presumption that a "marketplace-inspired" rate "already reflects a fair income and a fair return"). *SDARS I*, 73 FR at 4095 ("a fair income is more consistent with reasonable market outcomes"); *PSS I*, 63 FR at 25409 ("[u]sually this balance is struck in the marketplace through arms-length negotiations"; recommended rate based on consideration of "proposed marketplace benchmarks" achieves second objective).

SEPFF1465. The current rate is much lower than a market rate and thus does not afford a fair return to copyright owners, especially given today's economic conditions. The evidence shows that dramatic changes in the music industry have made royalty revenues from Sirius XM even more important than in the past. Physical product sales have experienced significant decline, which has led to substantial cost cutting throughout the record industry. Initially, physical product sales were partially replaced by download sales, but since 2012 U.S. download sales, too, have been steadily declining. The record industry is currently in the midst of a transformation of music distribution — from a digital model based on "ownership" of music to a new model of "access" to digital music. In this new world, record companies are increasingly dependent on the digital exploitation of sound recordings from services like Sirius XM.

SEPFF1466. Sirius XM can well-afford an increase in rates. It earns far more than a fair income under the current rate, and will continue to do so under SoundExchange's rate proposal. Put simply, and as described in detail below, Sirius XM's profits have increased dramatically since the first *SDARS* proceeding, and Sirius XM's performance along virtually

every financial and operating metric has been equally impressive. Sirius XM is able to pass through the cost of SoundExchange royalties to customers in the form of a "U.S. Music Royalty Fee," which is 13.9% of the price of a subscription. As of April 27, 2016, the fee was $2.22 for a primary subscription to Sirius XM's base package (Select) and $2.78 for a primary subscription to its premier packages (All Access).

SEPFF1467. Notably, although Sirius XM has increased its prices over the past decade, those price increases appear to have little effect on demand for its services. 2016 was a banner year for Sirius XM, with the company setting records for subscribers, revenue, adjusted EBITDA, and free cash flow, beating its guidance on all of those metrics. And the picture for the future continues to be rosy, with Sirius XM's financial performance over the upcoming five-year rate term expected to remain strong.

i. The Current Rate Is Much Lower Than A Market Rate And Thus Does Not Afford A Fair Return To Copyright Owners, Especially Given Today's Economic Conditions

SEPFF1468. The evidence shows that the current statutory rate and Sirius XM's proposed rate are far below market rates. As discussed in greater detail elsewhere, *see supra* Section V.C, at the current statutory rate, Sirius XM pays the record companies only $12 to $14 per year per subscriber, which is [ ]. Trial Ex. 32 at ¶ 27 (Harrison WDT).

SEPFF1469. Because the current rate, and Sirius XM's proposed rate, provide copyright owners with a fraction of the compensation that they would receive from marketplace rates, they do not afford a fair return. To the contrary, the effect of the rates is that copyright

owners subsidize Sirius XM's satellite radio service.[142] An upward adjustment is appropriate under the second statutory objective to account for this lack of a fair return.

SEPFF1470. The need for a fair return is particularly acute in light of the existing economic conditions. The evidence shows that dramatic changes in the music industry have made revenues from Sirius XM more important than in the past. Trial Ex. 34 at ¶¶ 8-9 (Kushner WDT); Trial Ex. 30 at 1-2 (Gallien WDT). Since 2000, music sales in the United States have declined by approximately 50%, falling from a high of $14.3 billion to $7 billion in 2015. Trial Ex. 30 at 3 (Gallien WDT).

SEPFF1471. Physical product sales, in particular, experienced significant decline. By 2015, record companies shipped 144 million physical product units across all formats with a retail value of approximately $2 billion. Trial Ex. 30 at 3 (Gallien WDT). Physical product sales still represented about 28.8% of the U.S. recording industry's retail revenue in 2015, but that share continues to decline steadily. Trial Ex. 34 at ¶ 10 (Kushner WDT).

SEPFF1472. [redacted]. UMG's domestic revenue from physical sales has decreased from [redacted] in 2000 to [redacted] in 2015, representing only [redacted] of UMG's U.S. total net sales in 2015. Trial Ex. 30 at 2-3 (Gallien WDT).

SEPFF1473. This decline in sales has led to substantial cost cutting throughout the record industry, with record companies slashing artist rosters, signing fewer artists, and reducing internal headcount. For example, as revenues fell precipitously, UMG had to undertake repeated rounds of restructuring and downsizing in order to preserve capital to continue investing in new artists and their creative vision. UMG employs roughly [redacted] in the U.S.

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[142] *See infra* Section X.C for further discussion of this subsidy.

today compared to 2000). Trial Ex. 30 at 3 (Gallien WDT). Despite these cost-saving initiatives, [ ]. Trial Ex. 30 at 1-3 (Gallien WDT). Likewise, in 1999, Atlantic and Elektra released a combined total of 86 new albums. By the middle of the last decade, that had fallen to 30 to 40 new albums per year. The aggregate workforce of Atlantic and Elektra, which at its peak in 1996 was over [ ] people, has been reduced to [ ] employees today. Trial Ex. 34 at ¶ 11 (Kushner WDT). Similarly, in 2000, Alligator Recordings had 23 staff-members. Today it has 16, and its remaining staff members [ ]. Trial Ex. 33 at 8 (Iglauer WDT).

SEPFF1474. As revenue from physical sales has plummeted, it has become clear that revenue from digital and licensed uses is where the future of the business lies. Trial Ex. 30 at 4 (Gallien WDT). According to RIAA data, by 2015 digital exploitation generated 70% of industry revenues. Trial Ex. 30 at 4-5 (Gallien WDT).

SEPFF1475. [ ]. In 2000, UMG had virtually no digital revenue. But by 2010, digital formats generated [ ] in revenue, comprising about [ ] of total revenue. In 2015, UMG's digital income increased to [ ] and comprised [ ] of total digital and physical revenue. Trial Ex. 30 at 4-5 (Gallien WDT).

SEPFF1476. Initially, physical product sales were partially replaced by download sales, which began to find consumer acceptance after the launch of the iTunes store in 2003, although at levels nowhere near sufficient to close the gap caused by plummeting physical sales.

Download sales increased steadily until 2012, when the retail value of downloads distributed in the U.S. was just over $3 billion, according to RIAA data. Trial Ex. 34 at ¶ 12 (Kushner WDT).

SEPFF1477. While the emergence of a major new revenue source was obviously good news for the recording industry, the sale of downloads produced its own dislocation due to the unbundling of albums. Record companies previously oriented their business, and artists oriented their careers, around cycles of producing and releasing a body of work in album form, promoting the album, and touring in connection with the album. While many consumers buy albums in download form, many more buy only selected tracks, an option that has been available since the launch of iTunes in 2003. This phenomenon itself led to the sale of fewer tracks than was the case when only albums were available, and ultimately a reorientation of the business around more frequent product releases. Trial Ex. 34 at ¶ 12 (Kushner WDT).

SEPFF1478. Since 2012, however, U.S. download sales too have been steadily declining. By 2015, the retail value of downloads distributed in the U.S. had fallen to a bit less than $2.4 billion, and downloads represented only about 34% of total U.S. music revenue, according to RIAA. Trial Ex. 34 at ¶ 15 (Kushner WDT).

SEPFF1479. [ ]. In 2013, UMG's revenues from digital downloads peaked at [ ]. By 2015, UMG's download revenues [ ] in UMG's most significant revenue stream in just two years. Trial Ex. 30 at 6 (Gallien WDT).

SEPFF1480. The decline in digital downloads has occurred because consumers are increasingly embracing services that provide them with *access* to a wide range of music rather than purchasing music for their personal collections. Some services, like Apple Music, Google Play, and Spotify, offer a mix of interactive and non-interactive features. Others, like Sirius XM,

do not yet offer interactive features. Whether consumers subscribe to Spotify or to Sirius XM, or use a non-subscription service like Pandora's free tier, they increasingly want to access music they want to hear without having to purchase a permanent copy of a recording. Trial Ex. 30 at 6 (Gallien WDT).

SEPFF1481. Thus, record companies are currently in the midst of another major transformation of music distribution — from a digital model based on "ownership" of music to a new model of "access" to digital music, including both on-demand services and listening on services like Sirius XM and Pandora. Streaming and other performance licensing is now the largest segment of the U.S. recording industry's revenue, at 34.3% as reported by RIAA. Trial Ex. 34 at ¶ 15 (Kushner WDT); *see also* Trial Ex. 34 at ¶ 17 (Kushner WDT) (documenting increase in recording industry revenue from streaming services).

SEPFF1482. Record companies have re-focused their businesses on maximizing digital and licensing exploitation. Revenues from digital exploitation of recorded works are now primary sources of revenues. Accordingly, record companies have made substantial investments in the infrastructure and personnel needed to operate a business that relies on digital products and licensed uses. For example, UMG has invested over [ ] in its digital business since the early 2000s. Trial Ex. 30 at 4 (Gallien WDT). There is a popular misconception that the shift from physical to digital distribution entails dramatic cost savings for a record company. In fact, most costs are not associated with distribution at all, and are driven by the process of creating and promoting recordings and the need to account to our artists and other royalty recipients. Those costs, along with corporate overhead, must be recovered from all the uses record companies can monetize. Trial Ex. 34 at ¶ 13 (Kushner WDT).

SEPFF1483. In addition, Atlantic has added an entire new department solely addressing digital marketing, while it continues to maintain its radio promotion staff, video production and promotion staff, and sales staff. Digital distribution requires complex negotiations with digital service providers, infrastructure to manage and deliver various versions of recordings to each service, development and delivery of extensive data about each recording, and employees to carry out these processes, while Atlantic also still maintains the staff and infrastructure necessary for physical distribution. Trial Ex. 34 at ¶ 13 (Kushner WDT).

SEPFF1484. Although digital revenues have steadily increased and now constitute the majority of record companies' business, they have not offset the decline in physical revenues. [ ]. Trial Ex. 30 at 4-5 (Gallien WDT).

SEPFF1485. As all of these financial figures demonstrate, record companies are increasingly dependent on the digital sales and licensed exploitations of sound recordings. While record companies were able, years ago, to rely largely on a single revenue stream, like the sale of CDs, those days are over. Today, they rely on a variety of revenue streams, most of them digital. The following table, which depicts the amount of revenue UMG derived from various sources in fiscal year 2015, makes this abundantly clear. Trial Ex. 30 at 5 (Gallien WDT).

UMG's Domestic Revenue Sources in 2015 [RESTRICTED]

Physical Product Sales	[ ]
Digital Download Sales	[ ]
Digital Subscriptions Sales	[ ]
Ad Supported Audio Streaming Sales	[ ]
Ad Supported Video streaming Sales	[ ]

Ring Tone & Other Mobile	[redacted]
Other Digital Revenues	[redacted]
Broadcast Licensing Income	[redacted]
Synchronization & Other License Income	[redacted]
Foreign License Income	[redacted]
Non Recorded Income	[redacted]
Manufacturing & Distribution Service	[redacted]

Trial Ex. 30 at 5 (Gallien WDT).

SEPFF1486. Because record companies now depend on generating numerous revenue streams, it is imperative that they receive fair compensation for the use of their recordings by digital and licensed service providers, whether that service is provided over fiber optic cables, cellular networks, or via orbiting satellites. Trial Ex. 30 at 5-6 (Gallien WDT).

SEPFF1487. In particular, the royalties from SoundExchange are an important part of the industry's current and future revenue base. UMG received approximately [redacted] in statutory license royalties from SoundExchange in 2010 and approximately [redacted] in 2015. Those 2015 royalties included [redacted] from satellite radio and [redacted] from pre-existing services. Trial Ex. 30 at 6 (Gallien WDT).

SEPFF1488. In 2015, Alligator's SoundExchange royalties were [redacted] The SoundExchange royalties represented approximately [redacted] of Alligator's total revenue, and Sirius XM royalties in particular were [redacted] of Alligator's total revenue. By comparison, in 2004, Alligator received [redacted] in SoundExchange royalties, representing [redacted] of Alligator's revenue that year. Trial Ex. 33 at 18 (Iglauer WDT).

SEPFF1489. The changes in the recorded music industry have hit some record companies harder than others. For example, Iglauer explained that in 2014 and 2015 [ ]. Trial Ex. 33 at 16 (Iglauer WDT).

SEPFF1490. Earning fair returns from Sirius XM is important for another reason: consumers have a limited amount of time to listen to music. When subscribers tune in to Sirius XM, they forego other direct revenue generating services, like Apple Music or Spotify. The return that record companies earn from Sirius XM should be commensurate with the returns they receive from such services. In addition, subscribers also may feel that they no longer need to purchase CDs or downloads to hear the music they like through their satellite subscription. Trial Ex. 30 at 7 (Gallien WDT).

SEPFF1491. As Mr. Kushner explained, record companies "view use of our music in every type of streaming service as competing to some extent with every other such use of our music. We view none of them as promotional of any other, and indeed, we view each as potentially cannibalizing others. Thus, we are focused on growing the lines of business that generate the highest revenue per user, and need to generate an appropriate level of revenue from each of them." Trial Ex. 34 at ¶ 21 (Kushner WDT).

ii. Sirius XM Earns Far More Than A Fair Income Under The Current Rate, And Will Continue To Do So Under SoundExchange's Rate Proposal

SEPFF1492. In *SDARS II*, the Judges reaffirmed their guidance from *SDARS I*: "Affording copyright users a fair income is not the same thing as guaranteeing them a profit in excess of the fair expectations of a highly leveraged enterprise. Nor is a fair income one which allows the [service] to utilize its other resources inefficiently. In both these senses, a fair income

is more consistent with reasonable market outcomes." *SDARS II*, 78 FR at 23067 (quoting *SDARS I*, 73 FR at 4095).

SEPFF1493. "In the absence of *substantial evidence* in the record to the contrary, any marketplace benchmark rate that guides the selection of rates will encompass such a return because it represents the best evidence of reasonable market outcomes." *SDARS II*, 78 FR at 23067 (emphasis added).

SEPFF1494. In *SDARS II* the Judges concluded that "Sirius XM's current trend toward profitability and its ability to pass on at least a portion of the rate increase to its subscribers suggests that the prevailing statutory rate—which was informed by a marketplace benchmark . . . did not hinder Sirius XM's ability to earn a fair income." *SDARS II*, 78 FR at 23067 (footnote omitted). This is even truer today given Sirius XM's extremely strong financial performance.

a. Background On Sirius XM Financials

SEPFF1495. Sirius XM's financial picture has changed dramatically since the first *SDARS* proceeding. At the time of *SDARS I*, Sirius and XM were two separate companies. These two satellite radio companies competed for subscribers based on price, and likewise engaged in price competition for non-music content such as sports leagues and talk show personalities (they did not, of course, compete on price for music content, because the statutory licenses eliminated such competition). In July 2008, Sirius and XM merged to form Sirius XM. Through this merger, Sirius XM became the sole provider of satellite radio in the United States, holding a virtual monopoly in this market segment. Trial Ex. 25 at ¶ 43 (Lys Corr. WDT) (citing Sirius XM Radio Inc., 2012 Form 10-K Annual Report at 1).

SEPFF1496. The merger had a dramatic impact on Sirius XM's financial fortunes. Not only did the merger eliminate price competition between the two satellite radio services for

subscribers and non-music content, but it also allowed the combined company to take advantage of the economies of scale that are central to its business model. Trial Ex. 25 at ¶ 44 (Lys Corr. WDT).

SEPFF1497. Sirius XM's operating costs are predominantly fixed with respect to subscriber revenue, meaning that they do not vary with subscriber revenue. Fixed costs include programming and content, satellite and transmission, sales and marketing, engineering and design, subscriber acquisition costs, and general and administrative. Thus, for example, Sirius XM's satellite transmission network costs are the same whether one person is listening to a broadcast, or millions. Trial Ex. 25 at ¶ 45 (Lys Corr. WDT).

SEPFF1498. Sirius XM's variable operating costs (*i.e.*, costs that do vary with subscriber revenue) are small in comparison, and include revenue share and royalties, customer service, and cost of equipment.[143] Trial Ex. 25 at ¶ 46 (Lys Corr. WDT).

SEPFF1499. Because of its largely fixed cost structure, Sirius XM's profits increased dramatically once its sales reached its "break-even point," that is a level such that its fixed costs are covered. The company was able to achieve this level of performance soon after — and in large part because of — the merger in 2008. Sirius XM's contribution margin (*i.e.*, the fraction of each additional revenue dollar that increases profits) is thus very high. By 2015, Sirius XM achieved a contribution margin of 71%, meaning that each additional dollar of revenue increases pre-tax net income and cash flows by $0.71.[144] Trial Ex. 25 at ¶ 47 (Lys Corr. WDT).

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[143] This categorization of fixed and variable costs comes from Sirius XM's internal categorizations. *See* Trial Ex. 25 at ¶ 46 n.17 (Lys Corr. WDT) (citing Sirius XM Radio Inc. 2011 Q2 Earnings Call (Aug. 2, 2011) at 6).

[144] Sirius XM frequently touts this point in its earnings calls. *See* Trial Ex. 25 ¶ 47 n.18 (Lys Corr. WDT) (citing James Meyer, CEO, Sirius XM, Sirius XM Radio Inc. 2015 Q1 Earnings Call (April 28, 2015) at 2 ("Most of the incremental revenue we generate flows to the bottom line, and we have a tremendous ability to convert our growing operating earnings into free cash flow at very high levels."); James Meyer, CEO, Sirius XM, Sirius XM Radio Inc.

SEPFF1500. Profitability has increased significantly in every period since the post-merger Sirius XM obtained sufficient revenue to cover its fixed costs. As Sirius XM CEO James Meyer put it:

> "[...] the model works and it works exactly like you think it works. This was a highly scalable, highly leveraged model and that if you look back and look, it is really when we reached about 20 million subscribers when the model took off and now our model is highly scalable and nothing changes but getting better going forward."

Trial Ex. 25 at ¶ 48 (Lys Corr. WDT) (citing James Meyer, CEO, Sirius XM, Citi Internet, Media & Telecommunications Conference (Jan. 7, 2014) at 3).

SEPFF1501. Sirius XM has also been extremely successful in generating cash from those high revenue levels. Free cash flow (FCF) is a metric that captures the amount of cash that is available, after necessary business investment, to pay dividends and repurchase shares. Sirius XM's business model and extraordinary performance have enabled it to translate those already high operating margins into FCF at a higher percentage than its competitors. The following figure from Professor Lys's Written Direct Testimony, Sirius XM's own illustration, shows that in 2012 FCF represented [[redacted]] of Sirius XM's EBITDA (a measure of operating cash flows) — far exceeding the next most competitive companies in the entertainment-media space. To put it differently, Sirius XM can distribute [[redacted]] of its EBITDA to its shareholders without affecting its operations.

2012 Q4 Earnings Call (Feb. 5, 2013) at 4 ("We have a reoccurring subscription revenue model with low marginal costs that enables us to keep the vast majority of our incremental revenue.").

Media Business FCF as a percentage of EBITDA [RESTRICTED]

Source: Sirius XM, Annual Stockholder Meeting (May 21, 2013), SXM_DIR_00003998, at 24.

Trial Ex. 25, Figure 2 at 11 (Lys Corr. WDT).

SEPFF1502. In short, Sirius XM's business model has not only worked, it has thrived. Sirius XM expected to lose money at the outset, because its business required substantial capital investment in a satellite transmission system and other infrastructure before even one subscriber could be served. The business model dictated that the subscriber base grow to a certain level before Sirius XM could cover its fixed costs and become profitable. While that was happening, Sirius XM persuaded the Judges in *SDARS I* that the royalty rates for its most important content — music — should be set below the market rates that the Judges found most strongly supported by the evidence, to facilitate Sirius XM's continued growth. With the benefit

of below-market royalty rates and the merger, Sirius XM passed the break-even point and is now reaping impressive financial rewards. Trial Ex. 25 at ¶ 50 (Lys Corr. WDT).

b. Sirius XM's Financial Performance, 2006-2015

SEPFF1503. Sirius XM's impressive financial shape is illustrated by its improving performance over the past decade, in which Sirius XM has significantly expanded its business by virtually every financial and operating metric. Sirius XM's outstanding financial performance and profitability is directly relevant to determining a rate that would allow "a fair income under existing economic conditions," while affording "the copyright owner a fair return for his or her creative work." 17 U.S.C. § 801(b)(1)(B). As discussed below, Sirius XM's robust financial performance ("fantastic," as Professor Lys testified at trial), which is unparalleled by its self-identified competitors, supports a substantially higher rate than present. Trial Ex. 25 at ¶ 51 (Lys Corr. WDT); 4/26/17 Tr. 1323:8-14 (Lys).

SEPFF1504. According to the company's executives, "Sirius XM is one of the best growth stories in media," and its "business is thriving," a claim fully supported by Professor Lys's analysis. Trial Ex. 25 at ¶ 52 & nn.24-25 (Lys Corr. WDT) (citing David Frear, CFO and Executive VP, Sirius XM, Q4 2012 Earnings Call (Feb. 5, 2013) at 7 and James Meyer, CEO, Sirius XM, Q1 2016 Earnings Call (April 28, 2016) at 2.).

SEPFF1505. Sirius XM's management regularly highlights its exceptionally strong financial performance, in examples set out in Professor Lys's Written Direct Testimony. *See* Trial Ex. 25 ¶ 52 (Lys Corr. WDT). For example, statements made by Sirius XM executives at recent earnings calls include:

- "2015 was an incredible year for SiriusXM. We exceeded all of our original operational and financial goals, and we are predicting continued growth in subscribers and all of our financial metrics this year."

Trial Ex. 25 ¶ 52 (Lys Corr. WDT) (citing James Meyer, CEO, Sirius XM, Q4 2015 Earnings Call (Feb. 2, 2016) at 2).

- "It's difficult for me to imagine how Sirius XM could have delivered a stronger quarter."

Trial Ex. 25 ¶ 52 (Lys Corr. WDT) (citing David Frear, CFO and Senior Executive VP, Sirius XM, Q1 2015 Earnings Call (April 28, 2015) at 4).

- "I thought our first quarter was pretty hard to beat, but the second quarter was even better."

Trial Ex. 25 ¶ 52 (Lys Corr. WDT) (citing David Frear, CFO and Senior Executive VP, Sirius XM, Q2 2015 Earnings Call (July 28, 2015) at 4).

- "SiriusXM turned in an excellent performance in 2014 on all fronts."

Trial Ex. 25 ¶ 52 (Lys Corr. WDT) (citing James Meyer, CEO, Sirius XM, Q4 2014 Earnings Call (Feb. 5, 2015) at 2).

- "Once again, SiriusXM posted exceptional operating results."

Trial Ex. 25 ¶ 52 (Lys Corr. WDT) (citing James Meyer, CEO, Sirius XM, Q3 2014 Earnings Call (Oct. 28, 2014) at 4).

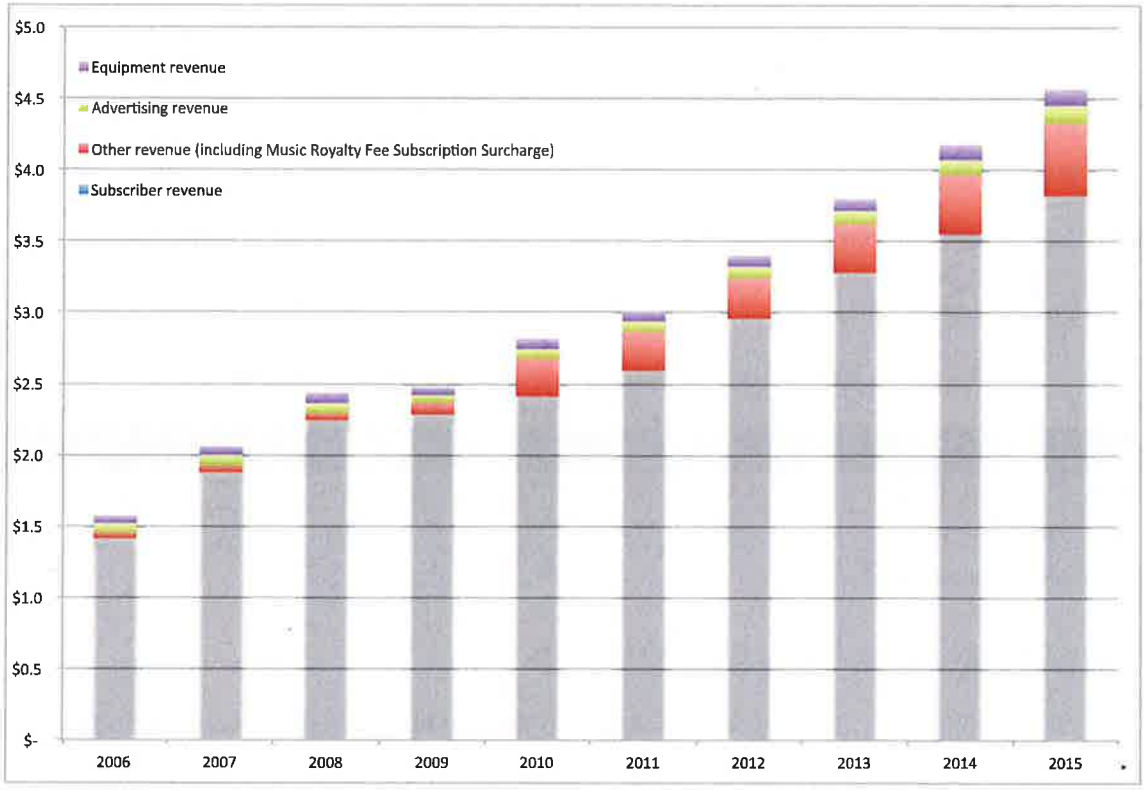
SEPFF1506. Starting in 2009 Sirius XM became profitable both in terms of EBIT (earnings before interest and taxes) and EBITDA (adjusted earnings before interest, taxes, depreciation, and amortization), two common indicators used to track firms' performance. In the post-merger period (2009-15), Sirius XM earned a total of $5.6 billion in EBIT. Similarly, in the seven-year period since the merger, Sirius XM has generated over $7 billion in adjusted EBITDA, which increased from a negative $690 million in 2006 to positive $1.66 billion in 2015. Trial Ex. 25 at ¶ 54 (Lys Corr. WDT) (citing Trial Ex. 372).

SEPFF1507. Over the past decade, Sirius XM has experienced a substantial increase in its number of subscribers, while it has consistently increased its prices and fees to the

consumer, leading to substantial growth in revenue. Trial Ex. 25 at ¶ 57 (Lys Corr. WDT); *see also* 4/26/17 Tr. 1323:15-19 (Lys) (reviewed Sirius XM's revenue base historically).

SEPFF1508. The figure below from Professor Lys's Written Direct Testimony demonstrates the importance of subscription revenue to Sirius XM.

Sirius XM Revenue by type, 2006-2015, in $ billion



Source: Sirius XM 10K filings, 2009-2015.

Trial Ex. 25, Figure 5 at 16 (Lys Corr. WDT).

SEPFF1509. As of March 2016, Sirius XM has over 30 million subscribers. Trial Ex. 25 ¶ 58 & n.34 (Lys Corr. WDT) (citing Sirius XM Holdings, Inc., Form 10-Q (Mar. 31, 2016) at 23). Over the past decade Sirius XM's subscriber base has grown on average 9.0% per year, more than doubling from 13.7 million subscribers in 2006 to 29.6 million subscribers at the end of 2015. Trial Ex. 25 at ¶ 59 (Lys Corr. WDT).

SEPFF1510. Sirius XM's increases in the number of its subscribers does not entirely explain Sirius XM's revenue growth. Sirius XM's total revenue has grown even faster than the number of subscribers, from $1.57 billion in 2006 to $4.57 billion in 2015, a 12.6 percent compounded annual growth rate (CAGR). Trial Ex. 25 at ¶ 65 (Lys Corr. WDT).

SEPFF1511. This has resulted from the fact that, at the same time as it has grown its subscriber base, Sirius XM has been able to increase the subscription prices and fees it charges subscribers, leading to rising average revenue per user (ARPU).[145] As illustrated in the below figure from Professor Lys's Written Direct Testimony, between 2008 and 2015, Sirius XM's ARPU increased from $10.82 to $12.53, a 15.8% increase, corresponding to a compounded annual growth rate of 1.6%.

Sirius XM Average Revenue per User (ARPU), 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ARPU	$10.82	$10.66	$10.56	$10.95	$11.73	$11.58	$12.00	$12.23	$12.38	$12.53
ARPU growth	n/a	-1.5%	-0.9%	3.7%	7.1%	-1.2%	3.7%	1.9%	1.2%	1.2%

Source: Sirius XM 10-K statements.

Trial Ex. 25, Figure 11 at 21 (Lys Corr. WDT).

SEPFF1512. This increase in ARPU is the combined result of increases in the Sirius XM subscription rates and fees, partially offset by the growth in subscription discounts and (cheaper) limited channel plans offered through customer retention and acquisition programs, as well as a shift to longer-term promotional data and service plans with lower rates. Trial Ex. 25 ¶ 67 (Lys Corr. WDT) (citing Trial Ex. 356 at 31).

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[145] In its SEC filings, Sirius XM provides a detailed breakdown of its ARPU calculations. *See, e.g.*, Trial Ex. 356 at 31 ("ARPU is derived from total earned subscriber revenue (excluding revenue derived from our connected vehicle services business), net advertising revenue and other subscription-related revenue, net of purchase price accounting adjustments, divided by the number of months in the period, divided by the daily weighted average number of subscribers for the period."). In 2014 there were also "changes in contracts with an automaker and a rental car company." *Id.*

SEPFF1513. The most significant fee item is the U.S. Music Royalty Fee surcharge, introduced in 2009. Although created ostensibly for the purpose of covering the statutory royalty fees Sirius XM is obligated to pay, it appears to be a response to restrictions imposed by the FCC against raising rates following the 2008 merger and simply amounts to another price increase. Trial Ex. 25 at ¶ 68 (Lys Corr. WDT).

SEPFF1514. Sirius XM has explained the U.S. Music Royalty Fee as follows:

> The FCC's order approving the Merger allows us to pass through cost increases incurred since the filing of our FCC merger application as a result of statutorily or contractually required payments to the music, recording and publishing industries for the performance of musical works and sound recordings or for device recording fees.

Trial Ex. 25 ¶ 69 (Lys Corr. WDT) (citing Sirius XM 2010 Annual Report at 4).

SEPFF1515. Sirius XM's website states that the current U.S. Music Royalty Fee is "13.9% of the subscription price of the package you purchase." Trial Ex. 320. This percentage fee is applied to "the entire subscription price of the package." Trial Ex. 320.

SEPFF1516. Sirius XM has periodically increased the size of its Music Royalty Fee. As of April 27, 2016, the fee was $2.22 for a primary subscription to Sirius XM's base package (Select) and $2.78 for a primary subscription to its premier package (All Access). Trial Ex. 321.

SEPFF1517. The Music Royalty Fee is currently large enough to essentially offset SoundExchange's requested per-subscriber rate ($2.48 in 2018). Subscribers to the All Access package already pay a Music Royalty Fee that exceeds this amount and leaves $0.30 per subscriber left over to defray other costs.

SEPFF1518. Historically, [[redacted]]. *Compare* Trial Ex. 149 (native file) (tab "SOA," column I) *with id.* (tab "Other Revenues," row 19). In 2014, Sirius XM paid out approximately [[redacted]] in royalties to SoundExchange, but collected [[redacted]

[redacted] in Music Royalty Fees. *Compare* Trial Ex. 151 (native file) (tab "SOA," cell I30) *with id.* (tab "Other Revenue," row 22). In 2015, Sirius XM paid out approximately [redacted]. *Compare* Trial Ex. 150 (native file) (tab "SOA" at cell I30) *with id.* (tab "Other Revenue" at row 21). In September 2016 (the latest month for which data was available), Sirius XM collected over [redacted] in Music Royalty Fees in September 2016, but paid SoundExchange approximately [redacted] in royalties. *Id.*

SEPFF1519. The figure below from Professor Lys's Written Direct Testimony presents the total effective monthly cost of subscribing to Sirius XM, combining the subscription fee (focusing on the company's most popular offering, the "Select" subscription package) and the U.S. Music Royalty Fee.

Sirius XM historical effective monthly total subscription cost for the Select subscription package

Date	Nominal Subscription	U.S. Music Royalty Fee	Total effective subscription	Increase	% increase
1-Jan-06	$12.95	$0.00	$12.95	n/a	n/a
29-Jul-09	$12.95	$1.98	$14.93	$1.98	15.3%
6-Dec-10	$12.95	$1.40	$14.35	$(0.58)	-3.9%
1-Jan-12	$14.49	$1.42	$15.91	$1.56	10.9%
1-Feb-13	$14.49	$1.81	$16.30	$0.39	2.5%
1-Jan-14	$14.99	$1.81	$16.80	$0.50	3.1%
5-Jan-15	$14.99	$2.08	$17.07	$0.27	1.6%
27-Apr-16	$15.99	$2.22	$18.21	$1.14	6.7%

Trial Ex. 25, Figure 12 at 22 (Lys Corr. WDT) (citing Sirius XM 10Ks and earnings calls); *see also* Trial Ex. 321.

SEPFF1520. As this figure shows, Sirius XM's pricing on its Select subscription package has increased by 41% over the past decade, from $12.95 in 2006 to $18.12 as of April

2016. This corresponds to a total increase of $5.26 or a compounded annual increase of 3.5%. Trial Ex. 25 at ¶ 71 (Lys Corr. WDT).

SEPFF1521. Sirius XM's pricing increases appear to have had little effect on demand for its services. To illustrate this, Professor Lys analyzed the impact of Sirius XM's price increases on churn, defined by Sirius XM as "the monthly average of self-pay deactivations for the period divided by the average number of self-pay subscribers for the period." Trial Ex. 372 at 21. Sirius XM's historical average self-pay[146] monthly churn rate is set out in the following figure from Professor Lys's Written Direct Testimony.

Sirius XM's churn rate, 2006-2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Churn	1.7%	1.7%	1.8%	2.0%	1.9%	1.9%	1.9%	1.8%	1.9%	1.8%

Trial Ex. 25, Figure 13 at 23 (Lys Corr. WDT).

SEPFF1522. Thus, while Sirius XM's subscription price, including royalty surcharge, has increased by 3.5% per year, and its ARPU has increased by 1.6% per year, Sirius XM's churn rate has stayed virtually constant. In 2006, Sirius XM's churn was 1.7% and in 2015 churn was 1.8%.[147] The only noticeable bump is in 2009 when churn increased from 1.8% to 2.0%. While this occurred in the year when Sirius XM introduced the U.S. Music Royalty Fee, and thus had the largest percentage increase in the effective subscription price, it also coincided with the 2008-09 recession. Trial Ex. 25 at ¶ 73 (Lys Corr. WDT).

SEPFF1523. Based on this analysis, Professor Lys concluded that Sirius XM has been facing a relatively inelastic demand, enabling it to increase prices to consumers without

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[146] "Self-pay" subscribers are subscribers who pay a subscription fee (as opposed to subscribers who do not pay for their service because they are receiving a promotional subscription). Trial Ex. 25 at ¶ 72 n.58.

[147] Sirius XM only discloses the churn rate to one decimal point and the observed movement has been very small, thus making CAGR calculations too imprecise to be meaningful. Trial Ex. 25 at ¶ 73 n.59.

negatively impacting its churn rate. This conclusion is consistent with statements of Sirius XM management whenever price increases have been instituted. *See* Trial Ex. 25 at ¶ 74 (citing statements of Mel Karmazin, David Frear, and James Meyer during earnings calls).

SEPFF1524. At the same time, Sirius XM's costs have been decreasing. Sirius XM reduced the cost of service by about one third, from approximately 60% of revenue in the 2006-2007 period to approximately 40% of revenue in 2015. More dramatically, operating expenses fell by about 100 percentage points, from 134% of revenue to about 34%. As a result of these increased efficiencies, by 2015 operating income represented 26% of revenue — meaning that Sirius XM earns 26 cents on each revenue dollar — a truly remarkable performance. Trial Ex. 25 at ¶ 88 (Lys Corr. WDT); *see also* 4/26/17 Tr. 1323:15-21 (Lys) (reviewed Sirius XM's free cash flows historically).

SEPFF1525. In addition, Sirius XM's free cash flow and net operating income have increased dramatically over the past ten years. Over the 2006-2015 period, Sirius XM has earned $5.9 billion in operating cash flows, and that since the merger, starting in 2009 Sirius XM's operating cash flows were positive in every single year. Trial Ex. 25 at ¶ 90 (Lys Corr. WDT).

SEPFF1526. The most commonly used metric to asses a company's performance and value is free cash flow (FCF), which represents the amount of cash that a company is able to generate after required investment in the company's current and future operations. Over the past decade Sirius XM has generated $2.6 billion in free cash flow — which is excess cash available after all of the capital investments (e.g., satellite costs) have been met. Since the merger, starting in 2009 Sirius XM has recorded seven straight years of positive FCF and has over that period generated $4.91 billion of FCF. Trial Ex. 25 at ¶¶ 91-92 (Lys Corr. WDT).

SEPFF1527. Sirius XM's FCF has increased from a *deficit* of $1.23 billion in 2006 (meaning that the company was not generating sufficient cash and needed to rely on external funding sources for its operations and investments) to a positive $1.32 billion in 2015. This means that after it satisfied its investment needs, its operations generated $1.32 billion in cash that it could distribute to its investors. Trial Ex. 25 at ¶ 55 (Lys Corr. WDT).

SEPFF1528. The 2015 FCF alone ($1.32 billion) is almost equal to the amount of property, plant and equipment on the company's books ($1.42 billion) — meaning that Sirius XM is generating more than sufficient amounts of cash to fund its capital needs. Trial Ex. 25 at ¶ 93 (Lys Corr. WDT).

SEPFF1529. In short, since 2010, Sirius XM's profitability has grown significantly faster than its revenue, indicating an improved ability to monetize the operational gains and scale. During the most recent five-year period, Sirius XM's revenue on average grew 10.2% annually. Over the same period, Sirius XM experienced significantly larger annual increases in EBIT (20.4%), Adjusted EBITDA (21.5%), net income (61.3%) and free cash flow (44.3%). Trial Ex. 25 at ¶ 97 (Lys Corr. WDT).

SEPFF1530. From these numbers, it is obvious that Sirius XM's overall operating performance in the 2009-2015 period was exceptional. The company has increased its penetration rates in U.S.-sold vehicles, which led to a strong growth in paying subscribers. More impressively yet, Sirius XM has posted even stronger growth in virtually all profitability categories (EBIT, EBITDA, net income, free cash flow), indicating that it has reached significant scale which enables it to better control its variable costs and improve margins. Sirius XM is easily able to fund its CapEx needs, which, along with depreciation and amortization, have been steady and flat. Trial Ex. 25 at ¶ 112 (Lys Corr. WDT). In summary, Sirius XM has exhibited

tremendous growth over the past decade, and in particular since the Sirius — XM merger. As Professor Lys put it, [redacted] 4/26/17 Tr. 1343:24-1344:5 (Lys).

c. Sirius XM's 2016 Financial Performance

SEPFF1531. 2016 was a banner year for Sirius XM. Sirius XM's CEO Jim Meyer stated publicly that "SiriusXM had an incredible 2016." Trial Ex. 42 at ¶ 163 (Lys WRT) (quoting Press Release, SiriusXM, *SiriusXM Exceeds 2016 Subscriber Guidance; Issues 2017 Subscriber and Financial Guidance*, January 5, 2017, http://s2.q4cdn.com/835250846/files/doc_news/SiriusXM-Exceeds-2016-Subscriber-Guidance-Issues-2017-Subscriber-and-Financial-Guidance.pdf).

SEPFF1532. Mr. Meyer testified that in 2016 Sirius XM set records for subscribers, revenue, adjusted EBITDA, and free cash flow, beating its guidance on all of those metrics. 5/15/17 Tr. 3759:13-3760:1 (Meyer).

SEPFF1533. In 2016, Sirius XM added more than 1.7 million net subscribers, beating its (already increased) guidance. In the closely watched "Self-pay net subscriber additions" line item, it added 1.66 million self-pay subscribers in 2016, above its upward-revised guidance of 1.6 million. (Sirius XM's original guidance was 1.4 million. Trial Ex. 25, Figure 43 at 56.) In total, Sirius XM grew its subscriber count by 6% in 2016, ending the year with 31.346 million subscribers. Trial Ex. 42 at ¶ 164 (Lys WRT) (citing Trial Ex. 357 at 31).

SEPFF1534. Sirius XM's 2016 revenue grew by 10% compared to 2015, topping $5 billion. EBITDA grew by 13% to $1.9 billion, and free cash flow per share grew 26% to $0.30. Finally, Sirius XM's net income grew a staggering 46% to $746 million. Trial Ex. 42 at ¶ 166 (Lys WRT).

SEPFF1535. These impressive results significantly exceeded [ ] external expectations, except for a small shortfall in ending subscribers relative to the Wall Street consensus forecast. Most significantly, Sirius XM's 2016 net income was 6% higher than [ ] external expectations. Sirius XM's CEO James Meyer summarized the company's performance in the earnings call:

> The game remains the same at SiriusXM. Start with a great business plan, execute it well, generate lots of cash and invest and deploy that cash wisely to the benefits of our shareholders. SiriusXM delivered across the board in 2016, setting records for subscribers, revenue, adjusted EBITDA and free cash flow. More than 31 million subscribers, more than $5 billion of revenue and our highest ever adjusted EBITDA and free cash flow. Our track record of delivering what we tell you remains strong as we also beat all of our 2016 guidance on each of these metrics.

Trial Ex. 42 at ¶¶ 167-168 (Lys WRT) (citing Sirius XM Holdings (SIRI) Q4 2016 Results - Earnings Call Transcript, February 2, 2017); *see also* 5/15/17 Tr. 3759:13-3760:1 (Meyer); 5/15/17 Tr. 3763:4-3764:1 (Meyer).

SEPFF1536. Sirius XM's recently announced 2017 public guidance is consistent with these trends.[148] Professor Lys noted that [" "] Trial Ex. 25 at ¶ 164 and Section II.E.2.b (Lys Corr. WDT). Consistent with that conclusion, several Wall Street analysts recently prominently noted Sirius XM's history of conservative guidance. On the cover page of its most recent analyst report, J.P. Morgan discussed the conservative nature of the guidance provided by Sirius XM:

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[148] Sirius XM's announced guidance is as follows: Self-pay net subscriber additions of approximately 1.3 million; revenue of approximately $5.3 billion; adjusted EBITDA of approximately $2.025 billion; and free cash flow of approximately $1.5 billion. *See* Trial Ex. 42 ¶ 169 (Lys WRT) (citing Press Release, SiriusXM, *SiriusXM Exceeds 2016 Subscriber Guidance; Issues 2017 Subscriber and Financial Guidance*, January 5, 2017, at 2 http://s2.q4cdn.com/835250846/files/doc_news/SiriusXM-Exceeds-2016-Subscriber-Guidance-Issues-2017-Subscriber-and-Financial-Guidance.pdf).

> **Conservative guidance maintained.** Sirius XM maintained its 2017 financial and subscriber guidance (which has historically been on the conservative side) (emphasis in original text).

Trial Ex. 42 at ¶ 169 (Lys WRT) (quoting Trial Ex. 225 at 1); 4/26/17 Tr. 1352:1-1353:3 (Lys) (discussing this analysis); *see also* Trial Ex. 42 at ¶ 170 (Lys WRT) (quoting Evercore ISI, "SIRIUS XM RADIO INC., 4Q16: No Surprises in the Quarter," February 2, 2017, at 1 "**Guidance has historically been conservative**" (emphasis in original)).

SEPFF1537. Sirius XM's CEO, James Meyer, acknowledged that Sirius XM has exceeded its guidance to the market for at least four years, and agreed that "Sirius XM exceeded its guidance to the market . . . . by a very wide margin." 5/15/17 Tr. 3755:13-15, 3755:20-24 (Meyer); 5/15/17 Tr. 3756:8-10 (Meyer).

SEPFF1538. It therefore stands to reason that Sirius XM is likely to perform better than the guidance provided to the market by the company. Trial Ex. 42 at ¶ 171 (Lys WRT).

d. Sirius XM's Projected Future Performance

SEPFF1539. In prior proceedings, Sirius XM has argued that any increase in the sound recording royalty rate would disrupt its business, contrary to the requirements of Section 801(b)(1)(D). Thus, in *SDARS II*, although Sirius and XM had by then completed their merger and the combined company exhibited improved financial performance, the expert witnesses for Sirius XM painted a gloomy picture of Sirius XM's future performance, even suggesting that it may have to file for bankruptcy. Trial Ex. 25 at ¶ 152 (Lys Corr. WDT).

SEPFF1540. Professor Lys analyzed Sirius XM's own forecasts and statements, as well as Wall Street consensus estimates and concluded that Sirius XM's future financial performance over the upcoming five-year rate term is expected to remain strong, with subscriber levels, revenues, EBITDA, free cash flow and net operating income all expected to increase. Trial Ex. 25 at ¶ 154 (Lys Corr. WDT); *see also* 4/26/17 Tr. 1335:22-1336:2, 1337:8-18 (Lys)

(reviewed internal Sirius XM and Wall Street forecasts); 4/26/17 Tr. 1339:21-1340:1 (Lys) ([redacted]); 4/26/17 Tr. 1340:9-1341:1 (Lys) [redacted].

SEPFF1541. Professor Lys offered a similar analysis in the *SDARS II* case, which was challenged by Sirius XM as unreliable. It is worth pointing out, therefore, that this method of analysis by Professor Lys in fact produced quite accurate results in the *SDARS II* case. Indeed, Sirius XM's performance exceeded Professor Lys's 2012 revenue forecast by 2.7% over the ensuing four years. Thus, it is fair to say that Professor Lys's 2012 forecast was quite accurate (albeit slightly too conservative). Trial Ex. 25 at ¶ 156 (Lys Corr. WDT); *see also* 4/26/17 Tr. 1338:11-1339:6 (Lys) [redacted].

SEPFF1542. Professor Lys has concluded that [redacted]. Trial Ex. 25 at ¶ 164 (Lys Corr. WDT). Professor Lys compared Sirius XM's 2016 budget and public guidance, and concluded that, according to Sirius XM's own internal data, [redacted]

[redacted]]. Trial Ex. 25 at ¶ 165 (Lys Corr. WDT); *see also* 4/26/17 Tr. 1323:22-24 (Lys) (reviewed Sirius XM's annual budgets in course of his analysis).

SEPFF1543. Professor Lys tested the relationship between Sirius XM's guidance, analyst consensus estimates, and eventual actual performance using 2015 data and confirmed [[redacted]]. Trial Ex. 25 at ¶¶ 166-67 (Lys Corr. WDT). [[redacted]]. Trial Ex. 25 at ¶ 169 (Lys Corr. WDT).

SEPFF1544. Finally, Professor Lys also noted that [[redacted]]. Trial Ex. 25 at ¶ 170 (Lys Corr. WDT). [[redacted]]. Trial Ex. 25 ¶ 171 (Lys Corr. WDT).

SEPFF1545. Ultimately, Professor Lys concluded that Sirius XM has [[redacted]]. Trial Ex. 25 at ¶ 172 (Lys Corr. WDT).

SEPFF1546. Yet even with Sirius XM's [[redacted]], after reviewing both internal (*i.e.*, Sirius XM's) and external (*i.e.*, Wall Street analysts') forecasts, Professor Lys concluded that [[redacted]]

149 [[redacted]]. Trial Ex. 25 at ¶ 170 n.136 (Lys Corr. WDT).

[redacted] Trial Ex. 42 at ¶ 192 (Lys WRT); 4/26/17 Tr. 1337:21-25 (Lys) ([redacted]); 4/26/17 Tr. 1341:4-8 (Lys) ([redacted]).

SEPFF1547. Professor Lys analyzed Sirius XM's internal long term forecast — the [redacted] — to project Sirius XM's future financial performance. Trial Ex. 42 at ¶ 172 (Lys WRT) (citing Trial Ex. 663); *see also* 4/26/17 Tr. 1335:18-1336:4 (Lys) [redacted]; 4/26/17 Tr. 1336:14-1337:4 (Lys) [redacted].

SEPFF1548. These internal forecasts and external forecasters both predict [redacted] including subscribers, revenue, EBITDA, free cash flow, and net income. Trial Ex. 42 at ¶¶ 193-204 (Lys WRT).

SEPFF1549. This is consistent with Sirius XM's public statements about the future. Although, as noted above, Sirius XM does not publicly disclose long-term projections, from the information in the public domain it is clear that Sirius XM's executives anticipate the strong growth that the company has experienced will continue in the future. For example, in February 2015 Sirius XM CFO and Senior Executive VP David Frear stated: "More ever [*sic*], it is very clear to me that in the next few years, we have plenty of runway ahead of us to continue growing our business on all fronts." Trial Ex. 25 at ¶ 226 (Lys Corr. WDT) (quoting David Frear, CFO and Senior Executive VP, Sirius XM, Q4 2014 Earnings Call at 2 (Feb. 5, 2015)).

SEPFF1550. Sirius XM's management has identified various factors that it believes will lead to improved performance for the company in the future. The company's management has spoken publicly about the following opportunities for future growth:

a. The potential for Sirius XM to increase its profits via the sale of subscriptions to buyers of used cars. *See* Trial Ex. 25 at ¶ 229 & n.156 (Lys Corr. WDT).

b. Growth relating to increased vehicle penetration, or the percentage of vehicles with an installed satellite radio. Trial Ex. 25 at ¶ 230 (Lys Corr. WDT).

c. The opportunity to sell more additional subscriptions to its current customers for second and third cars in the same household. Trial Ex. 25 at ¶ 231 (Lys Corr. WDT).

d. Future reductions in Subscriber Acquisition Cost, which include the cost Sirius XM pays for hardware subsidies, device royalties, commissions, and warranties among other items. Trial Ex. 25 at ¶ 232 (Lys Corr. WDT) (citing Trial Ex. 356 at 26 and quoting David Frear, CFO and Senior Executive VP, Sirius XM, Q1 2016 Earnings Call at 8 (April 28, 2016)).

e. Growth relating to 360L, a new product expected to be included in vehicles starting in 2017 that will combine Sirius XM's satellite and internet services for use in connected cars. Trial Ex. 25 at ¶ 233 (Lys Corr. WDT) (citing Trial Ex. 356 at 3).

f. Growth relating to additional spectrum once the Sirius chipsets become obsolete.[150] Trial Ex. 25 at ¶ 234 (Lys Corr. WDT).

g. Increase in subscription prices. Trial Ex. 25 at ¶ 235 (Lys Corr. WDT).

SEPFF1551. In addition, Sirius XM's management has indicated that it views wired or connected cars as an opportunity for the company, not the threat Sirius XM has contended in past proceedings. Trial Ex. 25 at ¶¶ 246-250 (Lys Corr. WDT).

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[150] The company currently operates under two bandwidths — the Sirius spectrum and the XM spectrum. Since Sirius and XM combined, the company began transmitting its programming twice, once to each spectrum. Subsequent to the merger, new cars are only equipped with the XM chipset. Once the old Sirius chipset becomes obsolete, the company's available spectrum will effectively double. Trial Ex. 25 ¶ 234 (Lys Corr. WDT).

SEPFF1552. In summary, Sirius XM has every reason to believe — and its executives in fact do believe — that the company's financial success will continue unabated over the period of the upcoming rate term. Trial Ex. 25 at ¶ 251 (Lys Corr. WDT).

3. Third Objective: Reflecting The Relative Roles Of The Copyright Owners And Copyright Users In The Product Made Available To The Public

SEPCL18. The third statutory objective, § 801(b)(1)(C), seeks to "reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication." This objective, also, is one that "marketplace evidence, standing alone" can address. *Amusement & Music Operators Ass'n v. Copyright Royalty Tribunal*, 676 F.2d 1144, 1157 (7th Cir. 1982); *see also Mechanicals II*, 74 FR at 4525 (making no adjustment based on this objective).

SEPCL19. A nearly identical statutory provision is part of the "willing buyer/willing seller" standard governing rates paid by webcasters for the use of sound recordings. *Compare* § 801(b)(1)(C) *with* 17 U.S.C. § 114(f)(2)(B)(ii). Specifically, section 114(f)(2)(B)(ii) states that the Judges should consider "the relative roles of the copyright owner and the transmitting entity in the copyrighted work and the service made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, and risk." In analyzing these § 114(f)(2)(B)(ii) objectives in the webcasting market, the Judges have previously concluded "that such considerations have already been factored into the negotiated price in the benchmark agreements." *Web III*, 76 FR at 13036; *accord Web II*, 72 FR at 24092, 24095; *see also In re Determination of Reasonable Rates and Terms for the Digital*

Performance of Sound Recordings and Ephemeral Recordings, 67 FR 45240, 45244 (2002) (hereinafter "*Web I*").

SEPCL20. The Judges have characterized their task under the third factor as determining "whether the record presents solid empirical evidence of a difference between the benchmark market, if any, and the target market that would warrant an adjustment in the rate most strongly suggested by the evidence." *SDARS II*, 78 FR at 23068. Digital music services are generally similar enough to each other with respect to technological contributions, capital investment, cost, risk and the opening of new markets that differences in the relative contributions of different types of services do not generally compel adjustment of a benchmark based on the third objective. *See SDARS I*, 73 FR at 4096 ("there is little to distinguish their relative contribution in this market from those of other digital music distributors in their markets"). Among other things, music services are not generally innovators of basic technologies, but merely users of technologies developed by third parties, and cannot claim credit for the technological contributions of others. *SDARS I*, 73 FR at 4096 ("the SDARS' claimed technological contributions take credit for not only their own efforts but also for the substantial technological contributions of others").

SEPFF1553. In *SDARS II*, the Judges concluded that evidence of the "unique and substantial financial costs that Sirius XM has incurred and anticipates incurring over the license period to maintain and upgrade its distribution system" justified a downward departure from 12-13% to 11%. *SDARS II*, 78 FR at 23069. As discussed below, however, the record in the current proceeding does not support a similar downward departure. Instead, consideration of the relative contributions of the record companies and the SDARS reveals that it is the record companies —

not the SDARS — that have taken far more risks, invested far more capital, and spent far more money than the SDARS "in the product made available to the public." § 801(b)(1)(C).

SEPFF1554. The third objective counsels for a rate above the benchmark, or at the high end of the benchmark range. Record companies and artists make substantial contributions that justify such an upward departure. The hunt for artistic talent is long, competitive, and unsuccessful far more often than not. *See* 5/11/17 Tr. 3542:25-3543:25 (Kushner) [redacted].

SEPFF1555. After finding artists who have commercial potential, the recording industry incurs highly substantial costs to create recorded works, and to market, manufacture, and distribute recorded music. Overall, the major labels spend *billions* of dollars in finding new artists and helping them reach an audience.

SEPFF1556. Sirius XM's costs — including its satellite costs — do not justify a downward departure. These costs are a small and ever-decreasing percentage of the company's overall revenues. To the extent Sirius XM pays less in royalties, those savings will be used by Sirius XM to buy back stock and pay dividends, not to make more music available to the public.

i. Record Companies And Artists Make Substantial Contributions That Justify An Upward Departure

SEPFF1557. As this Court has previously recognized, "record companies undertake 'significant and irreversible investments to develop talent and produce new works." *SDARS I*, 73 FR at 4096 (quoting testimony of Dr. Ordover). According to a 2015 RIAA study, the major labels spent *$13.4 billion* between 2003-2012 to find new artists and help them reach an audience. During that time, the major labels also paid an additional *$20 billion* in artist and

songwriting royalties to compensate those artists for their work. Trial Ex. 34 at ¶ 77 (Kushner WDT).

SEPFF1558. The hunt for artistic talent is long, competitive, and unsuccessful far more often than not. Artists & Repertoire (A&R) representatives from labels go to clubs and concerts around the world, listen to thousands of demonstration recordings (demos), and scour the Internet to identify emerging and undiscovered artists. Because finding musical talent is an art, not a science, it requires people with deep knowledge of and experience in the industry, all working relentlessly to identify performers likely to resonate with the public. Even when record companies identify those performers, the reality is that most of them do not immediately possess broad appeal and are unlikely to gain it without tremendous work and effort. Record companies help shape an artist's music and image in ways that maximize an artist's commercial appeal. Those efforts can include investing in dance and vocal lessons, personal stylists, makeup artists, trainers, media training, and the like. Of course, there is no guarantee that even with all of this effort and expense that an artist will be commercially successful, and when it is not, it is the record labels that bear the loss. Music services like Sirius XM benefit from the labels' investment in finding talent because they are free to play only the most popular music that the labels create. Trial Ex. 30 at 8 (Gallien WDT).

SEPFF1559. After finding artists who have commercial potential, the recording industry incurs highly substantial costs to create recorded works. In 2015 alone, UMG spent a total of [redacted] on recording costs, mastering costs, producer and sampling fees, as well as royalty advances to artists and overhead funding to A&R venture partners. Trial Ex. 30 at 8 (Gallien WDT). Mr. Kushner testified that for Atlantic Records, the recording costs for a first album from a new artist typically range from [redacted] to [redacted], and can exceed [redacted]

[redacted] for an established artist. Trial Ex. 34 at ¶ 36 (Kushner WDT). While record companies hope to recoup these expenditures and advances from subsequent sales, it is the record company, and not the artist or the music service, that bears the cost if the record proves unprofitable. UMG's 2015 income statement reflects [redacted] in advances and recording costs for new unproven artist signings and write offs of investments in established artists — net of recoveries. Trial Ex. 30 at 10 (Gallien WDT).

SEPFF1560. A typical breakdown of these costs include renting a recording studio, hiring a sound engineer, paying musicians to play with the featured artist, preparing a final mix of tracks to create a master recording, mastering the recording to make it ready to manufacture, and often hiring a producer to coordinate the project. Trial Ex. 33 at 10-11 (Iglauer WDT). The A&R Department will frequently work with the artist to select a creative team, including a producer, engineer, and studio who can best help the artist reach their creative potential. In many cases, the A&R staff is involved throughout the recording process, managing it from start to finish in a sort of executive producer role. Indeed, even after the basic recording process is complete, UMG's A&R team often remains integrally involved in completing the finished product, overseeing the mixing and mastering of recordings as well as any re-mixing or editing of the recordings that may be required for certain markets or uses. Trial Ex. 34 at ¶¶ 48-50 (Kushner WDT).

SEPFF1561. The recording industry then must invest in the time-consuming and expensive process of marketing recorded music. Whatever the focus for a particular artist, for a record to rise above its many competitors and become a success that will continue to attract an audience, there must be considerable and effective effort and investment in marketing the release. Trial Ex. 34 at 23 (Kushner WDT). And marketing is indeed an expensive proposition.

Mr. Kushner testified that for Atlantic Records, the typical initial U.S. marketing budget for an album cycle for a new artist is in the range of [redacted] to [redacted]. Trial Ex. 34 at ¶ 68 (Kushner WDT). In fiscal year 2015, UMG alone spent [redacted] on gross marketing costs net of recoveries to third parties, as well as [redacted] on its marketing overhead for the various departments focused on this important work. UMG 2015 marketing costs included over [redacted] in advertising, [redacted] in press and TV appearances for our artists, over [redacted] in internet marketing & advertising, over [redacted] in radio promotion, and over [redacted] in video production costs. In recent years, as playlists on digital music services have gained popularity, they have become an integral part of marketing and promoting an album. UMG has also invested in the setup costs and personnel to establish a team dedicated to streaming marketing and playlisting efforts. Trial Ex. 30 at 13-14 (Gallien WDT).

SEPFF1562. Another substantial cost incurred by the recording companies arises from the manufacturing and distribution of recordings, both in physical and digital form. Due to declining physical product sales, physical manufacturing has been declining, but it still carries high costs. UMG reports that its manufacturing costs for physical records, including costs they advance for pressing and distribution deals, were [redacted] in fiscal year 2015. Trial Ex. 30 at 14 (Gallien WDT). Digital distribution has been increasing, and there is misperception that it is costless to the record companies. The reality is that digital distribution is highly complex and requires expensive investments. UMG reports that since the early 2000s, UMG has invested over [redacted] in IT infrastructure and operating costs, as well as the professionals that today distribute the thousands of digital files it provides to hundreds of music services and to handle the processing of billions of micro transactions related to recognizing digital revenues and calculating the associated royalty obligations. Trial Ex. 30 at 14 (Gallien WDT). And in 2016

and throughout 2017, UMG will be investing in its 3rd generation of digital supply systems and digital revenue processing systems at an estimated cost of over [ ]. Trial Ex. 30 at 15-16 (Gallien WDT).

SEPFF1563. The costs borne by independent labels differ slightly from that of major labels, and the scale of their operations tends to be smaller, but there are also significant similarities. As Mr. Iglauer testified regarding Alligator Records, his independent label spends a great deal of time seeking out recording artists to sign—listening to demos, attending shows and music festivals, reading the music press, and taking referrals from other bands, labels, managers, and booking agents. It also devotes significant resources to promoting the music and touring of artists they have signed, including the payment of recording costs and advances. Trial Ex. 33 at 9 (Iglauer WDT).

ii. Sirius XM's Satellite Costs Do Not Justify A Downward Departure, Because They Are A Small Percentage Of Its Overall Revenues And Any Savings On Royalties Will Be Used To Buy Back Stock And Pay Dividends

SEPFF1564. In *SDARS II*, the one type of expenditure incurred by Sirius XM that distinguished it from other digital music distributors with respect to this objective was their expenditure for satellites. 78 FR at 23069. However, the Judges in *SDARS I* recognized countervailing considerations that may have made the SDARS' satellite expenditures more analogous to the capital investment of other digital music services. In particular, "[t]his type of investment spending has a useful life that typically extends beyond the limited period of a single licensing period as currently defined by statute; therefore, all of the costs of spending on this technology cannot properly be ascribed to a single licensing period." *SDARS I*, 73 FR at 4096-97.

SEPFF1565. The record unambiguously demonstrates that Sirius XM's satellite costs are a small percentage of its overall revenues. Sirius XM quantified its investment in building and launching two new satellites at approximately [ ] in total over the *SDARS III* rate period. Trial Ex. 42 at ¶ 227 (Lys WRT). In fact, Ms. Neville testified that those costs may [ ]. 5/11/17 Tr. 3691:18-3692:1 (Neville). But even taking the larger of those figures, Sirius XM can easily absorb a [ ] satellite investment. The [ ] is miniscule in relation to just the most recent year's EBITDA of $1.9 billion, free cash flow of $1.5 billion, or net income of $746 million. Trial Ex. 42 at ¶ 229 (Lys WRT). Perhaps most importantly, Sirius XM's anticipated [ ]. Trial Ex. 663 (native file) (tab "Consolidated Outputs," cells HO214, HP214).

SEPFF1566. Sirius XM does not disagree. In September 2014, Sirius XM CEO Jim Meyer made the following statement regarding satellite replacement costs:

> "By the way, it's not near the question it was for us eight or nine years ago, you know, when we looked at kind of the 300 million to replace each one, and how big that was. You know, with our revenue well over $4 billion, our EBITDA at $1.4 billion, and a revenue of $4 billion, I think that cost management for us is much easier today."

Trial Ex. 25 at ¶ 243 (Lys Corr. WDT) (quoting Jim Meyer, CEO, Sirius XM, Bank of America Merrill Lynch 2014 Media, Communications, and Entertainment Conference at 10 (Sept. 16, 2014)).

SEPFF1567. Put another way, the annual cost of satellite expenditures relative to revenues has been decreasing substantially and rapidly as Sirius XM has obtained ever-higher levels of revenues. Depreciation as a percentage of total revenue has fallen from approximately [ ]. Moreover, as depicted in the following figure from Professor

Lys's Written Rebuttal Testimony, that rate is expected to further decline to [ ] by 2019, despite the increased satellite investments. Trial Ex. 42 at ¶ 242 (Lys WRT).

Sirius XM's historical and forecasted depreciation as a percentage of total revenue, per [ ] [RESTRICTED]

Source: Lys analysis, SXM_DIR_00025989_RESTRICTED.xlsx.

Trial Ex. 42, Figure 58 at 89 (Lys WRT).

SEPFF1568. Professor Lys put these figures in context in response to a question from the Court:

[ ]

4/26/17 Tr. 1360:1-6 (Lys).

SEPFF1569. This level of expenditure is consistent with those of other music services that do not employ satellites. Sirius XM's capital expenditures amounted to only 3% of its total revenues in 2015. Trial Ex. 25 at ¶ 243 (Lys Corr. WDT) (citing Trial Ex. 356). This amount is comparable to Pandora, for example, which spent 2.8% of its total revenues on capital expenditures (mainly servers) during the same period. Trial Ex. 25 at ¶ 241 (Lys Corr. WDT) (citing Pandora 2015 Form 10-K).

SEPFF1570. In addition to constituting an ever-smaller fraction of Sirius XM's revenues, Sirius XM's future [ ] satellite investment is not substantially larger in absolute terms than what it has undertaken in the past. Professor Shapiro testified that "Sirius XM had no similar 'contribution' of this magnitude during the *SDARS II* license term." Trial Ex. 8 at 33 (Shapiro WDT). However, that does not appear to be accurate. Ms. Neville testified about previous investments of approximately [ ] per satellite for the launch of FM-5 (2009) and FM-6 (2013, during *SDARS II*). Trial Ex. 2 at ¶ 14 (Neville WDT). The cost to launch appears to be the same. The only difference is the timing of Sirius XM's replenishment needs, which are unevenly staggered. Sirius XM's [ ] shows that between 2013 and 2017 (the *SDARS II* period) the company expected to make a [investment in satellite CapEx. Trial Ex. 42 at ¶ 232 (Lys WRT) (citing Trial Ex. 663).

SEPFF1571. [

[redacted]]. 4/27/17 Tr. 1384:12-13 (Lys).

SEPFF1572. To put the size of this stock-repurchase program into perspective, the pre-merger investors in Sirius and in XM contributed a total of $6.9 billion, and all shareholder investments to date amount to $10.5 billion. Thus, Sirius XM has already repurchased more than its pre-merger shareholders contributed. By the time it completes its anticipated repurchases, Sirius XM will have returned 76% of all capital invested by its shareholders since the inception of the two predecessor companies. In 2015 alone, the amount of cash Sirius XM spent repurchasing its stock ($2.0 billion) is greater than the full value of the property plant and equipment on the company's balance sheet ($1.42 billion). Trial Ex. 25 at ¶ 102 (Lys Corr. WDT). Sirius XM anticipates [[redacted]]. Trial Ex. 663 (native file) (tab "Consolidated Outputs," cells HO214, HP214).

SEPFF1573. Sirius XM's aggressive equity repurchase plan demonstrates that a below-market royalty rate will result in a transfer of wealth from recording companies and artists to Sirius XM's shareholders — not an increased investment in the distribution of recorded works.

4. Fourth Objective: Minimizing Disruptive Impact On The Structure Of The Industries Involved And On Generally Prevailing Industry Practices

SEPCL21. The fourth statutory objective seeks to "minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices." § 801(b)(1)(D). This is the one statutory objective that "marketplace evidence, standing alone, does not address." *Amusement & Music Operators*, 676 F.2d at 1157.

SEPCL22. The Judges have adopted a specific standard of what constitutes disruption under the fourth objective: a rate change can be disruptive if it "directly produce[s] an adverse impact that is substantial, immediate, and irreversible in the short-run because there is insufficient time for either the SDARS or the copyright owners to adequately adapt to the changed circumstances produced by the rate change and, as a consequence, such adverse impacts threaten the viability of the music delivery service currently offered to consumers under this license." *SDARS II*, 78 FR at 23069 (quoting *SDARS I*, 73 FR at 4097). To justify a downward departure, the disruption would have to "cause the [service] to cease operating or dramatically change the nature of its product." *SDARS I*, 73 FR at 4097.

SEPCL23. Ten years ago, in the *SDARS I* proceeding, the Judges found that a downward departure from the upper boundary of the marketplace benchmark was justified because (i) Sirius and XM (which were then separate companies, which had not benefitted from the synergies and cost savings of their subsequent merger) "were not sufficiently profitable and did not have a sufficiently broad subscriber base to sustain an immediate rate increase from a range of 2.0%-2.5% to 13% of revenues," and (ii) "a 13% rate would potentially constrain the SDARS' ability to undertake satellite investments planned for the license period, which, if delayed, could disrupt the SDARS' consumer service." *SDARS II*, 78 FR at 23069 (citing *SDARS I*, 73 FR at 4097).

SEPCL24. However, by the time of the *SDARS II* proceeding five years ago, the Judges concluded that "Sirius XM is now in a far better financial position than either Sirius or XM was as a stand-alone company in 2007," and that "neither of the circumstances that justified a downward adjustment under the fourth factor in SDARS-I is currently present." *SDARS II*, 78 FR at 23070. In particular, the Judges found that "Sirius XM's ability to undertake satellite

investments during the license period" was "a less pressing issue than it was during the prior licensing period." *SDARS II*, 78 FR at 23070. The Judges observed that while "there will be ongoing costs of maintaining its existing satellites . . . . no substantial evidence in the record supports a downward adjustment based on Sirius XM's need to replace its existing satellites during the current licensing period." *SDARS II*, 78 FR at 23070.

SEPFF1574. No downward adjustment is required to minimize disruptive impact on the structure of the industries involved and on generally prevailing industry practice. SoundExchange's proposed rates are not disruptive because Sirius XM can afford them. Professor Lys's analysis demonstrates that even if Sirius XM were to increase its statutory royalty rate in 2015 to 24%, the company would still earn substantial returns that would exceed those earned by other companies in the industry based on the relevant performance metrics. *See* 4/26/16 Tr. 1321:6-1323:2 (Lys). The reality is that disruption comes from the fact that Sirius XM is paying below-market rates for the use of sound recordings which gives Sirius XM an unfair advantage relative to competing digital music services that pay higher royalty rates.

i. No Adjustment Is Necessary Because SoundExchange's Proposed Rates Are Not Disruptive And Sirius XM Can Afford Them.

SEPFF1575. By any measure, Sirius XM is easily capable of paying SoundExchange's proposed rates. Over the past nine years Sirius XM has paid a total of $1.6 billion in SDARS statutory royalty fees to SoundExchange. To put this amount in perspective, the nine-year total royalty payment is less than Sirius XM's Adjusted EBITDA for 2015 alone ($1.7 billion). Indeed, Sirius XM generated enough free cash flow last year alone ($1.3 billion) to pay the entire remaining SDARS statutory royalty obligation generated in the previous 8 years combined (2007-14). Trial Ex. 25 at ¶ 128 (Lys Corr. WDT).

SEPFF1576. Professor Lys calculated the impact of increasing Sirius XM's royalty rate in 2015 to 24%. He calculated that the pre-tax incremental impact of a 24% royalty payment was $[[redacted]] million and the net after-tax impact would be $[[redacted]] million. Trial Ex. 25 at ¶¶ 129-130 (Lys Corr. WDT).

SEPFF1577. Professor Lys's analysis demonstrates that even if Sirius XM were to increase its statutory royalty rate in 2015 to 24%, the company would still earn substantial returns as measured by net income, adjusted EBITDA, and free cash flows. In fact, these returns would still exceed those earned by other companies in the industry based on the relevant performance metrics.

Sirius XM 2015 performance metrics under 24% royalty rate vs. SIC 483

Performance Metric	Sirius XM, 24% royalty rate	Average for SIC 483 (Broadcast Radio and Television Industry)
Return on Assets (Net income ÷ average total assets)	5.5%	3.0%
EBITDA Margin (EBITDA ÷ total revenue)	27.4%	19.9%
Free Cash Flow Margin (free cash flow ÷ total revenue)	23.0%	6.1%

Trial Ex. 25 at ¶¶ 132-142 & Figure 33 (Lys Corr. WDT); *see* 4/26/17 Tr. 1321:23-1322:22 (Lys) (testifying that, at a 24% royalty rate, Sirius XM would beat its competitors in the broadcast industry by 50% in terms of its return on assets, by almost 50% in terms of EBITDA margin, and "by a long mile" in terms of free cash flow margin).

SEPFF1578. Professor Lys specifically analyzed the effect of SoundExchange's proposed royalty rates on Sirius XM's forecasted performance. *See* Trial Ex. 25 ¶¶ 199-224 (Lys Corr. WDT); Trial Ex. 42 at ¶¶ 205-224 (Lys WRT). Specifically, he calculated the incremental amount of SDARS royalties that would be payable if the forecasted rate was set to 24% as opposed to the rate included in the internal forecast. Trial Ex. 25 at ¶ 202 (Lys Corr. WDT).

SEPFF1579. Professor Lys's analysis shows that raising the statutory SDARS royalty rates in *SDARS III* to the maximum level proposed by SoundExchange would have an incremental after-tax impact of between [ ]. Sirius XM is expecting to perform so well in the future that it could easily absorb the maximum SoundExchange-proposed SDARS royalty rate of 24% (for the *SDARS III* period, 2018-2022). Trial Ex. 42 at ¶ 219 (Lys WRT).

SEPFF1580. Under this scenario, Sirius XM:

- Would earn between [ ] in EBITDA in every year of the forecast, and would continue growing. Trial Ex. 42 at ¶ 220 (Lys WRT).
- Would earn over [ ] in net income each year of the forecast, and would continue growing. Trial Ex. 42 at ¶ 221 (Lys WRT).
- Would generate over [ ] in free cash flow almost every year of the forecast and would continue growing. Trial Ex. 42 at ¶ 222 (Lys WRT).

SEPFF1581. In conclusion, Sirius XM's own internal forecasts show that, even under an SDARS royalty rate of 24%, it will remain extremely profitable during the *SDARS III* term (2018-22). Trial Ex. 42 at ¶ 223 (Lys WRT).

SEPFF1582. Sirius XM's financial performance makes it easy for it to absorb such a royalty rate. Professor Lys estimated that during the *SDARS III* term Sirius XM will [ ] in EBITDA, [ ] in net income, and [ ] in free cash flow. Trial Ex. 42 at ¶ 223 (Lys WRT). Furthermore, at the end of the forecasted period (2021) Sirius XM's 2016 LRS shows a strong balance sheet, with [ ] Trial Ex. 42 at ¶ 224 (Lys WRT).

SEPFF1583. As Professor Lys put it, [ ]

[redacted]

[redacted]]. 4/27/17 Tr. 1391:25-1392:6 (Lys).

ii. Sirius XM's Payment Of Below-Market Rates Disrupts The Industry And Prevailing Industry Practices By Giving Sirius XM An Unfair Advantage Over Competing Digital Music Services That Pay Higher Royalty Rates.

SEPFF1584. The reality is that disruption comes from the fact that Sirius XM is paying below-market rates for the use of sound recordings which gives Sirius XM an unfair advantage relative to competing digital music services that pay higher royalty rates. As a background matter, Professor Lys calculated the return that Sirius XM investors have enjoyed compared to other investors in the stock market. His analysis indicates that Sirius XM investors have earned above-market returns. The figure below from Professor Lys's Written Direct Testimony demonstrates that since the Sirius – XM merger on July 29, 2008, investors in Sirius XM have earned a return of 165%.[151] That far surpasses the returns on the market, as measured by the S&P 500 index (68%) and the Dow Jones Industrial Average (59%).

Return on Sirius XM's common stock since the merger, compared to the market

Security	29-JUL-2008	17-OCT-2016	Return
SIRI	$1.55	$4.11	164.9%
S&P 500	1,263.20	2,126.50	68.3%
DJIA	11,397.56	18,086.40	58.7%

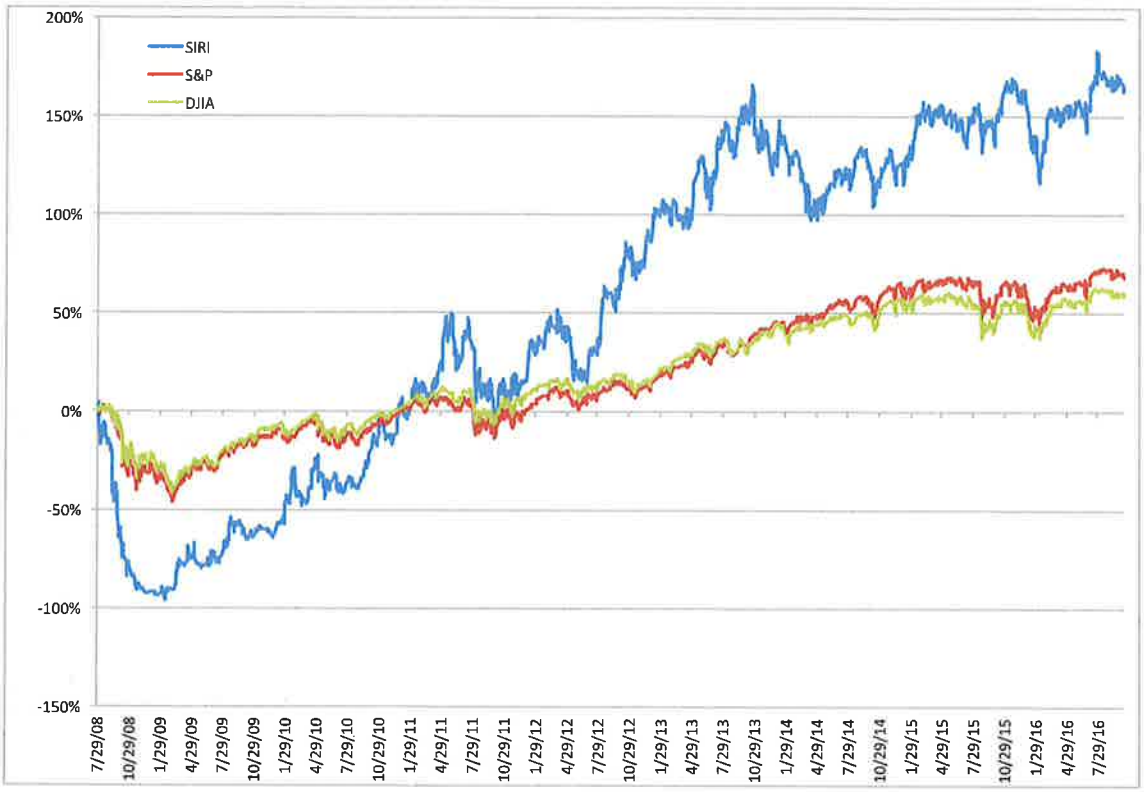
Trial Ex. 25, Figure 25 at 38 (Lys Corr. WDT).

SEPFF1585. The figure below from Professor Lys's Written Direct Testimony depicts the performance of the Sirius XM stock since the merger and compares it to the market.

[151] This return includes price appreciation and stock dividends, and measures the change in the "adjusted" closing stock price of SIRI.

This period includes the recession that began in 2008, and shows that Sirius XM has recovered from the downturn far better than the market in general.

Performance of Sirius XM's common stock since the merger, compared to the market



Source: Yahoo finance.

Trial Ex. 25, Figure 26 at 39 (Lys Corr. WDT).

SEPFF1586. Professor Lys compared Sirius XM's financial performance to the weighted-average performance of Pandora and iHeartMedia, [ ].[152] Trial Ex. 25 at ¶ 117 (Lys Corr. WDT). It bears noting that by 2013, Sirius XM had become the largest radio company in the

[152] Sirius XM's other competitors, such as Spotify and Apple Music, are not included in my analysis because their financial data is not available, either because they are not publicly traded or because they represent a small part of a much larger company.

world. [ ].

Sirius XM revenue compared to other radio companies [RESTRICTED]

Source: SXM_DIR_00004031, Sirius XM, Annual Stockholder Meeting, May 19, 2014, at 15.

Trial Ex. 25, Figure 27 at 40 (Lys Corr. WDT).

SEPFF1587. Sirius XM is not only the biggest, as measured by revenue. It is also higher in terms of profitability relative to its comparators. Professor Lys performed this analysis by calculating various performance metrics and comparing the value of these metrics for Sirius XM to the weighted-average value of the relevant metrics for the industry.[153] Because the

[153] Industry averages exclude Sirius XM. For the 3-digit SIC, Liberty Media, Inc. is also excluded since it is the majority owner of Sirius XM and therefore consolidates the company in its financial statements.

companies differ in size, the comparative analysis is based on margins and returns as opposed to dollar amounts. The performance metrics he considered included EBITDA margin, free cash flow margin, return on invested capital (ROIC), return on assets (ROA), net profit margin, and net operating margin.[154] Trial Ex. 25 at ¶ 119 (Lys Corr. WDT).

SEPFF1588. Professor Lys used the following definitions in his analysis:

a. Sirius XM's free cash flow comes from its 10-K filings; for other firms in the industry free cash flow is calculated by subtracting capital expenditures from cash flows from operations.

b. EBITDA margin measures a company's EBITDA as a percentage of its total revenue.

c. ROIC (return on invested capital) measures the aggregate return available to a firm's debt and equity investors. ROIC is calculated by dividing net income by average total invested capital, where total invested capital is equal to the book value of debt plus the book value of equity.

d. ROA (return on assets) measures the profitability of a company relative to its total assets, or the efficiency of management in using the company's assets to generate earnings. Net profit margin is equal to the net income of the company divided by total revenue, and net operating margin expresses operating profits as a percentage of total revenue. ROA is equal to net income plus after-tax interest expense, divided by average total assets. Trial Ex. 25 at ¶ 120 (Lys Corr. WDT).

SEPFF1589. The figure below from Professor Lys's Written Direct Testimony presents the amounts calculated for each of these metrics in 2015. It presents Sirius XM's metrics alongside comparable metrics for all other companies in the broadcast radio and television industry, as well as a weighted average for Pandora and iHeartMedia.

[154] In Professor Lys's computations of weighted averages, weights are based on total revenue for EBITDA margin, free cash flow margin, net profit margin and net operating margin. For ROA, weights are based on average total assets, and for ROIC weights are based on average total invested capital.

Fiscal year 2015 performance metrics for Sirius XM vs. broadcast radio (SIC 4832), broadcast radio and television (SIC 483), and Pandora/iHeartMedia

	EBITDA Margin	Free Cash Flow Margin	ROIC	ROA	Net Profit Margin	Net Operating Margin
Weighted average: broadcast radio (SIC 4832)	16.1%	-1.8%	-8.3%	-0.2%	-13.7%	7.7%
Weighted average: broadcast radio and television (SIC 483)	19.9%	6.1%	0.2%	3.0%	0.4%	13.3%
Weighted average: Pandora and iHeartMedia	22.7%	-6.0%	-8.1%	1.8%	-12.2%	13.2%
Sirius XM	36.3%	28.8%	9.2%	8.6%	11.2%	25.8%

Trial Ex. 25, Figure 28 at 42 (Lys Corr. WDT).

SEPFF1590. Along every one of these metrics, Sirius XM's performance clearly exceeds the averages of Pandora/iHeartMedia and its other industry competitors. In order to ensure that this result is not due to an anomaly in the year 2015, Professor Lys performed the same analysis, averaged over the years 2010 through 2015, as seen in the figure below from Professor Lys's Written Direct Testimony.

2010-2015 average performance metrics for Sirius XM vs. broadcast radio (SIC 4832), broadcast radio and television (SIC 483), and Pandora/iHeartMedia

	EBITDA Margin	Free Cash Flow Margin	ROIC	ROA	Net Profit Margin	Net Operating Margin
Weighted average: broadcast radio (SIC 4832)	22.9%	2.7%	-3.9%	2.5%	-7.1%	13.6%
Weighted average: broadcast radio and television (SIC 483)	22.2%	8.2%	2.8%	4.8%	4.1%	16.1%
Weighted average: Pandora and iHeartMedia	25.5%	-0.3%	-4.8%	2.8%	-8.5%	14.7%
Sirius XM	29.3%	20.5%	7.3%	6.5%	9.5%	24.1%

Trial Ex. 25, Figure 29 at 42 (Lys Corr. WDT).

SEPFF1591. While not as pronounced due to Sirius XM's lower performance in the earlier years, Sirius XM still clearly outperforms each of these comparison groups on every metric Professor Lys considered. Thus, what these comparisons show is that Sirius XM's start-up problems are definitely behind it and that it has become one of the most profitable companies in the industry. Trial Ex. 25 at ¶ 123 (Lys Corr. WDT).

SEPFF1592. These results are clearly reflected in statements made by Sirius XM executives. When asked about competition at a conference in 2014, Sirius XM CFO David Frear touted Sirius XM's superior performance:

> "I know which business plan I like best. And it's driven us to being the largest company in the radio space by revenue, measured by revenue in North America. And then as you look at other media companies that you guys may consider investing in that, I think it's helpful to stack us up as to how do we perform relative to the pro-margin perspective. We have among the best margins in media that our guidance this year will -- goes to about a 34% EBITDA margin. We do believe that there is upside in that margin as we continue to grow and continue to show good cost controls.
>
> We have the best free cash flow conversion ratio among all of the companies out there and some will say, wait a minute, you don't have your taxes in there, okay. So, since we won't pay taxes for another five years or so, you can take this 80% conversion ratio and you can knock it down to something it looks more like 58% it's still the best then. There are another group of people, who'll say wait a minute, what about your satellite expenditures, you just finished doing your launch and you're not -- you're kind of been in this period you're not building. So okay, take another 3% off and say that when we order back in the build program that we might have 150 million a year, we're spending on satellites. And you still end up with the mid 50s free cash flow conversion factor."

Trial Ex. 25 ¶ 124 (Lys Corr. WDT) (quoting David Frear, EVP and CFO, Sirius XM, Morgan Stanley Leveraged Finance Conference (June 12, 2014) at 4).

SEPFF1593. To further illustrate the degree to which Sirius XM's profits outstrip those of its competitors, Professor Lys calculated how much higher the royalty rate could have been set in 2015, assuming current payment calculation mechanics, while still allowing Sirius XM to earn a profit commensurate with its industry. Trial Ex. 25 at ¶ 133 (Lys Corr. WDT).

SEPFF1594. Specifically, Professor Lys defined Sirius XM's industry peers as either the "Broadcast radio" set of companies (SIC 4832), the "Broadcast radio and television" (SIC 483) set of companies, or as its competitors in the industry of seamless/high-tech alternatives to traditional radio (Pandora and iHeartMedia). Trial Ex. 25 at ¶¶ 133-142 (Lys Corr. WDT).

SEPFF1595. Professor Lys's calculations demonstrated that Sirius XM could have afforded to have its 2015 statutory royalty rate increased from 10.0% to up to 41.9%, 35.9% or 31.4% and still earned an average EBITDA level of $735.7 million (SIC 4832), $909.5 million (SIC 483), or $1.037 billion (Pandora/iHeartMedia), respectively. While this level of the royalty rate would have reduced Sirius XM's EBITDA profitability by $921 million, $747 million, and $620 million, respectively (from the actual $1,657 million), that would only result in equating Sirius XM's performance with its industry peers' EBITDA profitability levels. Trial Ex. 25 at ¶ 136 (Lys Corr. WDT).

SEPFF1596. In addition, as to free cash flow, Professor Lys's calculations determined that Sirius XM could afford to have its 2015 statutory royalty rate increased from 10.0% to 65.1% and still earn a free cash flow level commensurate with SIC 483 of $278.8 million. This metric demonstrates how strong Sirius XM's cash generation is under the current terms. Trial Ex. 25 at ¶ 138 (Lys Corr. WDT).

SEPFF1597. Finally, as to net income, Professor Lys computed that Sirius XM could afford to have its 2015 statutory royalty rate increased from the actual 10.0% to 35.0% and still earn an average SIC 483-level (in terms of return on assets) net income level of $39.6 million. Trial Ex. 25 at ¶ 142 (Lys Corr. WDT).

C. Record Companies And Artists Have Effectively Subsidized Sirius XM's Payment Of Below-Market Rates For Ten Years, And They Should Share In Sirius XM's Current Financial Success

SEPFF1598. In *SDARS I*, the Judges determined that the most strongly supported market rate for SDARS royalties should be $1.40 per subscriber, which they converted to 13% of revenue. *SDARS I*, 73 FR at 4093. The Judges granted Sirius XM temporary relief from those rate levels, setting rates that began at 6%. Those rates have slowly increased to the 11% level in 2017 — but they still lag behind the 13% figure that the Judges identified more than a decade ago. In economic effect, this means that SoundExchange (and ultimately labels and artists) has subsidized Sirius XM's growth by receiving below-market rates. Trial Ex. 42 at ¶ 244 (Lys WRT); *SDARS I*, 73 FR at 4093-94, 4097; 4/27/17 Tr. 1384:14-1385:13, 1388:10-1389:15 (Lys).

SEPFF1599. As the figure below from Professor Lys's Written Rebuttal Testimony shows, the nominal amount of the subsidy from 2007 through the first half of 2016 was more than [[redacted]]. These figures are calculated by subtracting Sirius XM's actual royalty payments (column C) from the royalty payments it would have made had the rate been set at 13% (column D).

Nominal SoundExchange subsidy to Sirius XM, 2007-16, in $ millions [RESTRICTED]

	Sirius XM Gross Revenue	SDARS royalty rate	Sirius XM actual royalty payments	Market royalty payments	Subsidy (nominal)
	A	B	C=A*B	D=A*13%	E=D-C
2007	$[redacted]	6.0%	$[redacted]	$[redacted]	$[redacted]
2008	$[redacted]	6.0%	$[redacted]	$[redacted]	$[redacted]
2009	$[redacted]	6.5%	$[redacted]	$[redacted]	$[redacted]
2010	$[redacted]	7.0%	$[redacted]	$[redacted]	$[redacted]
2011	$[redacted]	7.5%	$[redacted]	$[redacted]	$[redacted]
2012	$[redacted]	8.0%	$[redacted]	$[redacted]	$[redacted]
2013	$[redacted]	9.0%	$[redacted]	$[redacted]	$[redacted]
2014	$[redacted]	9.5%	$[redacted]	$[redacted]	$[redacted]
2015	$[redacted]	10.0%	$[redacted]	$[redacted]	$[redacted]
2016 (1H)	$[redacted]	10.5%	$[redacted]	$[redacted]	$[redacted]

	Sirius XM Gross Revenue	SDARS royalty rate	Sirius XM actual royalty payments	Market royalty payments	Subsidy (nominal)
	A	B	C=A*B	D=A*13%	E=D-C
TOTAL	$[redacted]		$[redacted]	$[redacted]	$[redacted]

Source: Lys analysis; gross revenue from Sirius XM statements of account to SoundExchange.

Trial Ex. 42, Figure 59 at 90 (Lys WRT); 4/27/17 Tr. 1385:14-25 (Lys).

SEPFF1600. Even this nominal [redacted] in subsidies is understated, however, because it does not account for the time value of money — *i.e.*, the idea that a dollar today is more valuable than a dollar tomorrow. Various options exist for accounting for the time value of money and thus estimating the value of the historical subsidy today. Trial Ex. 42 at ¶ 247 (Lys WRT).

SEPFF1601. The most conservative approach is simply to increase the value of the historical subsidy for inflation. Under this approach, in today's dollars, copyright owners' and artists' subsidy of Sirius XM is worth more than [redacted], as shown below in the following figure from Professor Lys's Written Rebuttal Testimony.

SoundExchange's inflation-adjusted subsidy to Sirius XM, in $ millions [RESTRICTED]

	Subsidy (nominal)	Inflation	Cumulative inflation-adjusted subsidy
	A	B	$C=C_{t-1}*(1+B)+A$
2007	$[redacted]	0.0%	$[redacted]
2008	$[redacted]	0.1%	$[redacted]
2009	$[redacted]	2.7%	$[redacted]
2010	$[redacted]	1.5%	$[redacted]
2011	$[redacted]	3.0%	$[redacted]
2012	$[redacted]	1.7%	$[redacted]
2013	$[redacted]	1.5%	$[redacted]
2014	$[redacted]	0.8%	$[redacted]
2015	$[redacted]	0.7%	$[redacted]
2016 (1H)	$[redacted]	2.1%	$[redacted]
TOTAL	$[redacted]		$[redacted]

Trial Ex. 42, Figure 60 at 91 (Lys WRT); 4/27/17 Tr. 1386:1-9 (Lys).

SEPFF1602. A second approach is to assume a constant rate of return on the historical subsidy. This approach assumes that SoundExchange would have invested each year's subsidy at the end of the year (the most conservative assumption with respect to timing) and received a 5% annual return. (The 5% figure is based on a review of senior notes issued by Sirius XM since 2013, which have paid annual interest rates ranging from 4.25% to 6.00%.). This approach yields a value of [ ] for the historical subsidy, as seen below in the following figure from Professor Lys's Written Rebuttal Testimony.

Value of SoundExchange's subsidy to Sirius XM assuming 5% annual return on investment, in $ millions [RESTRICTED]

	Subsidy (nominal)	Present value assuming 5% return
	A	B=A*((1.05)^(2016-year))
2007	$[ ]	$[ ]
2008	$[ ]	$[ ]
2009	$[ ]	$[ ]
2010	$[ ]	$[ ]
2011	$[ ]	$[ ]
2012	$[ ]	$[ ]
2013	$[ ]	$[ ]
2014	$[ ]	$[ ]
2015	$[ ]	$[ ]
2016 (1H)	$[ ]	$[ ]
TOTAL	**$[ ]**	**$[ ]**

Source: Lys analysis.

Trial Ex. 4, Figure 61 at 92 (Lys WRT); 4/27/17 Tr. 1386:10-15 (Lys).

SEPFF1603. A third approach is to assume that the subsidy would have been invested in the equity market, as measured by the S&P 500 index. Again assuming the investments were made at the end of each year, this approach yields a value of more than [ ], as seen below in a figure from Professor Lys's Written Rebuttal Testimony.

Value of SoundExchange's subsidy to Sirius XM assuming reinvestment in S&P 500 index, in $ millions [RESTRICTED]

	Subsidy (nominal)	S&P value	S&P return	Cumulative subsidy
	A	B	$C=B_t/B_{t-1}-1$	$D=D_{t-1}*(1+C)+A$
2007	$[redacted]	1,468.3600	n/a	$[redacted]
2008	$[redacted]	903.2500	[redacted]%	$[redacted]
2009	$[redacted]	1,115.1000	[redacted]%	$[redacted]
2010	$[redacted]	1,257.6400	[redacted]%	$[redacted]
2011	$[redacted]	1,257.6000	[redacted]%	$[redacted]
2012	$[redacted]	1,426.1899	[redacted]%	$[redacted]
2013	$[redacted]	1,848.3600	[redacted]%	$[redacted]
2014	$[redacted]	2,058.8999	[redacted]%	$[redacted]
2015	$[redacted]	2,043.9399	[redacted]%	$[redacted]
2016 (1H)	$[redacted]	2,238.8301	[redacted]%	$[redacted]
TOTAL	$[redacted]			$[redacted]

Trial Ex. 42, Figure 62 at 93 (Lys WRT); 4/27/17 Tr. 1386:16-24 (Lys).

SEPFF1604. A final approach is to analyze the subsidy from the standpoint of Sirius XM. If Sirius XM was indeed cash-constrained as it claimed in the *SDARS I* and *SDARS II* proceedings, then, absent the royalty rate reduction due to the 801(b) factors, it would have had to issue additional stock. This issuance of additional stock would have reduced the value of the equity owned by Sirius XM's existing shareholders. Professor Lys calculated the value of this reduction as [redacted]. Trial Ex. 42 at ¶ 251-54 & App. C (Lys WRT); 4/27/17 Tr. 1386:25-1388:22, 1389:16-1390:24 (Lys).

SEPFF1605. Under each of these four methodologies, the value of the historical subsidy received by Sirius XM far exceeds its planned CapEx investments of [redacted] over the *SDARS III* period. Thus, SoundExchange's historical subsidies have already more than compensated Sirius XM for this investment need. Trial Ex. 42 at ¶ 255-256 (Lys WRT).

SEPFF1606. The statutory rate has resulted in what is essentially a one-to-one transfer of wealth from artists and copyright owners to Sirius XM's shareholders. 4/27/17 Tr.

1390:18-24 (Lys). As Professor Lys has demonstrated, the historical below-market statutory rate has been economically equivalent to a [redacted] subsidy. Sirius XM has captured that value and transferred it directly to its shareholders, by repurchasing [redacted] of its own stock (and counting). This wealth transfer serves no purpose under the 801(b) factors and should not be perpetuated.

XI. Free Trials

SEPFF1607. SoundExchange additionally proposes modifications to the regulations to clarify that Sirius XM should pay royalties on the promotional trials it offers to consumers when such trials extend beyond 30 days.

SEPFF1608. Sirius XM offers trials to [[redacted]]. In 2015, [[redacted]] trials to consumers. Trial Ex. 663 (SXM_DIR_00025989) (native file). Sirius XM also intends to [[redacted]]. According to Sirius XM's own internal documents, it expects to offer [[redacted]]. Trial Ex. 663 (SXM_DIR_00025989) (native file).

SEPFF1609. Sirius XM offers two main kinds of trials. So-called "unpaid trial subscriptions" are trials in which Sirius XM does not receive any compensation for the trial from the OEM in whose car the trial is offered. 4/17/17 Tr.4438:8-11 (Frear). So-called "paid trials" are trials where the OEM that manufactured the car in which the trial is offered pays Sirius XM compensation in return for Sirius XM offering the trial. 5/17/17 Tr.4437:20-23 (Frear). Typically, in paid promotions—but not in unpaid promotions—Sirius XM is obligated to make a payment to the OEM whenever a trial subscriber converts to a paying subscriber. *See* 5/17/17 Tr; 4438:12-18 (Frear). In all cases, trials are free to the consumer. 5/17/17 Tr.4437:8-10 (Frear).

SEPFF1610. Because paid promotions generate revenue in the form of payments from OEMs, the compensation earned by Sirius XM for those trials is included in the revenue base on which statutory royalties are assessed under the current regulations. Trial Ex. 26 ¶ 82 (Orszag Am. WDT). However, in the case of unpaid promotions, SoundExchange receives no

royalties under the current regulations, even though Sirius XM makes extensive use of rights owners' content in offering such trials. Trial Ex. 26 ¶ 82 (Orszag Am. WDT).

SEPFF1611. SoundExchange proposes a simple adjustment to ensure that artists and copyright holders are adequately compensated for the immense value Sirius XM derives from their work in offering trials. Consistent with the benchmark interactive service agreements, which require [[redacted]], Sirius XM should be required to pay royalties for free trials that exceed 30 days in length. Sirius XM should pay a standard per subscriber rate on these trials, except that for months two and three of trials the rate should be adjusted to reflect the lower average willingness to pay of trial subscribers versus self-pay subscribers. This approach is consistent with the relevant benchmarks, as well as the digital streaming marketplace more generally, and would eliminate Sirius XM's ability to shrink its royalty obligation—and by extension the compensation it pays to copyright owners and artists—simply by making greater use of unpaid trials versus paid trials.

A. The Marketplace Agreements In The Record All Establish Durational Limits On Free Trials Offered By Services And 30 To 60 Days Is Common.

SEPFF1612. The agreements between record companies and the benchmark interactive subscription services address free trials. As Mr. Orszag explains, these agreements are "highly probative, capturing the current considerations and objectives of the parties, extant and anticipated future competition, and the dynamics that would shape the negotiations and final outcome of hypothetical arm's length bargaining between Sirius XM and a record company." Trial Ex. 26 ¶ 86 (Orszag Am. WDT).

SEPFF1613. The table below, offered by Mr. Orszag, summarizes how recently-executed deals between [[redacted]], each treat free trials:

	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]

Trial Ex. 26, Table 6 at 39 (Orszag Am. WDT) (citations omitted). Mr. Orszag has examined the free trial provisions in the agreements between each benchmark service and each major record company. With one lone exception, he found [redacted]

[redacted]. Trial Ex. 26 ¶ 87 (Orszag Am. WDT).

SEPFF1614. Mr. Orszag's analysis shows that the standard approach toward free trials in the agreements between the record companies and the benchmark services is for [redacted]. Trial Ex. 26 ¶ 86 (Orszag Am. WDT). In addition, the interactive services agreements also [redacted] Trial Ex. 26 ¶ 89 (Orszag Am. WDT).

SEPFF1615. Sirius XM trials are longer than free trials offered by the benchmark interactive services. Sirius XM's free trials may run [redacted]. By comparison, for the benchmark interactive subscription services, free trials generally last [redacted].

Service	Free Trial Length
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

Trial Ex. 26, Table 4 (Free Trials Offered Currently by Benchmark Services) (Orszag Am. WDT) (citations omitted).[155]

B. There Is No Reason Why Sirius XM Should Be Treated Differently.

SEPFF1616. There is simply no reason why the regulations should treat Sirius XM differently from the benchmark interactive services with respect to free trials. As. Mr. Orszag explains, "there is no sound economic basis for the present disparate treatment, under which Sirius XM is permitted to offer the repertoires of rights owners for durations greater than one month without the payment of royalties." Trial Ex. 26 ¶ 85 (Orszag Am. WDT). In his written rebuttal testimony, Professor Shapiro puts forward a model purporting to show that the record companies have an incentive to waive the collection of royalties for at least as long a period as Sirius XM elects to offer free trials. Professor Shapiro's model is flawed, principally because its key inputs are nothing more than unfounded and unrealistic assumptions.

SEPFF1617. Professor Shapiro acknowledges that the proper way of modeling the point at which Sirius XM should be made to pay royalties on trials is to compare the benefit per month that each party earns from a free trial, versus the cost per month to each party of running a free trial. Trial Ex. 9 at 55 (Shapiro Corr. WRT). Professor Shapiro further acknowledges that the point at which the costs outweigh the benefits of free trials for record companies (along with the equivalent point for Sirius XM) may be used to determine the point where Sirius XM should start paying royalties on trials. *See* Trial Ex. 9 at 55 (Shapiro Corr. WRT). But Professor Shapiro errs when he concludes that record companies, at any given point, have a higher

[155] The one exception appears to be the agreement between Apple and the major record labels. This agreement provides for 3-month free trials, but it was altered not long after the service launched. Almost since inception Apple has paid royalties on free trials longer than 30 days.

benefit/cost ratio than Sirius XM, and would choose to waive royalties for as long as Sirius XM would choose to run unpaid trials.

SEPFF1618. As part of modeling the costs and benefits of free trials to record companies, Professor Shapiro estimated the opportunity cost to record companies of permitting Sirius XM to offer free trials. Trial Ex. 9 at E-7 (Shapiro Corr. WRT). Put differently, Professor Shapiro estimated the amount of money that record companies could be making through other sources if they decided *not* to license to Sirius XM for free trials. This opportunity cost figure is largely a function of the additional money that other services, such as the benchmark interactive services, would be paying record companies if the record companies did not license to Sirius XM for free trials.

SEPFF1619. In estimating opportunity cost for record companies in the free trial context, Professor Shapiro made the assumption that no record company is a "must have" for Sirius XM. In other words, Professor Shapiro presumed that only a portion of Sirius XM's customers would leave in the event the record companies did not license Sirius XM. *See* 4/24/17 Tr.562:15-17 (Shapiro) (Q: "But you did not treat the record companies as must haves for Sirius XM, right?" A: "That's correct"); Trial Ex. 9 at E-8 (Shapiro Corr. WRT). Professor Shapiro admitted that this assumption lowered his calculation of record companies' opportunity cost for licensing to Sirius XM for free trials, 4/24/17 Tr.452:25-563:1-2 (Shapiro), *see supra* Section V.F.1.

SEPFF1620. Professor Shapiro's assumption, and therefore his conclusion, is incorrect. The major record companies *are* must-haves for Sirius XM. As explained by Professor Willig, *supra* Section V.F.1, substantially all subscribers would leave Sirius XM if the major record companies did not license their music to Sirius XM. Thus, Professor Shapiro's

calculation of record companies' opportunity cost in licensing to Sirius XM for free trials is inaccurate, and yields a number that is too low. This error infects Professor Shapiro's calculation of the marginal costs and benefits to a record company for licensing to Sirius XM for free trials, and thus prejudices his calculation of the optimal length of trials for a record company. *See* 4/24/17 563:3-7 (Shapiro). As a result, Professor Shapiro has failed to adequately model the optimal point at which Sirius XM should begin to pay royalties on free trials.

1. Sirius XM's Explanations For Why It Should Not Have To Pay Royalties On Trials Shorter Than 90 Days Are Unconvincing.

SEPFF1621. Sirius XM has offered numerous other reasons for why it should not have to pay royalties on trials shorter than 90 days, but none of them are compelling. First, Sirius XM has emphasized the fact that most Sirius XM subscribers do not convert until the end of a free trial period. As Mr. Orszag explains, and Mr. Frear himself admitted, there is a simple explanation for why Sirius XM subscribers do not convert until the end of a free trial period: It would be irrational for trial subscribers to convert and start paying money to Sirius XM before the end of their free trial, given that they could stay on the trial, pay nothing, and begin paying only when doing so is necessary to continue listening. *See* 5/17/17 Tr.4484:12-17 (Frear). The only reasonable expectation, then, is that most customers will convert near the end of their free trials regardless of trial length.

SEPFF1622. Second, Sirius XM contends that the nature of its free trial program is such that it needs more time to woo its trial subscribers than do the benchmark interactive services. *See* Trial Ex. 9 at E-9 (Shapiro Corr. WRT). This is pure conjecture. Sirius XM has not produced any document or survey assessing how its conversion rates would change were its trials to drop from 90 days to a shorter length.

SEPFF1623. Sirius XM suggests in this vein that part of the reason it needs more time than the interactive services to convert trial subscribers is because it pushes its trials onto consumers without their knowledge, whereas consumers have to request a trial from the interactive services in order to participate in one. Trial Ex. 12 ¶ 20 (Frear WRT). Similarly, Sirius XM contends that its trials must be longer because interactive services' trials automatically roll into paid subscriptions, whereas Sirius XM requires trial subscribers to opt in to becoming paying subscribers. Trial Ex. 12 ¶ 21 (Frear WRT). But these differences between Sirius XM and the interactives are the result of Sirius XM's *own choices* about how to structure its free trial program. Plainly, Sirius XM could require that consumers give them their credit card information as a condition of beginning a trial—but it has chosen not to. To the extent that these business choices require a longer trial period, it is Sirius XM that should bear the cost—not the record companies, who have no role in determining how Sirius XM's trials are structured.

SEPFF1624. It is true that interactive services can contact their trial subscribers through the interface of their apps, whereas Sirius XM presently cannot. But this distinction will soon disappear. [ ] 5/15/17 Tr.3783:25-3874:2, 3792:1-20 (Meyer). [ ]. *See* 5/15/17 Tr.3740:8-20 (Meyer). Therefore, this distinction between the interactive services and Sirius XM will rapidly become less significant, to the extent it had any material significance in the first place

SEPFF1625. There are also numerous ways that Sirius XM could adjust its business to accommodate a royalty obligation for free-trial subscribers. Sirius XM might elect to recalibrate its free trial program in ways designed to lower its royalty burden (for example, by

shortening the average free trial period), and to increase its conversion rates (for example, by requiring free trial subscribers to provide credit card information). Trial Ex. 43 ¶ 64 (Orszag WRT). [ ] *See* 5/17/17 Tr.4481:25-4482:2 (Frear). Or it could avoid paying royalties altogether simply by aligning its practices with the benchmark interactive subscription services and limiting its free trials to [ ]. Trial Ex. 43 ¶ 64 (Orszag WRT).

2. Although Sirius XM Pays Royalties On Paid Promotional Subscriptions, It Can Game The System By Altering Its Deals With The OEMs.

SEPFF1626. The regulations, as they are currently structured, provide Sirius XM with the ability to game the system to minimize its royalty obligation associated with free trials. As discussed above, Sirius XM does pay royalties on its paid promotions—that is, promotions where an OEM pays Sirius XM to offer free trials in the OEM's vehicles—but it does not pay trials on unpaid promotions. Thus, it is entirely possible that Sirius XM could shift its trials from paid to unpaid in order to minimize the royalties it pays to SoundExchange, without any noticeable difference to the consumer. Sirius XM could also offset the loss of OEM payments associated by switching from paid to unpaid trials by reducing or eliminating the amount of revenue it shares with OEMs when trial subscribers convert. Indeed, [ ]. *See, e.g.,* Trial Ex. 322 (SXM_DIR_00117336).

SEPFF1627. Since 2012, Sirius XM has become [ ]. As Mr. Orszag's analysis demonstrates, [ ]. Trial Ex. 26 ¶¶ 83-84. Sirius XM has [ ] Trial Ex. 26 ¶ 84 (Orszag Am. WDT); *see* 5/17/17 Tr.4494:2-5 (Frear)

([redacted]).

The following table contains data from Sirius XM's budgets and demonstrates [[redacted]].

Year	Number of Unpaid Trials (in '000s)	Number of Paid Trials (in '000s)	Percentage of Trials That are Unpaid
2011	[redacted]	[redacted]	[redacted]
2012			
2013			
2014			
2015			

See Trial Ex. 307 (SXM_DIR_00021341); Trial Ex. 308 (SXM_DIR_00021389); Trial Ex. 309 (SXM_DIR_00021445); Trial Ex. 310 (SXM_DIR_00021498). Sirius XM's forecasts likewise indicate that [[redacted]]. *See* Trial Ex. 663 (SXM_DIR_00025989) (native file).

C. SoundExchange's Approach For Assessing A Royalty On Trial Subscribers

SEPFF1628. SoundExchange's approach for addressing trials is far more sensible than the approach put forward by Sirius XM. As Mr. Orszag explains, there are three elements that go into determining an appropriate rate for trial subscriptions: when royalty payments begin, the unit of payment, and the payment amount. Trial Ex. 43 ¶ 60 (Orszag WRT). SoundExchange's proposed approach to free trials sensibly addresses each of these elements.

SEPFF1629. First, SoundExchange proposes that Sirius XM should begin paying royalties on free trials after the 30th day of the trial. Trial Ex. 26 ¶ 88 (Orszag Am. WDT). This proposal is reasonable because it [[redacted]]. As discussed above, there is no reason to [[redacted]], or to presume that Sirius XM is different from the interactive services in a way that would affect this aspect of the benchmark. As Sirius XM's CFO acknowledged, this limitation would not prevent Sirius XM from offering free trials longer than 30 days. It would merely require that, if

Sirius XM chooses to offer such trials, it compensate artists and record companies for use of their content past the 30-day mark. *See* 5/17/17 Tr.4482:4-12 (Frear).

SEPFF1630. Second, SoundExchange proposes that the unit of payment for royalties on trials be a per-subscriber rate. Trial Ex. 26 ¶ 89 (Orszag Am. WDT). This approach is sensible because it would eliminate the opportunity for Sirius XM to take advantage of the system by moving from paid to unpaid trials and thereby reduce, or in the extreme even eliminate the compensation related to free trials that it pays to SoundExchange. Trial Ex. 26 ¶ 90 (Orszag Am. WDT). Certainly, there is no question that Sirius XM receives benefits from each trial it offers. Each trial subscriber is valuable to Sirius XM because each trial subscriber could turn into a full paying customer. It makes no sense, then, for Sirius XM to be required to share the value of its trials with artists and record companies only when it receives compensation from an OEM.

SEPFF1631. In the event the Judges prefer not to use a per-subscriber approach for free trials, they should use Mr. Orszag's alternative method, which is to assign Sirius XM's royalty base ARPU to each free trial subscriber for whom Sirius XM incurs a royalty obligation. Trial Ex. 26 ¶ 90 (Orszag Am. WDT). This approach would likewise ensure that Sirius XM gains no advantage by switching from paid to unpaid promotions. This approach also would address Sirius XM's "incentive to alter how it recognizes revenues received from automobile OEMs in connection with free trials." Trial Ex. 26 ¶ 90 (Orszag Am. WDT). "In particular, if royalties on paid promotional subscribers were calculated based on the actual promotional revenues received by Sirius XM, rather than a grossed up figure derived using the royalty base ARPU, Sirius XM would have an incentive to minimize its reported paid promotional revenues." Trial Ex. 26 ¶ 90 (Orszag Am. WDT).

SEPFF1632. These approaches are appropriate with respect to both paid and unpaid trials. Presently, Sirius XM pays to SoundExchange a percentage of the money it receives from OEMs as part of paid promotions. But the money that Sirius XM receives from OEMs as compensation for trials is only a fraction of the value of those trials to Sirius XM. *See* Trial Ex. 26 at ¶ 91 & n.114 (Orszag Am. WDT). A per-subscriber or grossed-up ARPU approach would ensure that SoundExchange is compensated for the full value of trial subscribers, not merely the small slice of that value that Sirius XM recoups from OEMs. *See* Trial Ex. 26 at ¶ 90 n.112 (Orszag Am. WDT).

SEPFF1633. Third, with respect to the payment amount, SoundExchange proposes that the proper payment amount is the same headline rate it proposes in its rate proposal for paying subscribers, with certain modifications. As discussed above, it is entirely appropriate that Sirius XM pay the same rate for trial subscribers that it does for paying subscribers outside 30 days. That is the approach [ ]. Trial Ex. 26 at Table 6 (Orszag Am. WDT).

SEPFF1634. Professor Orszag acknowledges that the willingness to pay of Sirius XM trial subscribers may be lower than the willingness to pay of Sirius XM paying subscribers and, accordingly, has proposed an adjustment to account for trial subscribers' willingness to pay. Trial Ex. 26 at ¶ 80 (Orszag WDT). SoundExchange submits that this adjustment should be applied to trial subscribers in the second and third months of free trials offered by Sirius XM. Beyond the third month of a Sirius XM trial, a willingness-to-pay adjustment is unnecessary and inappropriate. Indeed, [ ] and Sirius XM has not even attempted to justify why it would need trials longer than 3 months in order to maintain conversion rates. *See* Trial Ex. 12 ¶ 4 (Frear WRT). There is certainly no reason why Sirius XM

should be allowed to pay reduced rates on, for instance, a [ ]. *See* Trial Ex. 322 at 44 (SXM_DIR_00117349).

SEPFF1635. To make a willingness-to-pay adjustment, Mr. Orszag proposes dividing free trial subscribers into two groups—those who eventually convert to paying subscribers and those who do not. Trial Ex. 43 ¶ 63(Orszag WRT). Trial subscribers who convert, by definition, have the same willingness to pay as paying subscribers. Trial Ex. 43 ¶ 63 (Orszag WRT). For trial subscribers who do not convert, Mr. Orszag used royalty payment data from Slacker and Spotify to estimate their willingness-to-pay. Trial Ex. 43 ¶ 62 (Orszag WRT). For Slacker, Mr. Orszag compared the weighted average effective per-performance rates for Slacker's ad-supported and non-interactive subscription tiers, and obtained a ratio of [ ], meaning that the willingness to pay of those trial subscribers not willing to become paid subscribers was [ ] of those willing to become paying subscribers. Trial Ex. 43 ¶ 62 (Orszag WRT). For Spotify, Mr. Orszag ran the same calculation using royalty payment data pertaining to Spotify's ad-supported and premium on-demand tiers and obtained a ratio of [ ], or approximately [ ] the willingness to pay of those subscribers who converted to paid subscribers.

SEPFF1636. As Mr. Orszag explains, these services are roughly analogous to Sirius XM's free trials and Sirius XM's paid service. "Just as the ad-supported tier of Slacker is a free-to-the-consumer version of the non-interactive subscription tier, so too is a Sirius XM free trial a free-to-the-consumer version of the Sirius XM service." Trial Ex. 43 ¶ 62 fn. 80 (Orszag WRT). The analogy is reasonable and Sirius XM's witnesses have failed to suggest a more informative comparison that could be drawn from available information.

SEPFF1637. In order to determine Sirius XM's royalty obligation, one first determines the percentage of Sirius XM free trial subscribers who do not convert—in the fourth quarter of 2016, this was approximately [redacted] of trial subscribers. Trial Ex. 43 ¶ 63 (Orszag WRT). Using the [redacted] ratio described above,[156] one can estimate that the willingness to pay of trial subscribers who do not convert is [redacted] of the average willingness-to-pay of the [redacted] of Sirius XM trial subscribers who do convert (which is the same as Sirius XM subscribers as a whole). Trial Ex. 43 ¶ 63 (Orszag WRT). Thus, the willingness to pay of trial subscribers as a whole is approximately [redacted] of self-pay subscribers. Trial Ex. 43 ¶ 63 (Orszag WRT). Accordingly, the headline per subscriber rates are adjusted by a factor of [redacted] in order to derive the per subscriber rates that should be applied to months two and three of Sirius XM free trials. *See* Trial Ex. 43 ¶ 63 (Orszag WRT).

[156] The [redacted] ratio from Spotify also could be used in this calculation. Consistent with his conservative approach, Mr. Orszag relied on the lower number. *See* Trial Ex. 43 ¶ 63 (Orszag WRT).

XII. Rate Structure For The SDARS

SEPFF1638. In addition to identification and adjustment of comparable benchmark rates, determination of reasonable royalty rates under the statutory license requires translating the benchmark into an appropriate rate structure, or what Professor Willig referred to as a "royalty rate architecture." 5/2/17 Tr. 1968:1-21 (Willig); *see also* Trial Ex. 26 at ¶ 26 (Orszag Am. WDT). Marketplace transactions show royalty rates calculated on the basis of a percentage of revenue, a number of dollars per subscriber, and sometimes a per-play basis, with each of those rate structures playing a different role. 5/2/17 Tr. 1968:3-10 (Willig).

SEPFF1639. In the case of Sirius XM, calculating its royalty obligations on the basis of a per-performance scheme (*i.e.*, payment based on the number of users who listen to a particular sound recording) appears infeasible at the present time, because satellite radio transmissions currently flow only in one direction – from the satellite to the listener. Because no listener data are transmitted back to the satellite, it appears as though Sirius XM does not collect, in the ordinary course of business, the information it would need to calculate its royalty obligations based on a per-performance mechanism. Trial Ex. 26 at ¶ 26 (Orszag Am. WDT). That leaves two viable alternatives: percentage-of-revenue and per-subscriber. There are advantages and disadvantages to each. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT).

SEPFF1640. Currently, Sirius XM's royalty payments are based on a percentage of gross revenues. 37 C.F.R. § 382.12(a). SoundExchange proposes moving to a "greater-of" structure, where the top-line SDARS royalty payment (before exclusions for use of directly licensed recordings and pre-'72 recordings) would be determined by either a percentage of gross revenues or a per-subscriber payment, whichever is greater over the course of the calendar year through the month of payment. SoundExchange Amended Proposed Rates and Terms at App. A § 382.21(a) (filed June 14, 2017). As described further below, a greater-of structure would

minimize ambiguity and disputes, fairly reflect the value Sirius XM receives from its extensive promotional offerings, and conform to benchmark agreements.

SEPFF1641. While SoundExchange and Sirius XM both propose retaining a definition of gross revenues similar to the one currently set forth in 37 C.F.R. § 382.11, both parties have proposed certain changes thereto. SoundExchange's proposed clarifications should be adopted, while Sirius XM's proposal to effectively undo a significant part of the Judges' underpayment decision in Docket No. 2006-1 CRB DSTRA should be rejected.

SEPFF1642. Once a top-line royalty payment is calculated, the SDARS regulations currently permit exclusions based on Sirius XM's use of direct license and pre-'72 recordings. 37 C.F.R. § 382.12(a), (d), (e). Both SoundExchange and Sirius XM propose retaining direct license and pre-'72 exclusions similar to the ones currently provided, but both parties have also proposed certain changes thereto.

SEPFF1643. SoundExchange and Sirius XM agree in substance concerning the minimum fee for SDARS, although SoundExchange has proposed editorial changes in the regulations and a slight delay in the payment date to conform to the regulations adopted by the Judges in *Web IV*.

A. The Judges Should Adopt A "Greater Of" Per-Subscriber And Percentage Of Gross Revenues Rate Structure For SDARS

1. Benchmark Agreements Embody "Greater Of" Rate Structures

SEPCL25. The first step in determining an appropriate rate under Section 801(b)(1) is to look at voluntary transactions in comparable markets – *i.e.*, marketplace benchmarks. *See SDARS II*, 78 FR at 23055; *Phonorecords I*, 74 FR at 4517; *SDARS I*, 73 FR at 4084, 4088; *PSS I*, 63 FR at 25399. For the same reasons that the Judges have found marketplace agreements to provide useful information about the numerical component of a rate,

they should also consider marketplace information concerning the rate structure to be determined in this proceeding.

SEPFF1644. Marketplace agreements for the licensing of sound recordings generally provide a royalty based on both a percent of revenue and payment per subscriber, and require the licensee to pay under the metric that yields the highest royalties. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT); *see also* Trial Ex. 29 at 19 (Bender WDT) (SoundExchange's proposed greater-of rate structure "would mirror royalty rate structures common in the marketplace").

SEPFF1645. Illustrating the point, the record is replete with sound recording license agreements requiring payment of a royalty that is the greater of a percentage of revenue and amount per-subscriber. *E.g.*, Trial Ex. 125A, § 5(a) (SoundX_000035992) (native file) ([redacted]); Trial Ex. 125C, Ex. C at ¶ (a) (SoundX_000004259) (native file) ([redacted]); Trial Ex. 125E, ¶ 6 (SoundX_000007112-13) (native file) ([redacted]); Trial Ex. 125F, ¶ 6.02 (SoundX_000039004-07) (native file) ([redacted]); Trial Ex. 126A, § 5(a) (SoundX_000012209) (native file) ([redacted]); Trial Ex. 126C, Ex. A § 1(a) (SoundX_000013894) (native file) ([redacted]); Trial Ex. 126I, Sch. 1 § 3.4 (SoundX_000019809-10) (native file) ([redacted]); Trial Ex. 127A, § 5 (SoundX_000020990-91) (native file) ([redacted]); Trial Ex. 127D, § 6(b) (SoundX_000027352) (native file) ([redacted]).

SEPFF1646. To be sure, the Judges declined to adopt a greater-of rate structure proposed by SoundExchange in *SDARS I*. There, the Judges found insufficient evidence demonstrating that such a structure would be easier to administer and found no other rationale for employing such a structure in the hypothetical marketplace of the statutory license. 73 FR at 4088. However, ten years of further experience with the percentage-of-revenue rate structure

adopted in *SDARS I* clearly shows that reliance on a percentage-of-revenue rate alone is not as free from difficulty as the Judges perceived in *SDARS I*. *See* 73 FR at 4087. To the contrary, and as described further below, the percentage-of-revenue rate has generated near-constant disputes and years of litigation. It has also incentivized Sirius XM to migrate from "paid" to "unpaid" promotional trials, effectively compelling artists and copyright owners to subsidize a Sirius XM marketing expense. Both of these issues would be substantially mitigated by the addition of a per-subscriber rate. Accordingly, the Judges should at this juncture embrace the wisdom of the marketplace and adopt a greater-of rate structure.

2. A Per-Subscriber Rate Would Minimize Ambiguity And The Potential For Disputes And Provide Transparency

SEPFF1647. Relying on a percentage-of-revenue metric alone creates a fertile ground for disputes concerning the proper accounting for Sirius XM's revenues under the definition of gross revenues in 37 C.F.R. § 382.11. A per-subscriber rate is easier to apply, and so offers hope of avoiding disputes such as those that have occurred under the rate structure in place over the last decade. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT).

SEPFF1648. SoundExchange and Sirius XM have had persistent disagreements concerning Sirius XM's royalty payment practices under the current percentage-of-revenue rate structure. Given the scale of Sirius XM's business, it is well-motivated to try to reduce the royalties it pays to artists and copyright owners by taking aggressive positions concerning what is permitted under the definition of gross revenues. Disputes in this regard can involve a large amount of money and take a very long time to resolve. SoundExchange greatly desires to minimize the room for future such disputes. Trial Ex. 29 at 18-19 (Bender WDT). Sirius XM also agrees that it would be desirable to minimize ambiguity in the rate regulations. 5/17/17 Tr. 4386:7-11 (Barry); 5/17/17 Tr. 4408:5-8 (Barry).

SEPFF1649. As the Judges know well, there is pending before them under Docket No. 2006-1 CRB DSTRA (2007-2012) a matter that results from referral by the U.S. District Court for the District of Columbia. SoundExchange's position in that matter is that Sirius XM has significantly underpaid statutory license royalties by implementing two exclusions from Gross Revenues that were not permitted by the regulations in effect at that time – one associated with its use of pre-'72 sound recordings, and one associated with its Premier or "Best Of" subscription packages. Trial Ex. 29 at 14 (Bender WDT).

SEPFF1650. In their initial decision in that matter, the Judges concluded "that Sirius XM's methodology with regard to excluding revenues attributable to pre-1972 sound recordings was not applied consistently and was not, therefore, consistently reasonable." Underpayment Decision, No. 2006-1 CRB DSTRA, at 3. The Judges also concluded that, "because Sirius XM did not offer the channels included for subscribers to the Premier package for a separate charge, it could not reasonably exclude revenue attributable to the Premier subscription price differential from Gross Revenues." Underpayment Decision, No. 2006-1 CRB DSTRA, at 3.

SEPFF1651. The dispute pending before the Judges is of very significant dimensions. The Judges noted in their decision that "[a]udits conducted for SoundExchange estimate the exclusion of revenue attributed to pre-'72 sound recordings reduced Sirius XM's royalties over the course of the *SDARS I* rate period by [[redacted]], and that the exclusion of the . . . price difference between the Basic and Premier packages . . . reduced Sirius XM's royalties by [[redacted]]." Underpayment Decision, No. 2006-1 CRB DSTRA, at 4 n.13. Sirius XM "estimates that the pre-'72 and upcharge exclusions reduced its royalties by [[redacted]] and approximately [[redacted]], respectively, over the six-year *SDARS I* rate period." Underpayment Decision, No. 2006-1 CRB DSTRA, at 4 n.13. While the exact

damages owed by Sirius XM to SoundExchange are yet to be determined, these numbers indicate the magnitude of the dispute resulting from disagreements over the proper definition and interpretation of Gross Revenues.

SEPFF1652. SoundExchange also has received the final report of an audit of Sirius XM's payments during the 2010-2012 period. In addition to the two categories of underpayment addressed in the Judges' decision, the auditor identified to SoundExchange and quantified various other underpayments during the period under audit. Trial Ex. 29 at 14 (Bender WDT); Trial Ex. 101 (audit report). In total, the auditor advised SoundExchange that based on the information provided, SoundExchange is due [redacted] in SDARS royalties and late fees for the 2010-2012 period. Trial Ex. 101 at 1.

SEPFF1653. While SoundExchange has not yet completed an audit of the *SDARS II* rate period, it is already clear that there are further such issues. In his trial testimony in this proceeding, Mr. Barry admitted that throughout the *SDARS II* rate period, Sirius XM has been improperly deducting from its gross revenues credit card fees related to equipment sales, 5/17/17 Tr. 4393:24-4394:14 (Barry), and probably all its bad debt expense across all its lines of business. 5/17/17 Tr. 4395:1-21 (Barry). Even though Sirius XM had been aware of these issues for some time as of Mr. Barry's testimony, it still had not paid the late royalties to SoundExchange. 5/17/17 Tr. 4396:14-4397:2 (Barry). To date, it has not made good on these late royalties.

SEPFF1654. Sirius XM acknowledges that ambiguities in the rate regulations can give rise to "very costly disputes" that "serve neither the interests of the music industry nor Sirius XM's interests." 5/17/17 Tr. 4386:12-20 (Barry). Because a per-subscriber rate is more straightforward to apply than a percentage-of-revenue rate, adopting a per-subscriber component

in the rate structure for SDARS would reduce the potential for accounting issues of the kinds that have given rise to past disputes. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT); Trial Ex. 29 at 18-19 (Bender WDT). Sirius XM agrees that adopting a per-subscriber royalty would "minimize disputes arising from ambiguities in the definition of gross revenues." 5/17/17 Tr. 4387:8-11 (Barry).

SEPFF1655. It is important to mitigate the risk of future such disputes through this proceeding. Without a change, there are likely to be even more such disputes. As noted above, one of the issues in the dispute pending before the Judges involves the allocation of bundle revenue under the definition of gross revenues. Sirius XM has in the last couple of years shifted to offering bundles of programming, and expects that trend to "increase, as we respond to market demands and market conditions." 5/17/17 Tr. 4338:23-4339:8 (Barry). Adopting a per-subscriber rate as part of the SDARS rate structure would minimize disputes as new bundles proliferate.

SEPFF1656. Adopting a per-subscriber component in the rate structure for SDARS would also contribute to the transparency of royalty payments. The Judges have previously recognized that reasonable rates and terms should be "methodologically transparent." Underpayment Decision, No. 2006-1 CRB DSTRA, at 12-13; *see also SDARS II*, 78 FR at 23073. Transparency of royalty payments is important in a statutory license context, because the statutory license operates on the honor system. SoundExchange receives only minimal rate calculations on licensees' statements of account. Trial Ex. 48 at 13 (Bender WRT). Sirius XM has even been uncooperative in reporting its actual gross revenues on its statements of account. Trial Ex. 29 at 15 n.9 (Bender WDT). As a result, SoundExchange does not typically have

visibility into royalty calculations until it conducts an audit, at its own expense, and sometimes with a fair bit of resistance from the licensee. Trial Ex. 48 at 13 (Bender WRT).

3. A Per-Subscriber Rate Would Reflect The Value Sirius XM Receives From The Use Of Recordings In Extended Free Trials

SEPFF1657. As described in detail in Section XI, Sirius XM routinely offers free trials of its SDARS service that materially exceed the length of the free trials offered by the benchmark interactive services. Trial Ex. 26 at ¶ 81 (Orszag Am. WDT); *see also* Trial Ex. 29 at 19 (Bender WDT). Sirius XM's free trial subscriptions may run [ ]. Trial Ex. 26 at ¶ 81 (Orszag Am. WDT); *see also* 5/15/17 Tr. 3708:24-3709:3 (Meyer) ("When you buy a new car and now many, many used cars, you're given a free trial of our service . . . during that first 90 to 180 days to be able to try the service."). By contrast, free trials for the benchmark interactive subscription services generally last no more than 30 days. Trial Ex. 26 at ¶ 81 (Orszag Am. WDT).

SEPFF1658. Under the current percentage-of-revenue rate structure, Sirius XM can give away music for an arbitrarily long period without incurring any royalty expense. Trial Ex. 29 at 19 (Bender WDT). That is a marked departure from standard industry practice, not only as to interactive services, but in general. As Mr. Bender explained, "[t]hroughout my 25 years in the industry, there has never been such a thing as unlimited free goods." 5/10/17 Tr. 3282:16-3283:3 (Bender). When Sirius XM provides extended free trials, artists and copyright owners are not compensated for use of their recordings by Sirius XM that would be compensable under marketplace agreements with interactive services. Trial Ex. 29 at 19 (Bender WDT).

SEPFF1659. In the last few years, Sirius XM has [ ], Trial Ex. 26 at ¶ 83 (Orszag Am. WDT), and its forecasts indicate [ ]. Trial Ex. 26 at ¶ 84 (Orszag Am. WDT). [

[redacted] Trial Ex. 26 at ¶ 90 (Orszag Am. WDT); 5/17/17 Tr. 4494:2-5 (Frear) (admitting that the proportion of unpaid trials relative to paid trials has increased in the past five years). This shift is unsurprising, given that Sirius XM has ample ability to recover the forgone revenue from OEMs (by, for instance, contracting to reduce its "revenue share" payments to those OEMs). *See, e.g.*, Trial Ex. 322 (SXM-DIR_00117336). The current percentage-of-revenue rate structure gives Sirius XM an ability and incentive to reduce its royalty obligation by making greater use of unpaid trials relative to paid trials. Trial Ex. 26 at ¶ 90 (Orszag Am. WDT).

SEPFF1660. As an economic matter, properly translating the benchmark rates into the statutory license market requires "incorporat[ing] Sirius XM's free trial subscribers in a manner consistent with how free trial subscribers are handled under the licensing agreements between record labels and the benchmark interactive services." Trial Ex. 26 at ¶ 85 (Orszag Am. WDT); *see also* Trial Ex. 26 at ¶ 88 (Orszag Am. WDT) ("it is clear at this stage, consistent with the unanimous treatment of free trials negotiated in the unregulated sphere, that Sirius XM should be required to pay royalties on free trials that extend beyond 30 days").

SEPFF1661. SoundExchange proposes to translate the treatment of free trials in the benchmark market into the statutory license market through its proposed per-subscriber rate. This approach provides a straightforward way of addressing Sirius XM's free trials. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT). If the Judges do not adopt a per-subscriber rate, the issue of free trials nonetheless should be addressed in some way to properly translate the interactive services benchmark into the statutory license market. *See* Trial Ex. 26 at ¶ 90 (Orszag Am. WDT).

SEPFF1662. Under SoundExchange's rate proposal, a free trial subscriber in the first month of a free trial would not be considered a "Subscriber," so its proposed per-subscriber rate would not be assessed against such a person. SoundExchange Amended Proposed Rates and Terms at App. A § 382.20 (filed June 14, 2017) (paragraph (2) of the definition of Subscriber). Free trial subscribers in months two and three of a free trial would be considered Subscribers, but Sirius XM would pay a special, reduced per-subscriber rate for them. SoundExchange Amended Proposed Rates and Terms at App. A § 382.21(a)(1)(i)(A) (filed June 14, 2017). SoundExchange's generally-applicable per-subscriber rate would apply to all other Subscribers receiving music channels through Sirius XM's SDARS service. SoundExchange Amended Proposed Rates and Terms at App. A § 382.21(a)(1)(i)(B) (filed June 14, 2017).

SEPFF1663. The reduced rate for free trial subscribers that SoundExchange proposes is based on calculations by Mr. Orszag. Trial Ex. 43 at ¶ 63 (Orszag WRT). He derived per-subscriber rates that appropriately should be applied to Sirius XM free trial subscribers beginning in their second month. For the percentage of Sirius XM trial subscribers who are likely to convert to paying subscribers ([[redacted]]), Mr. Orszag assumed the same willingness to pay as for Sirius XM's self-pay subscribers, on average. Trial Ex. 43 at ¶ 63 (Orszag WRT). For the remainder of Sirius XM trial subscribers, Mr. Orszag used royalty payment data for Slacker and Spotify to estimate a reasonable differential in willingness-to-pay as between Sirius XM self-pay subscribers and Sirius XM free trial subscribers. Trial Ex. 43 at ¶ 62 (Orszag WRT). Adding these components, he generated ranges of per-subscriber rates of [[redacted]] to [[redacted]] using the Slacker data and [[redacted]] to [[redacted]] using the Spotify data. Trial Ex. 43 at ¶¶ 63 & nn.84-85 (Orszag WRT). SoundExchange used a point within those ranges as its

proposed 2018 free trial subscriber rate, and has proposed increasing that rate at the same 3% annual rate as SoundExchange's generally-applicable per-subscriber rate.

SEPFF1664. SoundExchange proposes stepping up to the full per-subscriber royalty after three months of a free trial. Sirius XM's free trials run for a broad range of durations, [ ]. Trial Ex. 26 at ¶ 81 (Orszag Am. WDT). Yet the length of a free trial has nothing to do with a subscriber's personal willingness to pay or likelihood to convert, and everything to do with a particular car manufacturer's agreement with Sirius XM. Providing any free trial over the minimum length is giving away music to a significant number of free trial subscribers who would otherwise convert to self-pay status, or probably never convert. Sirius XM is free to do that, but only if it pays the proposed per-subscriber royalty. The decision to offer free trials of up to a year is a Sirius XM marketing decision and expense, not a cost that artists and record companies should be forced to bear.

SEPFF1665. This approach would eliminate Sirius XM's incentive to reduce its royalty obligation by making greater use of unpaid trials relative to paid trials, Trial Ex. 26 at ¶ 90 (Orszag Am. WDT), and ensure that artists and copyright owners receive fair compensation for the value Sirius XM receives by transmitting music beyond the length of an industry-standard royalty-free free trial period. Trial Ex. 29 at 19 (Bender WDT).

4. Continuation Of The Percentage Of Gross Revenues Metric Is Also Important

SEPFF1666. While there are ample reasons for the Judges to adopt a per-subscriber rate structure as described above, that does not mean that the Judges should abandon the current percentage-of-revenue model. The Judges should move to a "greater-of" structure, where the top-line SDARS royalty payment is determined by either a percentage of gross revenues or a per-subscriber payment, whichever is greater.

SEPFF1667. As described above, such a greater-of structure would be most consistent with marketplace agreements. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT); Trial Ex. 29 at 19 (Bender WDT). The marketplace embraces such structures because there are advantages and disadvantages to each approach. While a percentage-of-revenue metric raises issues concerning the appropriate definition of revenue, and may give rise to future disputes, such a metric has the advantage of being linked to consumers' willingness to pay for a service. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT). Music content drives consumers' willingness to pay for Sirius XM's SDARS service. *See* Trial Ex. 21 at § 6; *see also supra* Section IV(F)(2)(i). Artists and copyright owners should receive a share of the upside should Sirius XM's average revenue per user rise over the term of the license. *See* Trial Ex. 26 at ¶ 27 (Orszag Am. WDT).

B. The Definition Of "Gross Revenues" For SDARS

1. The Definition Of "Gross Revenues" For SDARS Should Be Clarified

SEPFF1668. While the addition of a per-subscriber rate to the SDARS rate structure would reduce the effects of disputes concerning accounting under the percentage-of-revenue prong, the percentage-of-revenue prong nonetheless should be meaningful and administrable. SoundExchange proposes retaining essentially the current definition of gross revenues, and has based the calculation of its proposed percentage rate on the revenue per user generated under that definition. *See* Trial Ex. 26 at ¶¶ 58-59 (Orszag Am. WDT). However, the current definition is not a model of clear draftsmanship and has given rise to numerous disputes. In some cases Sirius XM has even acknowledged that deductions the definition arguably permits are not appropriate. Just as the Judges sought to recast the webcasting regulations in "plain language" and avoid "internal ambiguity," *see Web IV*, 81 FR at 26316 n.1, 26400, they should revise certain aspects of the drafting of the definition of gross revenues, as proposed by SoundExchange.

i. Deductions For Excluded Revenue Should Be Taken Only To The Extent That The Relevant Revenue Is Included In The First Place

SEPFF1669. The principal clarification that SoundExchange proposes is to express what should be the self-evident proposition that amounts should be deductible from gross revenues only if they were otherwise included in gross revenues. SoundExchange proposes to accomplish that clarification by adding to paragraph (3) of the definition the phrase "To the extent otherwise included by paragraph (1) or (2)." SoundExchange Amended Proposed Rates and Terms at App. A § 382.20 (filed June 14, 2017); Trial Ex. 29 at 20 (Bender WDT).

SEPCL26. To understand this proposal, it is important to understand the architecture of the current definition of gross revenues. As a starting point, paragraph (1) of that definition specifies that gross revenues is "comprised of" two categories of revenue: (a) subscription revenue from a U.S. SDARS and (b) advertising revenue from channels that make more than incidental use of music. 37 C.F.R. § 382.11.

SEPFF1670. From 2006-2015, subscription fees represented 87% of Sirius XM's total corporate revenue. Much of the rest consisted of what Sirius XM calls "other revenue," which includes the U.S. Music Royalty Fee Surcharge, which is paid by subscribers and so treated as subscription revenue for purposes of the definition of gross revenue. Sirius XM's remaining revenue includes small amounts of advertising, which takes place primarily on non-music channels, and equipment sales. Trial Ex. 25 at ¶ 58 (Lys Corr. WDT).

SEPCL27. Thus, the top-line gross revenues contemplated by the current definition consist of subscription revenue (including the U.S. Music Royalty Fee Surcharge) and a small amount of advertising revenue.

SEPCL28. Paragraph (2) of the current definition simply serves to confirm that the revenue identified as included by paragraph (1) is included even if the money is paid to a corporate affiliate of Sirius XM. *See* 37 C.F.R. § 382.11.

SEPCL29. Paragraph (3) of the current definition then includes a long list of things that "Gross Revenues shall exclude." 37 C.F.R. § 382.11. Many of the items listed in paragraph (3) are excluded from gross revenues only in the sense that paragraph (3) confirms that they are not included in gross revenues to begin with, by virtue of paragraphs (1) and (2). However, some of the items listed in paragraph (3) might be included in gross revenues by paragraphs (1) and (2), and in those cases they are excluded in the sense that they may be deducted.

SEPCL30. For example, paragraph (3)(i) specifies that equipment revenue is excluded. It is undisputed that equipment revenue is not part of subscription revenue or advertising revenue. 5/17/17 Tr. 4388:4-7 (Barry). Thus, under the current definition, equipment revenue is not included in gross revenues because it is not one of the categories of revenue identified in paragraph (1). Sirius XM agrees that there is no need to subtract out equipment revenue from the pool of revenue established by paragraphs (1) and (2), because equipment was never in that pool in the first place. 5/17/17 Tr. 4389:11-18 (Barry). Accordingly, the reference to equipment revenue in paragraph (3)(i) has no operative function, and serves merely to confirm what is already the case by operation of paragraph (1). The situation is the same with royalty revenue (paragraph (3)(ii)), record sales revenue (paragraph (3)(iii)), and sales taxes and perhaps miscellaneous fee revenue (paragraph (3)(iv)), none of which is subscription or ad revenue. Trial Ex. 13 at ¶ 26 (Barry WRT). These items stand in

contrast to the rest of paragraph (3), which seems to permit the subtraction from gross revenues of certain amounts that are included by virtue of paragraphs (1) and (2).

SEPFF1671. With that as background, SoundExchange proposes clarifying that amounts can be deducted from the pool of top-line gross revenues established by paragraphs (1) and (2) only when those amounts were included in that pool in the first place. Trial Ex. 29 at 20 (Bender WDT). Mr. Barry expressed concern that SoundExchange's proposal "could forbid legitimate *deductions* that are either not subscription or advertising revenue, or that are not, for accounting reasons, categorized as revenue at all." Trial Ex. 13 at ¶ 26 (Barry WRT) (emphasis added). However, that concern is misplaced. For example, Mr. Barry expressed concern that equipment revenue, royalty revenue, and record sales revenue might not be *deductible* because they are not included in subscription or advertising revenue. Trial Ex. 13 at ¶ 26 (Barry WRT). However, that is the whole point of SoundExchange's clarification. Sirius XM and SoundExchange agree that equipment revenue is not part of subscription revenue or advertising revenue. As a result, it does not need to be *deducted* from the pool of revenue established by paragraphs (1) and (2). 5/17/17 Tr. 4388:4-4389:18 (Barry). SoundExchange does not propose any changes to paragraphs (1) and (2). SoundExchange Amended Proposed Rates and Terms at App. A § 382.20 (filed June 14, 2017). Accordingly, SoundExchange's proposal [[redacted]] Trial Ex. 29 at 20 (Bender WDT) ("we do not propose to change the exclusion from the royalty base of categories of revenue such as equipment revenue").

SEPFF1672. Mr. Barry likewise expresses concern that bad debt, credit card expense and sales taxes are not treated as revenue at all. Trial Ex. 13 at ¶ 26 (Barry WRT).

However, when there is associated revenue under paragraphs (1) and (2), SoundExchange's proposal allows for a deduction under paragraph (3) when it is appropriate. In contrast, under the existing terms, Sirius XM has frequently deducted certain items from Gross Revenue when there was not associated revenue included as Gross Revenue in the first place. (There is a separate issue concerning the treatment of credit card expense, which is addressed in Section XII.B.1.ii below.)

SEPFF1673. For example, the parties agree that bad debt expense *should* be deductible when it relates to subscription revenue and ad revenue, and *not* when it relates to other categories of revenue. SoundExchange's proposal would permit the deduction of bad debt expense relating to subscription revenue. This is so because if a dollar owed by a subscriber was booked as subscription revenue, it would be included in gross revenues by paragraph (1)(i). If that same dollar was determined to be uncollectable and booked as bad debt expense, that dollar could be deducted pursuant to SoundExchange's proposed paragraph (3)(vi) because that dollar was "otherwise included by paragraph (1) or (2)." SoundExchange Amended Proposed Rates and Terms at App. A § 382.20 (filed June 14, 2017).

SEPFF1674. Conversely, bad debt expense that does *not* relate to subscription or ad revenue should not be deducted from gross revenues. In the past, Sirius XM has [ ]. Trial Ex. 29 at 20 (Bender WDT). SoundExchange's auditor identified this issue in the last completed audit of Sirius XM. The audit report states as follows:

[ ]

[redacted]

Trial Ex. 101 at 9. According to calculations by SoundExchange's auditor, this improper deduction resulted in a reduction of royalties in the amount of [redacted] over the audit period. Trial Ex. 101 at 9.

SEPFF1675. At trial, Mr. Barry acknowledged this practice, agreed that Sirius XM had engaged in this practice throughout 2015, and further agreed that Sirius XM probably had engaged in this practice throughout the entire *SDARS II* rate period. 5/17/17 Tr. 4395:13-21 (Barry).

SEPFF1676. When this issue was discovered by SoundExchange's auditor, Sirius XM took the position in its response to the auditor's report that [redacted] Trial Ex. 101, App. B at 6 (Sirius XM's response to the audit report). That is, it asserted that [redacted].

SEPFF1677. Setting aside the current wording of the regulations, there does not seem to be any disagreement between the parties concerning the right result here. Sirius XM's response to the auditor's report agreed that, despite its argument concerning what the regulations provide, it would [redacted]. Trial Ex. 101, App. B at 6. At trial, Mr. Barry agreed that Sirius XM should not be able to exclude bad debt from gross revenues unless the bad debt is associated with subscription

or advertising revenues, and that SoundExchange's proposal to change the regulations to that effect is appropriate. 5/17/17 Tr. 4397:5-13 (Barry).

SEPFF1678. This makes perfect sense. Gross revenues include revenue that Sirius XM earns through the sale of subscriptions and advertising. There is no reason Sirius XM should get to subtract from this base number revenue that it was unable to collect in the course of, say, selling aftermarket radios to a big-box retailer. Such a deduction is a non sequitur that has no basis in sound economics or logic.

SEPFF1679. As noted above, sales tax is similar to equipment revenue for purposes of the gross revenue definition. It is not included in gross revenues because it is not subscription revenue or ad revenue. Instead, sales tax is a pass-through item [ ]. Trial Ex. 13 at ¶ 26 (Barry WRT). SoundExchange's proposal does not sweep sales tax into the pool of gross revenues; indeed, it proposes no change to paragraphs (1) and (2). However, SoundExchange's proposal makes clear that sales tax should not be deducted from the pool of subscription and ad revenue in which sales tax was never included. This is not an idle fear. The report of SoundExchange's last completed audit of Sirius XM states that "[ ]" Trial Ex. 101 at 8.

SEPFF1680. A simple illustration shows the point. Suppose Sirius XM charged $1 as a subscription fee and was required to collect 5¢ in sales tax on that $1 subscription fee payment. It is undisputed that the $1 should be included in gross revenues and the 5¢ should not be included in gross revenues. If the 5¢ were booked in a liability account, it would not be necessary to deduct the 5¢ from the $1 in subscription fee revenue. If $1.05 were booked as subscription fee revenue, SoundExchange's proposal would allow deduction of the 5¢. But it

appears from the audit report that Sirius XM has [ ].

SEPFF1681. Sirius XM has also [ ]. Trial Ex. 29 at 20 (Bender WDT). As reported by SoundExchange's auditor:

[ ]

Trial Ex. 101 at 7-8. According to calculations by SoundExchange's auditor, this improper deduction resulted in a reduction of royalties in the amount of] over the audit period. Trial Ex. 101 at 7. As in the case of bad debt, Sirius XM took the position that [ ] although it [ ]. Trial Ex. 101, App. B at 5.

SEPFF1682. Mr. Barry testified that "Sirius XM does not disagree with" the principle that Sirius XM should not "reduce[] its reportable Gross Revenues for SDARS on account of refunds or other downward adjustments to categories of revenue that aren't included in Gross Revenues in the first place (for example, bad debt or on webcasting subscriptions)." Trial Ex. 13 at ¶ 27 (Barry WRT).

SEPFF1683. Finally, there is the matter of credit card fees. There is a separate question of whether credit card fee expense (as opposed to credit card fee revenue) relating to

subscriptions and ads should be deducted from gross revenues. That is addressed in Section XII.B.1.ii below. However, the parties agree that Sirius XM should not deduct equipment-related credit card fees from gross revenues, yet Sirius XM has done so anyway. See Trial Ex. 101 at 8; 5/17/17 Tr. 4393:24-4394:14 (Barry). At trial, Mr. Barry stated that he has "no problem" with SoundExchange's proposed clarification insofar as it relates to "equipment credit card transactions." 5/17/17 Tr. 4394:15-25 (Barry).

SEPFF1684. There does not seem to be any substantive disagreement between the parties concerning the right result here: gross revenues should consist of the categories of revenue identified in paragraphs (1) and (2), less items identified in paragraph (3) that were included by paragraphs (1) and (2). Because Sirius XM has taken other deductions from gross revenues, and contended that such deductions were consistent with the regulations, the regulations should be changed. SoundExchange believes that its proposal is a reasonable way to achieve the substantive result that all parties seem to, and should, agree on.

ii. Apart From Bad Debt, There Should Be No Adjustments Based On Expenses Incurred By Sirius XM

SEPFF1685. Sirius XM charges its subscribers various miscellaneous fees, including [ ]. Trial Ex. 29 at 21 (Bender WDT); Trial Ex. 101, at 4-5, 8, Schedules 2 & 6. As noted above, SoundExchange and Sirius XM disagree concerning whether current paragraph 3(iv), by its reference to "credit card, invoice, and fulfillment service fees," permits deduction of only Sirius XM's fee revenue or also its fee expense. SoundExchange believes it is clear that this provision permits exclusion of Sirius XM fee revenue, not expenses. Because Sirius XM has taken a contrary position, SoundExchange has proposed clarifying in its paragraph 3(v) that what is deductible is "[c]redit card, invoice,

activation, swap and early termination fees charged to subscribers." *See* SoundExchange Amended Proposed Rates and Terms at App. A § 382.20 (filed June 14, 2017) (proposed paragraph (3)(v)). (As discussed in Section XII.B.1.v below, SoundExchange has proposed addressing shipping and handling fee revenue in paragraph (3)(i).)

SEPCL31. Current paragraph (3)(iv) permits deduction of revenue, not expenses. This subsection appears within the definition of "Gross Revenues." If the Judges had intended to create some kind of percentage-of-profits royalty rate structure by providing for the deduction of expenses from revenue, they would have said so when they adopted the definition. Instead, they explained that they were creating a "revenue-based metric" and a "definition of revenue." *SDARS I*, 73 FR at 4087. Similarly, in addressing one proposed exclusion, the Judges explained that their goal was to "delineate the revenues related to the value of the sound recording performance rights at issue in this proceeding." *SDARS I*, 73 FR at 4087. The one exception to the Judges' otherwise consistent treatment of gross revenues as a "revenue-based metric" was the exclusion of "[b]ad debt expense." However, there, the Judges clearly called for the exclusion of an expense, demonstrating that the Judges knew how to specify the deduction of expenses when they wanted to do so.

SEPFF1686. Despite the Judges' clear intention to create a revenue exclusion, Sirius XM has taken the position that current paragraph (3)(iv) permits not only exclusion of certain miscellaneous fee revenues, but also deduction of various expenses. As reported by SoundExchange's auditor:

[[redacted]

[redacted]

Trial Ex. 101 at 8. In responding to Sirius XM's defense of its deductions, SoundExchange's auditor further explained:

[redacted]

Trial Ex. 101, App. B at 6.

SEPFF1687. Thus, it appears from the auditor's report that Sirius XM has [redacted]. Trial Ex. 29 at 21-22 (Bender WDT). This is a financially significant issue. According to calculations by SoundExchange's auditor, the deduction of expenses purportedly made pursuant to paragraph (3)(iv) resulted in a reduction of royalties in the amount of [redacted] over the SDARS I audit period. Furthermore, at trial, Mr. Barry confirmed that, throughout the entire SDARS II rate period, Sirius XM excluded from gross revenues credit card processing expenses it incurs that are related to equipment revenue. 5/17/17 Tr. 4393:24-4394:6 (Barry). The royalties that Sirius XM improperly withheld as a result of this exclusion have not yet been quantified, given that an audit of the SDARS II rate period has not concluded.

SEPFF1688. By contrast, Sirius XM has proposed moving the reference to "credit card" to current paragraph (3)(v) to make its credit card expenses deductible. Sirius XM First Amended Proposed Rates and Terms at 3 (filed February 17, 2017). At trial Mr. Barry acknowledged that credit card expense is a kind of expense that Sirius XM is "seeking to exclude." 5/17/17 Tr. 4391:11-15 (Barry).

SEPFF1689. It is SoundExchange's position that "[a]part from bad debt, there should be no adjustments to revenue based on expenses incurred by Sirius XM." Trial Ex. 29 at 21 (Bender WDT). The definition of gross revenues is intended to implement a "revenue-based metric." *SDARS I*, 73 FR at 4087. The Judges should not turn it into a profits-based metric.

iii. Deductions For XM Miscellaneous Fee Revenue Should Be Clear And Reasonably Related To The Associated Expense

SEPFF1690. SoundExchange is not opposed in principle to permitting Sirius XM to exclude from gross revenues (or deduct from gross revenues if otherwise included therein) miscellaneous subscriber fee revenue that is not related "to the value of the sound recording performance rights at issue in this proceeding." *SDARS I*, 73 FR at 4087. Consistent with that principle, SoundExchange has proposed replacing current paragraph (3)(iv) with a new paragraph (3)(v) specifying that the excludable or deductible fee revenue is "[c]redit card, invoice, activation, swap and early termination fees charged to subscribers and reasonably related to the Licensee's expenses to which they pertain." SoundExchange Amended Proposed Rates and Terms at App. A § 382.20 (filed June 14, 2017). (SoundExchange has proposed breaking taxes out into its own paragraph (3)(iv), and as discussed in Section XII.B.1.v below, SoundExchange has proposed addressing shipping and handling fee revenue in paragraph (3)(i).)

SEPFF1691. While SoundExchange agrees that certain miscellaneous fee revenue can be deducted (if otherwise included), that does not mean that any amount paid by a subscriber

and called a special fee should be deductible, regardless of the size of the fee. To a subscriber who is willing to pay a certain amount to access Sirius XM programming, it does not matter how much of the subscriber's payment is called a subscription fee and how much is called something else. To ensure that the deduction for miscellaneous subscriber fees remains true to its purpose of relating the royalty to the value of the sound recordings used, this proposal does two things. First, it specifies more clearly which miscellaneous subscriber fee revenue is deductible, to permit reasoned consideration of which fees are or are not related to the use of sound recordings and avoid future disputes. Second, it specifies that for a miscellaneous subscriber fee to be properly deductible from subscriber revenue, it must be related to the purpose unrelated to the use of recordings for which that fee is charged. *See* Trial Ex. 29 at 21 (Bender WDT); 5/10/17 Tr. 3183:18-3184:4 (Bender).

SEPFF1692. Currently, paragraph (3)(iv) permits exclusion of fees that Sirius XM charges for the use of credit cards and for invoice billing, along with something called "fulfillment service fees." 37 C.F.R. § 382.11. It is not clear what those are, although the *SDARS II* determination suggests that they may be activation fees, swap fees, and early termination fees. 78 FR at 23072. SoundExchange proposes replacing the vague reference to "fulfillment service fees" with specific references to the miscellaneous fees referred to in the *SDARS II* determination. In any event, it should be clear which miscellaneous fees are in or out of the royalty base. Trial Ex. 29 at 21 (Bender WDT).

SEPFF1693. For its part, the rate request that Sirius XM submitted with its rebuttal case included a new proposal to add to paragraph (3)(iv) an exclusion of "late fees." Sirius XM First Amended Proposed Rates and Terms at 3 (filed February 17, 2017). At trial, Mr. Barry

agreed that late fee revenue is not an exclusion currently permitted under the regulations. 5/17/17 Tr. 4390:23-4391:2 (Barry).

SEPFF1694. It would be unfair for the Judges to add a significant new exclusion from gross revenues based on this last minute proposal. Sirius XM's original rate proposal did not include any changes to the definition of gross revenues. Sirius XM Proposed Rates and Terms at 2 (filed October 19, 2016). To the contrary, Sirius XM's original rate proposal specified that "[o]ther than the changes shown below in redline [which did not include any changes to the definition of gross revenues], Sirius XM proposes that the terms currently set forth in 37 C.F.R. § 382.10-17 be continued." Sirius XM Proposed Rates and Terms at 1 (filed October 19, 2016). The Judges should not entertain a proposed new exclusion from gross revenues advanced when it was too late for SoundExchange to develop meaningful responsive evidence.

SEPFF1695. On the merits, late fees are payment for access to programming, paid late. As SoundExchange's auditor put it:

[redacted]

Trial Ex. 101 at 5. Just as SoundExchange distributes the late fees it collects to artists and copyright owners as royalties, late fee revenue collected by Sirius XM should be included in gross revenues for purposes of calculating its royalties.

SEPFF1696. Because the theory of excluding miscellaneous subscriber fee revenue from the royalty base is to enable Sirius XM to recover costs unrelated to the use of sound recordings, rather than as an additional source of profit from providing an SDARS,

SoundExchange proposes specifying that these fees can be excluded only when they are reasonably related to the Licensee's expenses to which they pertain. Trial Ex. 29 at 21 (Bender WDT).

SEPFF1697. For example, nothing in the current regulations clearly prevents Sirius XM from unfairly lowering its royalties payable to SoundExchange by raising its activation fee and correspondingly cutting its subscription fee for the first month of a subscription. 5/17/17 Tr. 4401:1-8 (Barry). Sirius XM should not be able to charge a $100 activation fee, exclude it from gross revenues, and give away the service. 5/10/17 Tr. 3183:18-3184:4 (Bender). SoundExchange's proposal should not be problematic because Sirius XM believes all of the miscellaneous fees it charges are reasonably related to the expenses associated with them. 5/17/17 Tr. 4401:9-16 (Barry). [redacted] 5/17/17 Tr. 4429:4-16 (Barry).

iv. The Judges Should Confirm Again That Revenue From Non-Music Offerings "Offered For A Separate Charge" Is Excludable Only When Those Offerings Are "Provided On A Standalone Basis," And Not Adopt Sirius XM's Proposed Non-GAAP Allocation Methodology

SEPFF1698. In its proposed paragraph (3)(vii)(A) and (B), SoundExchange has suggested language to confirm again that revenue from non-music offerings "offered for a separate charge" is excludable only when those offerings are "provided on a standalone basis." Trial Ex. 29 at 22 (Bender WDT). This proposal is intended "[p]urely [as] a clarification to language that we had previously thought was sufficient." 5/10/17 Tr. 3184:13-14 (Bender).

SEPFF1699. SoundExchange has long thought that the references to a separate charge in current paragraph (3)(vi)(A) and (B) were very clear. After all, when the Judges adopted that language, they explained that "the SDARS definition of 'gross revenues' excludes

monies attributable to premium channels of nonmusic programming that are offered for a charge separate from the general subscription charge for the service." *SDARS I*, 73 FR at 4087. The "separate charge" language was added by the Judges "to make clear that this portion of the definition dealing with data services does not contemplate an exclusion of revenues from such data services, where such data services are not offered for a separate charge from the basic subscription product's revenues." *SDARS I*, 73 FR at 4081. In *SDARS II*, "[t]he Judges stress[ed] that the exclusion is available only to the extent that the channels, programming, products and/or other services are offered for a separate charge." *SDARS II*, 78 FR at 23072 n.45. However, SoundExchange's auditor advised it that throughout the *SDARS I* period at least, [ ]. Trial Ex. 101 at 5-6, Schedule 3. At the time SoundExchange filed its direct case, Sirius XM continued to assert that the "separate charge" language permitted deduction of an allocated part of its Premiere package. Underpayment Decision, No. 2006-1 CRB DSTRA, at 17.

SEPFF1700. Since the filing of direct cases in this proceeding, the Judges decided that "the language in the revenue exclusion described in subsection (vi)(B) did *not* permit Sirius XM to exclude from the Gross Revenues royalty base the price difference, *i.e.*, the Upcharge, between the Premier package and the Basic package." Underpayment Decision, No. 2006-1 CRB DSTRA, at 17 (emphasis in original). Given that decision, SoundExchange's proposed clarification is probably unnecessary. However, because the Judges' initial decision has been withdrawn, SoundExchange continues to ask that, to provide further clarity going forward, the Judges confirm again the meaning of current paragraph (3)(vi)(A) and (B) (which

SoundExchange proposes renumbering as paragraph (3)(vii)(A) and (B)). Trial Ex. 29 at 22 (Bender WDT).

SEPFF1701. Sirius XM, conversely, included in the rate request it submitted with its rebuttal case a new proposal striking the longstanding "separate charge" requirement and adding to current paragraphs (3)(vi)(A) and (B) new language allowing allocation of all bundle revenue regardless of whether the components of the bundle are offered for a separate charge. That language specifies that the exclusion to be taken in the case of any bundle is "the difference between: (a) the stated sale price of the bundle, minus (b) the stated sale price of the bundle multiplied by a fraction, the numerator of which is the publicly stated retail price of the standard music/non-music package when sold on a standalone and undiscounted basis, and the denominator of which is the publicly stated retail price of the bundle when sold on a standalone and undiscounted basis." Sirius XM First Amended Proposed Rates and Terms at 3 (filed February 17, 2017).

SEPFF1702. What Sirius XM is proposing here is a change in the regulations that would allow it to do exactly what the Judges disapproved in their underpayments decision. There, Sirius XM excluded from gross revenues the difference in price between its Premier package and base package (currently Select). Underpayment Decision, No. 2006-1 CRB DSTRA, at 5, 16-17. Assuming a $19.99 price for Premier and a $15.99 price for Select, the allocation formula Sirius XM proposes is:

$$\$19.99 - \$19.99\left(\frac{\$15.99}{\$19.99}\right)$$

Trial Ex. 334 at 3 (Mr. Barry's interpretation of the proposed language at his deposition); *see also* 5/17/17 Tr. 4361:19-22 (Barry) (handwriting on page 3 of Trial Ex. 334 is Mr. Barry's). As a matter of basic algebra, "[t]he $19.99 just cancels out in the second part of the equation . . . [s]o

what you are left with is just the difference in the list price between the bundled package and Select." 5/17/17 Tr. 4408:16-22 (Barry).

SEPFF1703. Sirius XM conceded that such an exclusion is not permitted under the current regulations as interpreted by the Judges. 5/17/17 Tr. 4410:14-17 (Barry). There are compelling economic reasons for why that is the case. As the Judges explained in their underpayments decision, the methodology Sirius XM is proposing is "economically indeterminate" because "[t]he price difference between the bundle and an unbundled item fails to reflect the revenue attributable to each item." Underpayment Decision, No. 2006-1 CRB DSTRA, at 19-20.

SEPFF1704. Sirius XM's proposed approach to allocating bundle revenue is not the same as the multiple element arrangement rules in GAAP. 5/17/17 Tr. 4406:1-8 (Barry). Mr. Barry acknowledged at trial that the multiple element arrangement rules are the most economically appropriate approach to allocating revenue from bundles. 5/17/17 Tr. 4405:12-25 (Barry).

SEPFF1705. Mr. Barry argued in one part of his rebuttal testimony that "the Gross Revenues definition was thoughtfully constructed 10 years ago by the CRB." Trial Ex. 13 at ¶ 31 (Barry WRT). He was right about that as to the bundling rules and separate charge requirement as well. It would be unwise and unfair for the Judges to in effect reverse their decision in the underpayments case based on this last-minute proposal.

v. Duplicative Exclusions Should Be Eliminated

SEPFF1706. SoundExchange proposes deleting one item from each of two pairs of duplicative exclusions. Taxes and shipping and handling fees are presently excluded twice – once in paragraph (3)(i) specifically as they pertain to equipment revenue, and again generally in paragraph (3)(iv). Because equipment appears to be the only thing for Sirius XM to ship and

handle, the equipment provision seems to be the right place to confirm the exclusion of shipping and handling fee revenue. Because taxes are excluded generally in paragraph (3)(iv), there is no reason to say again in the equipment provision of paragraph (3)(i) that taxes are excluded. Trial Ex. 29 at 20 (Bender WDT).

2. Sirius XM's Proposal Concerning Which Version Of GAAP Applies Should Be Rejected

SEPFF1707. Sirius XM has proposed modifying the definition of "GAAP" currently in Section 382.11 to specify that GAAP compliance is to be determined by the version of GAAP in effect at the time the licensee calculates and makes its royalty payment. Sirius XM First Amended Proposed Rates and Terms at 2 (filed February 17, 2017). SoundExchange does not believe that it is necessary to address this point, and is opposed to the regulatory language proposed by Sirius XM. Trial Ex. 48 at 20-22 (Bender WRT).

SEPFF1708. It is not necessary to address this issue. None of the SoundExchange staff involved in handling licensee audits and disputes recalls any instance in which the resolution of a question concerning the amount of a disputed royalty payment depended on the particular GAAP provisions in effect at a certain time. With respect to Sirius XM specifically, SoundExchange again is not aware of any circumstance in which changes in GAAP during the pendency of an underpayment or dispute would have affected the calculation of Sirius XM's royalty liability. This just is not an important issue for the Judges to address. Trial Ex. 48 at 21 (Bender WRT).

SEPFF1709. If the Judges were inclined to specify which version of GAAP applies to a particular payment, analysis of the issue is complicated by the fact that Sirius XM seems to intend something other than what it wrote in its proposed regulatory language. *See* 5/17/17 Tr. 4416:16-24 (Barry).

SEPFF1710. As Mr. Barry explained Sirius XM's proposal at trial, it seems that what Sirius XM is trying to propose is that the version of GAAP to be applied to a particular royalty payment is the version in effect on the last day of the accounting period to which the payment relates. For example, in the case of the royalty payment for the month of May, the version of GAAP that would apply is the version in effect on May 31. 5/17/17 Tr. 4416:16-4417:4 (Barry). That is not far off from a clarification proposed by Mr. Bender, which is that the version of GAAP to be used is the one in effect on the date the payment is due (45 days after the end of the month). Trial Ex. 48 at 21 (Bender WRT). Mr. Bender expressed the view that this latter proposal follows naturally from Sirius XM's obligation with respect to the payment of royalties, which is to make payments on certain dates, with those payments being determined with reference to GAAP. 37 C.F.R. §§ 382.11, 382.12(a), 382.13(c). Either of these approaches would lead to the desirable result that the licensee's liability is both knowable and fixed as of the date the payment is due. *See* Trial Ex. 48 at 21 (Bender WRT).

SEPFF1711. What Sirius XM's proposed regulations actually say is quite different. That language would determine GAAP compliance with respect to what are potentially two different dates – the date of royalty calculation and the date of royalty payment. Sirius XM First Amended Proposed Rates and Terms at 2 (filed February 17, 2017). Those dates could potentially be separated by a long time, depending on when a licensee pays, increasing the chances of a GAAP change in the interim. If the Judges wish to clarify the date on which GAAP compliance is to be determined, they should choose one date, not two. Trial Ex. 48 at 21-22 (Bender WRT).

SEPFF1712. The date of royalty calculation also would not necessarily be known to SoundExchange, meaning that it would not necessarily be able to assess GAAP compliance as of

the date of royalty calculation, unless that was a date the licensee was required to disclose to SoundExchange. Particularly if an issue were to arise only years later in an audit, it may be difficult to figure out what the date of royalty calculation was, unless it was memorialized in a record such as the statement of account. Trial Ex. 48 at 22 (Bender WRT).

SEPFF1713. Finally, the date of royalty payment depends on the licensee's compliance with its payment obligations. While one might expect the date of payment to be close to the date the payment is due, that often is not the case. And in the case of an underpayment that is eventually made good, Sirius XM's proposal seemingly contemplates the possibility of using different versions of GAAP to calculate the initial and final payments. A licensee's royalty liability for a particular month should not fluctuate over time based on changes in GAAP after the due date, and be finally determined only when the licensee finally chooses to make its payment. Trial Ex. 48 at 22 (Bender WRT).

C. The Direct License And Pre-'72 Exclusions For SDARS

SEPFF1714. Both Sirius XM and SoundExchange have proposed continuing the current basic construct of exclusions from the payable royalty based on Sirius XM's use of direct license and pre-'72 recordings. Trial Ex. 48 at 6 (Bender WRT). These exclusions would apply regardless of whether Sirius XM's royalty payment for a particular month is based on a per-subscriber or percentage-of-revenue rate structure. Trial Ex. 29 at 23 (Bender WDT).

SEPFF1715. As adopted in *SDARS II*, the percentage exclusion for direct license and pre-'72 recordings is based on an estimate of listenership using performances on Sirius XM's webcast music channels as a proxy for satellite listenership. 37 C.F.R. § 382.12(d), (e); *SDARS II*, 78 FR at 23072-73. This proxy is used because Sirius XM has said that actual satellite listenership cannot be measured with Sirius XM's current radio technology. Trial Ex. 6 at ¶ 13 (Barry WDT). SoundExchange proposed the approach adopted by the Judges in *SDARS*

II because it seemed (and still seems) to be the best means of approximating satellite listenership given Sirius XM's current radio technology. Trial Ex. 29 at 23-24 (Bender WDT).

SEPFF1716. The current methodology mirrors the one used by Sirius XM prior to October 2011 (without specific authorization in the regulations). At that time, Sirius XM switched to an exclusion methodology based on [ ]. Underpayment Decision, No. 2006-1 CRB DSTRA, at 14. At that time, the Judges ordered use of the webcast proxy, finding that it "is the superior approach." *SDARS II*, 78 FR at 23073.

SEPFF1717. After several years' experience operating under the exclusions adopted in *SDARS II*, SoundExchange proposes several adjustments to the current exclusion methodology. Trial Ex. 29 at 23 (Bender WDT). Sirius XM also proposes a change: going back to the play-based methodology [ ] and that the Judges rejected in *SDARS II*. The play-based methodology should be rejected again.

1. The Direct License And Pre-'72 Exclusions Should Be Calculated Using Actual Satellite Listenership Data If Available

SEPFF1718. SoundExchange's most significant proposed adjustment to the exclusion methodology is to use actual satellite listenership data to calculate the exclusion percentage, rather than the webcasting proxy, if and when reasonably reliable satellite usage data becomes available. SoundExchange Amended Proposed Rates and Terms at App. A §§ 382.21(d) & (e), 382.22(a) (filed June 14, 2017).

SEPFF1719. As noted above, the reason the webcast proxy is currently used is that Sirius XM has said that actual satellite listenership cannot be measured with Sirius XM's current radio technology. Trial Ex. 6 at ¶ 13 (Barry WDT). The webcast proxy is a good proxy for

actual satellite listenership, but not a perfect proxy. Trial Ex. 29 at 24-25 (Bender WDT); Trial Ex. 48 at 9-10, 12 (Bender WRT). There is not a perfect match between Sirius XM's webcast channels and satellite music channels. Indeed, the regulations anticipate that not all satellite music channels will be webcast. See 37 C.F.R. § 382.12(d)(3)(i), (e)(3)(i). One would also expect a mismatch between the webcast proxy and actual satellite listenership due to differences in listening habits between the car and home, office or other mobile environments. Trial Ex. 29 at 24-25 (Bender WDT).

SEPFF1720. SoundExchange and Sirius XM agree that, if possible, the best way to calculate the exclusions would be on the basis of actual satellite listenership. 5/17/17 Tr. 4414:21-25 (Barry); *see also* Trial Ex. 13 at ¶ 43 (Barry WRT) ("Sirius XM does not disagree with the spirit of SoundExchange's proposal"). In fact, Mr. Barry agreed that actual listenership data is the "gold standard" of data. 5/17/17 Tr. 4415:1-2 (Barry).

SEPFF1721. Collection of actual satellite usage data would also provide the best possible basis for harmonizing the methodology used to calculate the direct license and pre-'72 exclusions with the methodology used for SoundExchange distributions. That would allow artists and copyright owners to be credited with a similar share of Sirius XM's usage whether their works were covered by a direct license or paid for through SoundExchange. Both SoundExchange and Sirius XM agree that it would be desirable to harmonize those methodologies. Trial Ex. 29 at 25 (Bender WDT); Trial Ex. 48 at 7 (Bender WRT); 5/17/17 Tr. 4242:10-14 (White); 5/17/17 Tr. 4414:17-20 (Barry).

SEPFF1722. The real question is whether it is sufficiently likely that actual satellite listenership data will become available during the coming rate period that the Judges should contemplate that possibility in the regulations. SoundExchange believes it is.

SEPFF1723. Sirius XM has announced a new generation of radios, formerly referred to as SXM17 and now called 360L. 5/10/17 Tr. 3185:20-24 (Bender). [ ] Trial Ex. 1 at ¶ 34 (Meyer WDT); Trial Ex. 13 at ¶ 18 (Barry WRT); 5/15/17 Tr. 3784:23-25 (Meyer). [ ] Trial Ex. 29 at 23-24 (Bender WDT); Trial Ex. 48 at 7-8 (Bender WRT); 5/15/17 Tr. 3785:8-24 (Meyer); 5/17/17 Tr. 4415:22-4416:1 (Barry).

SEPFF1724. [ ] 5/15/17 Tr. 3785:15-3786:1 (Meyer). [ ] 5/15/17 Tr. 3786:15-18 (Meyer); 5/15/17 Tr. 3788:22-3789:5 (Meyer). Thus, Sirius XM will have the capability of collecting and reporting aggregate tuning hours ("ATH") or other relative usage information that Sirius XM is required to provide pursuant to 37 C.F.R. § 370.4(d)(2)(vii), but that Sirius XM has previously said it could not report. Trial Ex. 29 at 23-24 (Bender WDT). (For this reason, the Judges should reject Mr. Barry's suggestion of eliminating the requirement to report listenership pursuant to § 37 C.F.R. 370.4(d)(2)(vii). Trial Ex. 6 at ¶ 13 (Barry WDT).)

SEPFF1725. Sirius XM is pursuing the 360L technology because it will allow it to create "a single, cohesive in-vehicle entertainment offering," Trial Ex. 13 at ¶ 18 (Barry WRT), which it [ ] 5/15/17 Tr. 3783:6-12 (Meyer). Among other things, 360L will allow Sirius XM to supplement its core satellite radio

product with personalized recommendations, preset preference profiles for each car user, and alerts about sports scores while listening to other content. Trial Ex. 1 at ¶ 34 (Meyer WDT).

SEPFF1726. [redacted] 5/15/17 Tr. 3785:1-3; 3789:11-14 (Meyer). However, [redacted] 5/15/17 Tr. 3789:15-3790:22 (Meyer). That is not surprising. Broadcast radio stations do "an incredible amount of research into who's listening to what," while Sirius XM has not previously had that level of listenership data. 5/10/17 Tr. 3216:24-3217:2 (Bender). [redacted] *E.g.*, Trial Ex. 176. A steady flow of detailed listenership data would be useful to Sirius XM for making programming decisions to keep its subscriber base engaged. 5/10/17 Tr. 3217:2-6 (Bender).

SEPFF1727. During trial, Judge Strickler asked questions getting at whether it might be appropriate to deduct the cost of developing the 360L radios from gross revenues for purposes of calculating Sirius XM's royalty payments. 5/10/17 Tr. 3214:18-3216:12 (Bender). That would not be appropriate, because gross revenues is part of a percentage-of-revenue metric, not a percentage-of-profits metric. *See* Section XII.B.1.ii *supra*. In addition, development of 360L radios is clearly a major strategic initiative that Sirius XM is pursuing for its own purposes, not for purposes of delivering data to SoundExchange.

SEPCL32. The Judges are required by statute to "establish requirements by which copyright owners may receive reasonable notice of the use of their sound recordings under" section 114. 17 U.S.C. § 114(f)(4)(A). The purpose of that requirement "is to enable copyright owners of sound recordings to distribute royalties collected under the statutory licenses to the

correct recipients." *In re Notice and Recordkeeping for Use of Sound Recordings Under Statutory Licenses*, 67 FR 59573, 59574 (2002). To permit a fair distribution of statutory royalties, services have long been required to provide listenership information in their reports of use. *In re Notice and Recordkeeping for Use of Sound Recordings Under Statutory License*, 69 FR 11515, 11524-25 (2004). When SoundExchange seeks actual listenership data from Sirius XM, it is simply asking for what the Judges' regulations require, 37 C.F.R. § 370.4(d)(2)(vii), and what SoundExchange currently gets from almost all other statutory licensees. 5/10/17 Tr. 3222:5 (Bender).

SEPFF1728. Sirius XM "is well along towards developing . . . '360L.'" Trial Ex. 13 at ¶ 18 (Barry WRT). Several demo cars with 360L radios are currently on the road, and Sirius XM is in the process of planning deployment of 360L with auto manufacturers. Trial Ex. 1 at ¶ 35 (Meyer WDT); 5/15/17 Tr. 3741:5-6 (Meyer). [ ] Trial Ex. 13 at ¶ 18 (Barry WRT).

SEPFF1729. In fact, [ ]. 5/15/17 Tr. 3741:6-8 (Meyer); 5/15/17 Tr. 3783:25-3784:2 (Meyer); 5/15/17 Tr. 3792:2-5 (Meyer); *see also* Trial Ex. 48 at 7 (Bender WRT) ("360L radios will become available early in the coming rate period"). [ ] 5/15/17 Tr. 3792:6-9 (Meyer). [ ] *See* 5/15/17 Tr. 3793:17-19 (Meyer). [ ] 5/15/17 Tr. 3792:10-13 (Meyer). By the end of the rate period, Sirius XM hopes that 360L will

be in "a big portion of the new cars being built." 5/15/17 Tr. 3741:23-3742:4 (Meyer). [

] 5/15/17 Tr. 3792:14-17 (Meyer).

SEPFF1730. [

] 5/15/17 Tr. 3792:18-20 (Meyer). [

] 5/15/17 Tr. 3741:17-23.

SEPFF1731. Any listenership data collected through 360L radios during the coming rate period obviously will not be comprehensive, because it will take years for the entire installed base of SDARS receivers to be replaced by 360L receivers. However, the data does not need to be comprehensive for the limited purposes of calculating overall direct license and pre-'72 exclusions, and of assigning weights to usage in SoundExchange's distribution methodology. Once Sirius XM has achieved sufficient penetration of 360L radios for them to constitute a reasonable sample of its overall subscriber population, that sample should provide a better approximation of actual listenership than the reference channel proxy. As the 360L radios thereafter continue to roll out in new cars, the fit between the available listenership data and true satellite listenership will only improve. Trial Ex. 48 at 8-9 (Bender WRT).

SEPFF1732. Use of sampling methodologies in the music industry is well established. Sampling is used by Nielsen and Arbitron to determine broadcast radio listenership. 5/10/17 Tr. 3186:21-24 (Bender). [

] Trial Ex. 176 at 2. [

] Trial Ex. 659 (Main tab) (native file). Sampling is also used under the Judges' regulations for reporting of usage by certain eligible

minimum fee webcasters. 37 C.F.R. § 370.4(d)(3)(ii). Likewise here, a sample "far, far less than 100 percent," and perhaps in the range of tens of thousands of radios, should provide a representation of audience measurement good enough for calculating the exclusion percentage. 5/10/17 Tr. 3186:14-3187:12 (Bender). [ ]

SEPFF1733. It would be premature to try to specify with mathematical precision what would constitute a good enough sample of listenership data, because [ ]. 5/15/17 Tr. 3785:1-3; 3789:11-14 (Meyer). However, [ ]. 5/15/17 Tr. 3789:15-3790:22 (Meyer). If it starts to do so, the parties certainly could if necessary consult statisticians for opinions about what sample size would be reasonable. *See* 5/10/17 Tr. 3187:6-15 (Bender). However, if Sirius is collecting listenership data and using it to make personalized recommendations to users and to inform its programming decisions, it seems unlikely in practice that anyone would think that data would be insufficient to calculate the exclusion percentage.

SEPFF1734. SoundExchange and Sirius XM agree that it would be desirable to use actual satellite listenership data to collect the exclusion percentage. If Sirius XM decides to start collecting such data, the available data seems likely to be sufficient for that desired purpose before the end of the rate period. Accordingly, the Judges should contemplate that possibility in the regulations.

2. In The Absence Of Actual Satellite Listenership Data, The Direct License And Pre-'72 Exclusions Should Continue To Be Calculated Using Performances On The Reference Channels

SEPFF1735. In the absence of actual satellite listenership data as described above, SoundExchange proposes continuing use of the webcasting proxy to determine the exclusion percentage. SoundExchange Amended Proposed Rates and Terms at App. A § 382.21(d)(1)(iii), (e)(1)(iii) (filed June 14, 2017). Sirius XM proposes basing the exclusion on plays or "spins" on Sirius XM's satellite radio channels, without regard to listenership. Sirius XM First Amended Proposed Rates and Terms at 5-6 (filed February 17, 2017).

SEPFF1736. At the time of *SDARS II*, Sirius XM was using an exclusion methodology based on plays. Underpayment Decision, No. 2006-1 CRB DSTRA, at 14. In *SDARS II*, the Judges ordered use of the webcast proxy instead, because it "is the superior approach." *SDARS II*, 78 FR at 23073. The Judges should not reverse that decision. Trial Ex. 29 at 24 (Bender WDT). While the webcast proxy is not perfect, Trial Ex. 48 at 7 (Bender WRT), it is a good enough proxy for satellite listenership to use in determining the overall amount of the exclusions across Sirius XM's entire service in the absence of better usage data. Trial Ex. 29 at 28 n.15 (Bender WDT). An exclusion methodology based on plays also would be more susceptible to gamesmanship than the current system. Trial Ex. 29 at 24 (Bender WDT).

SEPFF1737. It is important to use a listenership-weighted methodology for determining the exclusion percentage, because there is huge variation in listenership to Sirius XM's various satellite channels. Sirius XM offers narrow genre channels, and some genres of music are simply more popular than others. For example, its "Hits 1" channel plays the latest popular hits; "40s Junction" and "Met Opera Radio" do not. Allocating royalties on the basis of plays would tend to allocate about the same amount of royalties to the most popular and least

popular channels. Trial Ex. 48 at 10-11 (Bender WRT); *see also* Trial Ex. 42 at ¶ 41 (Lys WRT).

SEPFF1738. [ ] Using Sirius XM's play-based methodology to calculate the exclusions would value any play on any channel equally, while these data show that [ ]. It is this significant weighting that the webcasting proxy is intended to approximate.

SEPFF1739. Because Sirius XM's use of pre-'72 and direct license tracks skews toward less popular channels, a change back to a play-based methodology would immediately result in a significant transfer of value from artists and copyright owners whose works are used under the statutory license to Sirius XM and/or direct licensors without any change in listenership. Trial Ex. 48 at 11 (Bender WRT). As Mr. Barry explained, [

[redacted]. Trial Ex. 13 at ¶ 34 (Barry WRT). According to Professor Lys, in August 2016 (the latest period for which data was available for his analysis) directly licensed tracks accounted for [redacted] of total webcast performances but [redacted] of plays on the satellite service. Trial Ex. 42 at ¶ 42 (Lys WRT). In the previous month, level of directly licensed performances was only [redacted]. Over the last 12-month period for which data was available, direct licenses accounted for only [redacted] of performances. Trial Ex. 42 at ¶ 43 (Lys WRT).

SEPFF1740. In their underpayment decision, the Judges were highly critical of a play-based methodology for just these reasons:

> [redacted]—was clearly unreasonable. During this period, Sirius XM [redacted]. See Brooker Decl. ¶ 24. [redacted] Absent additional evidence, neither the Judges nor the District Court is afforded a rational way – let alone a reasonable one – to determine with any reasonable accuracy the volume or value of those performances. Such an approach is imprecise and clearly fails the "reasonableness" test.

Underpayment Decision, No. 2006-1 CRB DSTRA, at 16 (ellipsis in original).

SEPFF1741. The Judges also found that a play-based approach "is inappropriate because it would provide an incentive for Sirius XM to 'game' the percent-of-revenue royalty system." Underpayment Decision, No. 2006-1 CRB DSTRA, at 16. For example, Sirius XM could reduce its overall royalty cost by playing a high density of pre-1972 and directly licensed recordings on less popular channels and in the middle of the night. It could easily do that without affecting the attractiveness of its service to subscribers and potential subscribers,

because even if the excluded recordings were less popular ones, few people would hear those plays. Trial Ex. 48 at 11 (Bender WRT); *see also* Underpayment Decision, No. 2006-1 CRB DSTRA, at 16 ("[a] licensee could increase the number of pre-'72 sound recording performances it played in order to inflate the numerator in the fraction of total performances not subject to the royalties under the statutory license"). Mr. Barry even acknowledged that, if a play-based methodology were used to calculate the exclusions, there is nothing that would prevent Sirius XM from playing a high volume of directly licensed sound recordings early in the morning when no one is listening to drive up the direct license share it can take as an exclusion. 5/17/17 Tr. 4414:10-16 (Barry).

SEPFF1742. Sirius XM should not be able to use the statutory license to acquire rights to the more popular "hit" recordings it needs to draw subscribers to its service at a price that is artificially diminished by an excessive allocation of royalties to less popular recordings played when nobody is listening. Trial Ex. 48 at 12 (Bender WRT).

SEPFF1743. The problems with the webcasting proxy are minor by comparison. Some mismatch between the webcast proxy and actual satellite listenership is to be expected due to differences in listening habits between the car and home, office, or other mobile environments. However, this would affect different channels and genres of music differently, while the exclusions are calculated across Sirius XM's whole service. Possible over-indexing by webcasts of some channels would tend to balance out possible under-indexing by webcasts of other channels. As a result, differences between listening on the Internet and listening on the satellite service are likely to be relatively minor across the whole service as compared to the huge differences in listenership among individual channels on the satellite service. Trial Ex. 48 at 9-11 (Bender WRT).

SEPFF1744. The webcasting proxy is a much better approach than one that does not even attempt to take listenership into account. In the absence of actual satellite usage data, the Judges should reaffirm their decision in *SDARS II* to base the direct license and pre-'72 exclusions on listenership, as represented by performances on the reference channels. Trial Ex. 48 at 12 (Bender WRT).

3. Artists And Copyright Owners Whose Works Are Used Under The Statutory License Should Not Be Penalized When Other Copyright Owners Enter Into Direct Licenses To Exploit Regulatory Differences

SEPFF1745. SoundExchange also proposes that until such time as actual satellite listenership data is used to calculate the direct license exclusion, the direct license share should be capped based on plays on the satellite service. *See* SoundExchange Amended Proposed Rates and Terms at App. A § 382.21(d)(1)(iii) (filed June 14, 2017).

SEPFF1746. There is a structural difference between (1) the way that SoundExchange must allocate royalties in light of the data that Sirius XM reports and (2) the basis upon which the direct license exclusion is calculated and Sirius XM pays [[redacted]] labels under direct licenses. Trial Ex. 25 at ¶ 284 (Lys Corr. WDT); Trial Ex. 42 at ¶ 85 (Lys WRT). Unlike almost all other statutory licensees, Sirius XM does not currently provide to SoundExchange listenership data that could be used for distributing SDARS royalties. 5/10/17 Tr. 3221:10-12 (Bender). Because SoundExchange is required to "distribute royalties on a basis that values all performances by a Licensee equally based upon the information provided under the reports of use requirements," 37 C.F.R. § 382.13(f)(1), it has no choice but to distribute on the basis of plays on Sirius XM's satellite radio service. Trial Ex. 25 at ¶ 285 (Lys Corr. WDT); Trial Ex. 29 at 8 (Bender WDT); Trial Ex. 49 at 9 (Bender WRT). (SoundExchange separately proposes giving it flexibility to use alternative usage data, if suitable data can be identified. *See* Section XVI.E *infra*.)

SEPFF1747. By contrast, the methodology used to calculate the direct license exclusion is based on webcast performances, [ ]. Trial Ex. 25 at ¶ 287 (Lys Corr. WDT). The structure of the royalties payable under its direct licenses is a choice that Sirius XM made. While the Judges determined in *SDARS II* that the total amount Sirius XM deducts from its payment to SoundExchange should be determined based on the webcasting proxy, the Judges did not order Sirius XM to follow suit. [ ] Trial Ex. 48 at 6 n.2 (Bender WRT); 5/17/17 Tr. 4302:22-4303:3 (White) ("we're not required to distribute direct license royalties in any particular way"). In fact, Sirius XM does not seem to have switched from the "play-based" to "performance-based" methodology until [ ]. Trial Ex. 42 at ¶ 87 (Lys WRT) (citing Trial Ex. 175 at SXM DIR 00092228); *see* Trial Ex. 198 (native file) ([ ]).

SEPFF1748. As discussed in detail in Section VII.I.3, the difference between Sirius XM's payment methodology and SoundExchange's distribution methodology has created an incentive for labels to sign direct licenses with Sirius XM if they "over-index" – *i.e.*, their share of performances on Sirius XM's webcasting service is greater than their share of plays on Sirius XM's SDARS. Trial Ex. 4 at ¶¶ 26-27 (White WDT); Trial Ex. 25 at ¶¶ 286, 289 (Lys Corr. WDT); Trial Ex. 42 at ¶ 85 (Lys WRT); Trial Ex. 48 at 6-7 (Bender WRT). [ ]

Trial Ex. 42 at ¶ 89 (Lys WRT); 5/17/17 Tr. 4290:21-4291:3 (White) [

]

SEPFF1749. [

] Trial Ex. 25 at ¶ 300 (Lys Corr. WDT); 4/27/17 Tr. 1553:15-23 (Lys). This is because Sirius XM gets a more-than-offsetting increase in the size of the direct license exclusion from its statutory royalty obligation. Trial Ex. 25 at ¶ 300 (Lys Corr. WDT); Trial Ex. 42 at ¶ 96 (Lys WRT). That exclusion is calculated based on performances using the webcasting proxy, not plays on the SDARS. 37 C.F.R. § 382.12(d); Trial Ex. 25 at ¶ 300 (Lys Corr. WDT); Trial Ex. 42 at ¶ 96 (Lys WRT). The increased exclusion decreases the pool of royalties available to artists and copyright owners whose works are used under the statutory licenses. Trial Ex. 25 at ¶ 301 (Lys Corr. WDT). The extra payment to the direct licensor is [

] 4/27/17 Tr. 1557:24-1558:3 (Lys).

SEPFF1750. Sirius XM clearly understands that it can save money by signing direct licenses even with labels that over-index. Trial Ex. 42 at ¶ 96 (Lys WRT) (citing Trial Ex. 157 at 136:20-138:2); 5/17/17 Tr. 4301:4-9 (White) (acknowledging that, even when over-indexing labels get paid more royalties, Sirius XM still saves money). [

] Trial Ex. 29 at 25 (Bender WDT) ("[w]e have heard from some independent record companies that Sirius XM is using the mismatch between the exclusion and distribution methodologies as part of its sales pitch to entice indies with popular repertoire that does well on webcasting to enter into direct

licenses"); Trial Ex. 42 at ¶ 90 (Lys WRT); 4/27/17 Tr. 1533:8-1534:18 (Lys); 5/17/17 Tr. 4295:23-4296:2 (White).

SEPFF1751. This has not been an issue to date, because [ ]. Trial Ex. 13 at ¶ 34 (Barry WRT). For example, in August 2016 (the last period for which data was available at the time of Professor Lys' analysis) directly licensed tracks accounted for [ ] of SDARS plays and [ ] of webcast performances. Trial Ex. 42 at ¶ 42 (Lys WRT).

SEPFF1752. However, given Sirius XM's aggressive efforts to exploit the mismatch between the direct license exclusion methodology and the distribution methodology SoundExchange is required to use, the principle that copyright owners should receive a "fair return" under the statutory license, 17 U.S.C. § 801(b)(1)(B), compels some mechanism to mitigate Sirius XM's incentives to engage in such regulatory arbitrage to the detriment of artists and copyright owners whose works are used under the statutory license. As a simple way of addressing the issue, SoundExchange has proposed capping the direct license share based on plays on the SDARS until Sirius XM provides actual satellite usage data as described in Section XII.C.1 above. Trial Ex. 29 at 25-26 (Bender WDT).

SEPFF1753. This proposal would not prevent any direct licensing that Sirius XM might wish to enter into. 5/10/17 Tr. 3279:25-3280:7 (Bender). [ ] But if artists and record companies are going to be compelled to have their works available under a statutory license, the statutory license rates should not be structured in a way that *encourages* Sirius SX to

bypass the statutory license and in the process take money out of the pockets of artists and record companies who remain in the statutory license system. Trial Ex. 29 at 25-26 (Bender WDT); 5/10/17 Tr. 3279:7-17 (Bender).

SEPFF1754. In time, the right way to avoid this issue is to migrate calculation of the direct license exclusion to actual satellite listenership data, as discussed in Section XII.C.1 above. Because that would eliminate the opportunity for arbitrage between the statutory license exclusion and distribution methodologies, SoundExchange's proposed cap on the direct license share would only apply until such time as actual satellite listenership data is used to calculate the direct license exclusion. *See* SoundExchange Amended Proposed Rates and Terms at App. A § 382.21(d)(1)(iii) (filed June 14, 2017). The end of the cap when that migration occurs may also serve the salutary purpose of providing an incentive for Sirius XM not to delay the transition to use of actual satellite listenership data in the calculation of the direct license exclusion.

4. The Judges Should Clarify That The Pre-'72 Exclusion Applies Only To Use Of Works Not Protected By Federal Copyright

SEPFF1755. SoundExchange proposes modifying the definition of "Pre-1972 Recording" currently in 37 C.F.R. § 382.11 to clarify that the pre-'72 exclusion applies only to use of recordings not protected by federal copyright. SoundExchange Amended Proposed Rates and Terms at App. A § 382.20 (filed June 14, 2017). Specifically, SoundExchange's proposal would exclude from that definition "restored works" as defined in 17 U.S.C. § 104A(h)(6) and any other recordings subject to protection under the federal Copyright Act.

SEPFF1756. The rationale for the pre-'72 exclusion is that "[t]he performance right granted by the copyright laws for sound recordings applies only to those recordings created on or after February 15, 1972," and relatedly that "pre-1972 recordings are not licensed under the statutory royalty regime." *SDARS II*, 78 FR at 23073.

SEPFF1757. However, the law is not quite as straightforward as a literal reading of the *SDARS II* determination would suggest. Most directly, certain recordings of foreign origin that were created before February 15, 1972 were "restored" to federal copyright protection to satisfy the United States' international treaty obligations. 17 U.S.C. § 104A(a)(1)(A) (providing federal copyright protection for restored works), (h)(6)(C)(ii) (defining "restored work" to include certain pre-'72 recordings); U.S. Copyright Office, *Federal Copyright Protection for Pre-1972 Sound Recordings* 17 (2011) ("there are now some pre-1972 sound recordings that do enjoy federal copyright protection"); Trial Ex. 29 at 26 (Bender WDT). The statutory license applies to such recordings, 17 U.S.C. § 114(f)(1)(B) (rates binding on all copyright owners), and the Judges must "determine reasonable rates and terms of royalty payments" for their use. § 114(f)(1)(A). SoundExchange assumes that the Judges did not intend the current exclusion to apply to such recordings, as it would violate Section 114, and probably the United States' treaty obligations, to make use of such recordings non-compensable under the statutory license.

SEPFF1758. This was identified as an issue in SoundExchange's last audit of Sirius XM. Trial Ex. 29 at 26 (Bender WDT). The auditor framed the issue as follows:

[redacted]

SEPFF1759. Trial Ex. 101 at 10.To avoid any potential doubt as to whether restored works are eligible for the pre-'72 exclusion, the Judges should clarify that they are not.

SEPFF1760. SoundExchange's proposal also refers to "other recordings subject to protection under the federal Copyright Act." This language would confirm that if a pre-'72 recording was remixed or remastered on or after February 15, 1972 (*e.g.*, in digital form) such that the remixed or remastered version qualifies as a federally-protected derivative work, use of the remixed or remastered version is not excludable from Sirius XM's royalty payment. *See ABS Entm't, Inc. v. CBS Corp.*, No. CV 15-6257, 2016 WL 4259846, at *4-8 (C.D. Cal. May 30, 2016) (finding various remastered versions of pre-1972 recordings to be federally-protected derivative works), *appeal docketed*, No. 16-55917 (9th Cir. June 29, 2016); U.S. Copyright Office, *Compendium of U.S. Copyright Office Practices* § 803.6(B)(2) (3d ed. 2014) (describing remix authorship); Trial Ex. 29 at 26 (Bender WDT). Of course, any such federally-protected derivative works created on or after February 15, 1972 are not themselves pre-'72 recordings, so they do not qualify as "Pre-1972 Recordings" under the current definition in 37 C.F.R. § 382.11. However, the additional language may be helpful to avoid any confusion in that regard.

5. The Direct License And Pre-'72 Exclusions Should Apply Only When Track-Level Usage Data Is Reported To SoundExchange

SEPFF1761. SoundExchange proposes that it receive track-level usage information for recordings that are excluded based on a claim that they are directly licensed or pre-'72 recordings. SoundExchange Amended Proposed Rates and Terms at App. A § 382.21(d)(2)(ii), (e)(2)(ii) (filed June 14, 2017).

SEPFF1762. Currently, Sirius XM is required to provide listings of the excluded tracks (37 C.F.R. § 382.13(h)), but it provides only aggregate data concerning the number of performances used in calculating the exclusions. Thus, when SoundExchange finds errors in the exclusions, it has no information about usage of the excluded tracks to assess the significance of those errors. Trial Ex. 29 at 26-27 (Bender WDT). In *SDARS II*, the Judges found that there

should be "transparency" in the calculation of the exclusions. 78 FR at 23073. Because millions of dollars of royalties are at stake, SoundExchange should have visibility into calculation of the exclusions at the track level.

D. The Minimum Fee For SDARS

SEPFF1763. SoundExchange and Sirius XM agree in substance concerning the minimum fees for SDARS. Trial Ex. 48 at 2 n.1 (Bender WRT).

SEPFF1764. Sirius XM proposes no change to the minimum fee provision currently in 37 C.F.R. § 382.12(c). Sirius XM First Amended Proposed Rates and Terms at 4 (filed February 17, 2017). SoundExchange proposes no material change in the minimum fee provisions for SDARS. However, as discussed in Section XIV, below, the specific regulatory language in its proposed Sections 382.2(c) and 382.21(b) is patterned on that adopted by the Judges in *Web IV*. In each case, the proposed minimum fee is $100,000 per year, which would be creditable toward ephemeral royalties under Section 112(e). Trial Ex. 29 at 31 (Bender WDT). Consistent with a change made by the Judges in *Web IV*, the date for payment of the minimum fee would slip from January 20 to January 31. 37 C.F.R. §§ 380.2(c), 382.12(c); SoundExchange Amended Proposed Rates and Terms at App. A § 382.2(c) (filed June 14, 2017).

XIII. Rate Proposal For The PSS

SEPFF1765. For 20 years, the PSS have enjoyed below-market royalty rates anchored in royalty rates for musical works and a policy decision by the *PSS I* CARP "to set a low rate favoring the Services." *PSS I*, 63 FR at 25406. [

SEPFF1766. However, in the 20 years since *PSS I*, the music marketplace has changed. Unlike in 1998, the PSS no longer play a unique role in making recordings available by means of digital audio transmissions. Trial Ex. 501 at ¶ 77 (Wazzan Corr. WDT). Under "existing economic conditions," 17 U.S.C. § 801(b)(1)(B), Section 801(b)(1) demands a substantial increase in PSS rates.

A. The SoundExchange And Music Choice Rate Proposals

SEPFF1767. SoundExchange proposes that PSS rates increase to a level commensurate with the statutory royalty rates paid by their functionally-equivalent but later-established competitors. Specifically, SoundExchange proposes that PSS pay royalties for their core television-based services at a level commensurate with the new subscription services paying statutory royalties at the rates in 37 C.F.R. Part 383 ("CABSAT services"). SoundExchange Amended Proposed Rates and Terms at App. A § 382.11(a)(1) (filed June 14, 2017); *see also* Trial Ex. 501 at ¶ 53 (Wazzan Corr. WDT). SoundExchange further proposes that the PSS pay royalties for their ancillary webcasting services at a level commensurate with their webcasting competitors (also new subscription services, but paying statutory royalties at the rates in 37

C.F.R. Part 380). SoundExchange Amended Proposed Rates and Terms at App. A § 382.11(a)(2) (filed June 14, 2017).

SEPCL33. A PSS is defined in relevant part as "a service that performs sound recordings by means of noninteractive audio-only subscription digital audio transmissions, which was in existence and was making such transmissions to the public for a fee on or before July 31, 1998 . . . ." 17 U.S.C. § 114(j)(11). Under this definition, all that distinguishes a PSS from a "new subscription service" is that a PSS must have been in operation by July 31, 1998. *See* 17 U.S.C. § 114(j)(8).

SEPFF1768. There are two distinct types of new subscription services that are functionally equivalent to offerings by PSS providers. First, CABSAT services are television-based services distributed through cable and satellite television providers (called multichannel video programming distributors or "MVPDs" in FCC parlance) just like the core offerings from the PSS providers. *See* 37 C.F.R. § 383.2(f). The term CABSAT is a portmanteau blending the words cable and satellite. SoundExchange uses the term to distinguish these television-based services from other new subscription services. Trial Ex. 29 at 13 n.8 (Bender WDT).

SEPFF1769. CABSAT providers pay statutory royalties at the rates set forth in 37 C.F.R. Part 383. For 2018-2020, those are per-subscriber rates at the following levels:

2018: $0.0190

2019: $0.0196

2020: $0.0202

37 C.F.R. § 383.3(a)(1).

SEPFF1770. For television-based offerings as part of a PSS, SoundExchange proposes these same rates and rate structure. Trial Ex. 29 at 29 (Bender WDT). For 2021 and 2022, years for which statutory CABSAT rates have not yet been established, SoundExchange

proposes continuing to step up the rates at the same increment of approximately 3% that applies throughout the current CABSAT rate period. Trial Ex. 29 at 31 (Bender WDT); Trial Ex. 501 at ¶ 87 (Wazzan Corr. WDT).

SEPFF1771. For purposes of applying this per-subscriber rate, SoundExchange proposes defining the term "Subscriber" in the same manner as in 37 C.F.R. § 383.2(g). SoundExchange previously omitted part of that definition because it was not apparent to SoundExchange that the omitted part was relevant in a PSS context. However, based on the testimony of Mr. Del Beccaro, Trial Ex. 57 at 22-23 n.4, 60-61 (Del Beccaro WRT), SoundExchange is now proposing to use the whole definition from 37 C.F.R. § 383.2(g). SoundExchange Amended Proposed Rates and Terms at App. A § 382.10 (filed June 14, 2017).

SEPFF1772. There is also a second group of new subscription services: subscription webcasters, whose transmissions through websites or apps are functionally equivalent to the webcasting offered by Music Choice. Providers of these new subscription services pay statutory royalties at the rates set forth in 37 C.F.R. Part 380. Trial Ex. 29 at 13 n.8 (Bender WDT). Those rates are calculated on a per-performance basis. Through 2020, the rate for commercial subscription webcasting is $0.0022 (subject to adjustment based on inflation). 37 C.F.R. § 380.10(a)(1), (c). To the extent that webcasting is provided as part of a PSS, SoundExchange proposes that the same rates apply. Trial Ex. 29 at 29 (Bender WDT).

SEPFF1773. Mr. Del Beccaro testified that Music Choice, alone among webcasters, does not have the reporting tools to track individual performances. Trial Ex. 57 at 22-23 n.4, 31 (Del Beccaro WRT); 5/18/17 Tr. 4605:23-4606:14 (Del Beccaro). This is assertedly because for Music Choice, in contrast to Pandora, "each song is not an individual asset." 5/18/17 Tr. 4651:4-5 (Del Beccaro). Instead, Music Choice "take[s] our broadcast and put[s] it on the Internet."

5/18/17 Tr. 4651:2-3 (Del Beccaro). Of course, that does not distinguish Music Choice from radio broadcasters that simulcast their programming. It would be entirely reasonable to require Music Choice to calculate individual performances when it webcasts its channels, just as the Judges require of radio stations that put their broadcasts on the Internet. *See Web IV*, 81 FR at 26320 (determining to treat simulcasters the same as other commercial webcasters).

SEPFF1774. However, as an accommodation to Music Choice, SoundExchange is now proposing an optional method for a PSS to estimate performances based on the aggregate listening statistics by channel that Music Choice does collect. SoundExchange Amended Proposed Rates and Terms at App. A § 382.11(a)(2)(ii) (filed June 14, 2017). This approach is similar to an option that was available to broadcasters for parts of their programming during the *Web III Remand* rate period. *In re Determination of Royalty Rates for Digital Performance Right in Sound Recordings and Ephemeral Recordings*, 79 FR 23102, 23133 (2014) (former 37 C.F.R. § 380.13(g)(3)).

SEPFF1775. SoundExchange proposes continuing the substance of the minimum fee and ephemeral royalty provisions currently in effect, although its regulatory language addressing these matters incorporates editorial changes made by the Judges in *Web IV*. SoundExchange Amended Proposed Rates and Terms at App. A § 382.11(b), (c) (filed June 14, 2017).

SEPFF1776. For its part, Music Choice pleads poverty as it has in all past PSS rate proceedings for 20 years. *E.g.*, Trial Ex. 55 at 19 (Del Beccaro WDT). Despite a recent internal assessment that [Trial Ex. 408 at MC0016485, it proposes cutting the current 8.5% PSS rate by at least a third, to a rate no higher than 5.6% of gross revenues. Music

Choice Amended Rates and Terms at 1 (filed February 17, 2017); 5/18/17 Tr. 4522:8 (Del Beccaro) ("I feel like our proposal is 5.6 percent").

SEPFF1777. Music Choice's case is permeated by a patronizing view that artists and record companies don't understand their own interests as well as Music Choice does. Trial Ex. 55 at 35 (Del Beccaro WDT) ("the lawyers on the digital rights side of the companies do not understand that by driving our rights costs up they are cutting off their noses to spite their faces"); Trial Ex. 55 at 37 (Del Beccaro WDT) ("[i]t is in everyone's interest to provide the requested rate relief to Music Choice").

SEPFF1778. With all due respect to Mr. Del Beccaro, SoundExchange, the Recording Industry Association of America, Sony Music Entertainment, Universal Music Group, Warner Music Group, the American Association of Independent Music, the American Federation of Musicians of the United States and Canada, and the Screen Actors Guild and American Federation of Television and Radio Artists are broadly representative of all the artists and copyright owners with a stake in this proceeding. *E.g.*, Trial Ex. 29 at 2-3 (Bender WDT). They have thoroughly considered their mutual rate request and its effects on their constituents and firmly believe that under current economic conditions, the PSS must pay a significantly higher royalty rate.

B. SoundExchange's PSS Rate Proposal Is Reasonable In Light Of The Economic Evidence

1. The Standards And Methodology To Be Applied In Setting PSS Rates

SEPCL34. In setting a statutory royalty rate for the PSS under Section 114, the Judges are to apply the objectives set forth in Section 801(b)(1) of the Copyright Act, and they also may consider the rates and terms for comparable types of subscription digital audio transmission services and comparable circumstances under voluntary license agreements. 17

U.S.C. § 114(f)(1)(B). The rates and terms determined by the Judges are to "distinguish among the different types of digital audio transmission services then in operation." 17 U.S.C. § 114(f)(1)(A).

SEPCL35. Under Section 112(e), the Judges are to apply the willing buyer/willing seller standard to all services, including the PSS. 17 U.S.C. § 112(e)(4). They are also to set a minimum fee. 17 U.S.C. § 112(e)(3).

SEPCL36. The Copyright Act does not provide a specific formula for how to translate the Section 801(b)(1) policy goals into an actual dollar rate. Trial Ex. 501 at ¶ 17 (Wazzan Corr. WDT). Accordingly, the Judges and their predecessors have looked to benchmarks to inform their Section 801(b)(1) analysis whenever possible.

SEPFF1779. This is a standard way in which economists estimate a reasonable royalty rate. Trial Ex. 26, at ¶ 12 (Orszag WDT).

SEPCL37. For example, in *PSS I*, the Copyright Arbitration Royalty Panel ("CARP") explained:

> In prior royalty adjustment proceedings, the CRT and CARPs have utilized a consistent approach to rate-setting. They looked initially at specific "benchmarks" – rates negotiated in analogous market transactions. They then analyzed those benchmarks in light of the applicable statutory criteria and record evidence to determine a reasonable royalty rate.

PSS I CARP Report, Trial Ex. 979 at ¶ 123. The Register of Copyrights endorsed this approach. *PSS I*, 63 FR at 25400.

SEPCL38. In their *SDARS I* and *SDARS II* decisions, the Judges outlined a similar two-step procedure for setting rates. According to the *SDARS I* decision, the focus of the first step is identifying "comparable marketplace royalty rates" or "benchmarks" that are "indicative of the prices that prevail for services purchasing similar music inputs for use in digital programming ultimately made available to consumers." *SDARS I*, 73 FR at 4088. The second

step is determining whether the "[801(b)(1)] policy objectives weigh in favor of divergence from the results indicated by the benchmark marketplace evidence." *SDARS I*, 73 FR at 4094. The *SDARS II* decision is to a similar effect. *SDARS II*, 78 FR at 23056, 23066.

SEPFF1780. With this guidance from the Judges and their predecessors, SoundExchange and Music Choice agree concerning the basic methodology that should be applied in setting a PSS rate. Trial Ex. 502 at ¶ 5 (Wazzan Corr. WRT). In the words of Dr. Crawford:

> [T]here are two steps to this process. The first step is to determine what royalties would arise in the absence of regulatory intervention, i.e. what royalties would arise in a "hypothetical market" for PSS sound recording performance rights. The second step is to consider how the royalties that arose in such a hypothetical market should be adjusted, if at all, to account for the four statutory objectives outlined in Section 801(b) of the Act.

Trial Ex. 54 at ¶ 39 (Crawford WDT); *see also* Trial Ex. 26 at ¶ 13 (Orszag WDT); Trial Ex. 501 at ¶¶ 17-18 (Wazzan Corr. WDT) ("[o]ne can summarize these objectives as the desire to derive (or approach) a free market rate (albeit within a regulated structure) and to then consider whether certain policy objectives might warrant a deviation from that rate"); Trial Ex. 502 at ¶ 7 (Wazzan Corr. WRT).

SEPFF1781. Mr. Del Beccaro's suggestion that the PSS rate should be "set without reference to a market rate," Trial Ex. 55, at 7 (Del Beccaro WDT), is inconsistent with Music Choice's own expert's testimony, as well as prior decisions by the Judges, and must be rejected. Trial Ex. 502 at ¶ 7 n.5 (Wazzan Corr. WRT).

2. The Statutory CABSAT Rates In Part 383 Provide The Best Available Basis For Estimating The Fair Market Value Of The Use Of Sound Recordings In A Television-Based PSS

i. Selection Of A Benchmark

SEPFF1782. In selecting a benchmark as part of the first step of the 801(b)(1) analysis, a "key characteristic" is comparability. *SDARS II*, 78 FR at 23058.

SEPFF1783. SoundExchange and Music Choice broadly agree on considerations relevant to the selection of a comparable benchmark, although they disagree on their application. Trial Ex. 502 at ¶¶ 8-9 (Wazzan Corr. WRT). A comparable benchmark should involve the same buyers and sellers and the same rights. Trial Ex. 501 at ¶ 37(c) (Wazzan Corr. WDT). As Mr. Orszag put it, "[b]y 'comparable,' I mean the rates negotiated for rights that are roughly similar to the rights granted by the blanket license at issue in this proceeding." Trial Ex. 26, at n.3 (Orszag WDT). If possible, a benchmark should not be affected by regulated rates, because such rates may not reflect a marketplace outcome. Trial Ex. 43 at ¶¶ 6-7 (Orszag WRT); Trial Ex. 501 at ¶¶ 11, 20-21 (Wazzan Corr. WDT).

SEPFF1784. In his direct testimony, Dr. Crawford similarly listed five characteristics for an "ideal" benchmark: (a) marketplace outcomes with similar stakes; (b) same sellers; (c) same buyers; (d) same rights sold to the same downstream buyers; and (e) same method of end-user purchase and consumption. Trial Ex. 54 at ¶ 50 (Crawford WDT).

SEPFF1785. Finding a sufficiently comparable benchmark has historically been challenging when setting rates for the PSS. Trial Ex. 501 at ¶ 12 (Wazzan Corr. WDT).

SEPFF1786. The *PSS I* proceeding began very shortly after enactment of the statute creating the digital performance right, so no market for licensing sound recording performance rights existed. Trial Ex. 501 at ¶ 28 (Wazzan Corr. WDT). That left the CARP with a poor selection of proposed benchmarks: the purchase price of video programming by cable television

networks, musical works rates, and fees payable in connection with the Music Choice partnership agreement before there was any statutory obligation to pay for the use of sound recordings. Trial Ex. 501 at ¶¶ 29-30 (Wazzan Corr. WDT). Faced with no better options, the Register relied on musical works rates, "because these rates represent an actual marketplace value for a public performance right in the digital arena, albeit not the digital performance right in sound recordings." *PSS I*, 63 FR at 25409.

SEPFF1787. In *SDARS II*, Music Choice again proposed the musical works rate as a benchmark. Trial Ex. 501 at ¶ 37 (Wazzan Corr. WDT). With a more complete record and a more sophisticated understanding of comparability, the Judges thoroughly rejected use of the musical works benchmark. *SDARS II*, 78 FR at 23055, 23058. The Judges explained:

> [A] benchmark market should involve the same buyers and sellers for the same rights. However, the musical works market involves different sellers (performing rights societies versus record companies) selling different rights. The fact that a [PSS] needs performing rights to musical works and sound recordings to operate its service does not make the rights equivalent, nor does it say anything about the relative values of those rights.

SDARS II, 78 FR at 23058 (citations omitted). That conclusion was consistent with prior decisions in webcasting rate proceedings that also rejected the use of musical works rates as a benchmark for sound recording royalties. *Web III*, 76 FR at 13038; *Web II*, 72 FR at 24094-95; *Web I*, 67 FR at 45246-47, 45258-59.

SEPFF1788. For its part, SoundExchange presented an analysis of over 2,000 marketplace agreements covering a variety of licensed rights, including subscription interactive services. Trial Ex. 501 at ¶¶ 37(d), 48 (Wazzan Corr. WDT). That analysis was not wrong to note that the PSS pay royalties at a rate that is conspicuously lower than the rate applicable to any other type of service. Trial Ex. 501 at ¶ 50 (Wazzan Corr. WDT). However, the Judges also rejected this benchmark, in the process explaining the difficulty in identifying a suitable

benchmark for PSS: "Music Choice has several distinct features, such as its intermediary role between cable systems and subscribers and the bundling of Music Choice's services with multiple channels of video and other non-music programming, which significantly dim the possibility of market comparators." *SDARS II*, 78 FR at 23058.

SEPFF1789. On behalf of SoundExchange, Dr Wazzan searched for suitable benchmarks to use in setting PSS rates. He found that identifying a suitable benchmark for PSS rate-setting remains an issue today, and identified no *marketplace* benchmark that is sufficiently comparable to the PSS to be used for this purpose, even with adjustment. Trial Ex. 501 at ¶ 12 (Wazzan Corr. WDT). With the notable exception of the subscription interactive services, sound recording performance licensing is heavily regulated by the statutory license. Trial Ex. 501 at ¶ 44 (Wazzan Corr. WDT); 5/3/17 Tr. 2299:16-19 (Wazzan) ("there's a lot of regulation in this industry"). Probably because the PSS are satisfied with their below-market statutory rate when they are not participating in a proceeding like this one, nobody has identified any agreements relating exclusively to a PSS, or even relating in material part to a PSS. Trial Ex. 501 at ¶¶ 45, 47 (Wazzan Corr. WDT). Even if such agreements existed, one would expect the rates under those agreements to be influenced by the statutory license. Trial Ex. 501 at ¶ 44 (Wazzan Corr. WDT).

SEPFF1790. The record reflects two Muzak agreements that include rights for its PSS, but that primarily relate to Muzak's business establishment service. Trial Ex. 401, 402. There are many reasons these two agreements are not satisfactory benchmarks. Trial Ex. 501 at ¶ 45 (Wazzan Corr. WDT).

SEPFF1791. Most of Sirius XM's direct licenses discussed in Section VII include rights for its CABSAT service along with its SDARS. Trial Ex. 501 at ¶ 54 (Wazzan Corr.

WDT). However, in addition to the many problems discussed in Section VII that make those agreements unreliable as a benchmark for SDARS, they are an even more unreliable benchmark for PSS because they cannot be understood as specifically reflecting the economics of its CABSAT service. Trial Ex. 501 at ¶ 56 (Wazzan Corr. WDT).

SEPFF1792. In the end, Dr. Wazzan concluded that the CABSAT services and PSS "are extremely comparable." 5/3/17 Tr. 2305:20-22 (Wazzan). As a result, the statutory royalty rates for CABSAT services in 37 C.F.R. Part 383 are the closest thing available to an observable market rate for PSS. Trial Ex. 501 at ¶¶ 12, 65, 94 (Wazzan Corr. WDT).

SEPFF1793. Of course, the sellers under the CABSAT statutory license are the same record companies as in the hypothetical PSS marketplace. Trial Ex. 502 at ¶ 17 (Wazzan Corr. WRT); 5/3/17 Tr. 2306:3-4 (Wazzan); *see also* Trial Ex. 26 at ¶ 30 (Orszag WDT) (interactive streaming services and satellite radio services both "depend on access to the same sound recording rights controlled by the same copyright owners").

SEPFF1794. As described further below, the CABSAT buyers and the PSS buyers are similarly situated, and the same rights are conveyed, because both create audio music channels incorporating the licensed sound recordings and sell them to MVPDs, who in turn resell those channels to consumers as part of subscription bundles. 5/3/17 Tr. 2305:24-2306:8 (Wazzan). And there are the same methods of end-user purchase and consumption for both CABSAT and PSS services, because both are delivered to the television sets of consumers through their cable or satellite provider as part of a subscription bundle consisting overwhelmingly of television programming. Trial Ex. 501 at ¶¶ 59, 60 (Wazzan Corr. WDT).

SEPFF1795. Thus, the CABSAT benchmark is consistent with four of Dr. Crawford's five characteristics for an "ideal" benchmark. Trial Ex. 54 at ¶ 50 (Crawford WDT);

Trial Ex. 502 at ¶ 21 (Wazzan Corr. WRT). As such, the CABSAT benchmark certainly is a better benchmark than the musical works benchmark, which Dr. Crawford calls "the best possible benchmark," Trial Ex. 54 at ¶ 61 (Crawford WDT), even though it does not "involve the same buyers and sellers for the same rights" as the PSS market. *SDARS II*, 78 FR at 23058. The CABSAT benchmark also responds directly to the issues identified by the Judges in rejecting SoundExchange's *SDARS II* benchmark. *See SDARS II*, 78 FR at 23058. "It would be very difficult to find a better benchmark." 5/3/17 Tr. 2306:9-10 (Wazzan).

SEPFF1796. For the reasons explored further below, the CABSAT benchmark is the best available benchmark.

ii. CABSAT Services And PSS Are Functionally Equivalent Cable Radio Services And So Implicate the Same Rights

SEPFF1797. The CABSAT benchmark is a satisfactory benchmark because a CABSAT service implicates the same rights as a television-based PSS service. That is, in the hypothetical market for acquiring sound recording rights for the core television-based PSS service, the PSS providers would need to obtain the same rights as conferred by the CABSAT statutory license. The PSS and CABSAT services are both the same kind of service – a cable radio service. The only material respect in which they are differentiated is by the date they commenced operation. 17 U.S.C. §114(j)(11); Trial Ex. 29 at 29 (Bender WDT).

SEPFF1798. Music Choice refers to a music service delivered through an MVPD as a cable radio service. *E.g.*, Trial Ex. 54 at ¶ 24 (Crawford WDT) ("cable radio services like Music Choice"); Trial Ex. 54 at ¶ 35 (Crawford WDT) ("Music Choice sought to differentiate itself from other cable radio operators"); Trial Ex. 55 at 7 (Del Beccaro WDT) ("residential cable radio market"); Trial Ex. 55 at 47 (Del Beccaro WDT) (referring to "any PSS, and any other participant in the cable radio market").

SEPFF1799. Music Choice further acknowledges that CABSAT services are also "in the cable radio space." 4/24/17 Tr. 714:13-16 (Crawford) ("there are other firms . . . that don't pay PSS rates"); *see also* Trial Ex. 54 at ¶ 147 (Crawford WDT) (Stingray, its principal competitor, is [[redacted]]). Providers of PSS and CABSAT services are selling MVPDs the same thing – cable radio service.

SEPCL39. The statutory license shapes many characteristics of cable radio services. If they wish to rely on the statutory license, all cable radio services must adhere to certain basic requirements. Among others, they cannot be interactive. 17 U.S.C. § 114(d)(2)(A)(i). They also must adhere to a limitation on the density of certain programming, which is referred to as the sound recording performance complement. 17 U.S.C. § 114(d)(2)(B)(i) (PSS), (d)(2)(C)(i) (CABSAT). They cannot pre-announce their playlists. 17 U.S.C. § 114(d)(2)(B)(ii) (PSS), (d)(2)(C)(ii) (CABSAT). They must provide reports of their programming to SoundExchange. 37 C.F.R. §§ 370.3 (PSS), 370.4 (CABSAT). *See* Trial Ex. 55 at 5 (Del Beccaro WDT).

SEPFF1800. CABSAT services are also subject to additional statutory requirements. 17 U.S.C. § 114(d)(2)(C)(iii)-(ix). The last of these requires a CABSAT to display text data identifying the title of each sound recording it plays, along with the album title and the featured recording artist's name, as each recording is being played. 17 U.S.C. § 114(d)(2)(C)(ix). Music Choice makes emphasizes its screen displays that include information such as the artist's name and album title. Trial Ex. 54 at ¶ 30 (Crawford WDT); Trial Ex. 55 at 38 (Del Beccaro WDT); Trial Ex. 56 at 11 (Williams WDT). Music Choice displays such information to have displays that are "engaging," Trial Ex. 57 at 4 (Del Beccaro WRT); *see also* Trial Ex. 56 at 6 (Williams WDT), and presumably because every other statutory service has

such displays. *See* 17 U.S.C. § 114(d)(2)(C). However, the core information on the screen displays of all PSS and CABSAT services is simply information that the CABSAT services (like all webcasters) are required to provide.

SEPFF1801. Beyond these basic requirements, the characteristics that distinguish cable radio services from other kinds of statutory licensees are well described in the definition of "Service" in the CABSAT rate regulations at 37 C.F.R. § 383.2(f). SoundExchange has proposed including substantially the same definition in the PSS rate regulations. SoundExchange Amended Proposed Rates and Terms at App. A § 382.10 (filed June 14, 2017) (definition of Television Service). That definition provides in relevant part as follows:

> A *Service* is a non-interactive (consistent with the definition of "interactive service" in 17 U.S.C. 114(j)(7)) audio-only subscription service (including accompanying information and graphics related to the audio) that is transmitted to residential subscribers of a television service through a Provider which is marketed as and is in fact primarily a video service where
> (1) Subscribers do not pay a separate fee for audio channels.
> (2) The audio channels are delivered by digital audio transmissions through a technology that is incapable of tracking the individual sound recordings received by any particular consumer.

37 C.F.R. § 383.2(f).

SEPFF1802. The term Provider is defined in Section 383.2(e), as "a 'multichannel video programming distributor' as that term is defined in 47 CFR 76.1000(e); notwithstanding such definition, for purposes of this part, a Provider shall include only a distributor of programming to televisions, such as a cable or satellite television provider." 37 C.F.R. § 383.2(e).

SEPFF1803. A PSS service meets every element of the definition of a CABSAT service:

a. A PSS is required to be a noninteractive, audio-only subscription service. 17 U.S.C. § 114(j)(11); *see also* Trial Ex. 55 at 5 (Del Beccaro WDT).

b. A PSS is transmitted to residential subscribers of a television service through an MVPD. Trial Ex. 55 at 4 (Del Beccaro WDT) (describing Music Choice's "residential audio service" and explaining that it "is delivered to customers by cable operators and other multi-channel video programming distributors").

c. Music Choice's MVPD customers primarily provide video service. Trial Ex. 55 at 4 (Del Beccaro WDT) (explaining that the Music Choice service is distributed as part of a package of television offerings); Trial Ex. 55 at 24 (Del Beccaro WDT) (describing competition between Music Choice and other television content providers).

d. MVPD subscribers do not pay a separate fee for the PSS service. Trial Ex. 55 at 4 (Del Beccaro WDT) (Music Choice provided "as part of a package of television offerings"); Trial Ex. 55 at 22 (Del Beccaro WDT) (describing migration of Music Choice from being an a la carte premium offering to being a basic offering).

e. It is not possible to track which recordings are being listened to by any particular MVPD subscriber (or whether subscribers are tuned in at all). Trial Ex. 41 at 8 (Ford WRT) ("when a . . . Music Choice channel adds a recording to its rotation, there is not currently any way to know how many people have actually heard it"); *see also* Trial Ex. 29 at 29 (Bender WDT).

SEPFF1804. Because all cable radio services are distributed through MVPDs, both CABSAT services and PSS require rights to engage in such multi-level distribution. Voluntary agreements do not necessarily convey rights for multi-level distribution. *E.g.*, Trial Ex. 125A, § 3(g) (SoundX_000035989) (native file) ([redacted]) (prohibiting sublicensing and syndication); Trial Ex. 125C at SoundX_000004250 (native file) ([redacted]) (limiting syndication); Trial Ex. 126A, § 3(g) (SoundX_000012206) (native file) ([redacted]) (prohibiting sublicensing and syndication); Trial Ex. 126C, Ex. A § 7(d) (SoundX_000013890) (native file) ([redacted]) (prohibiting bundling); Trial Ex. 127A, § 3(g) (SoundX_000020987) (native file) ([redacted]) (prohibiting sublicensing and syndication). The CABSAT license, however, conveys the right to distribute through a distributor such as an MVPD, because Section 114 exempts MVPD retransmissions of licensed services. 17 U.S.C. § 114(d)(1)(C)(iii).

SEPFF1805. Cable radio services – both PSS and CABSAT – face additional constraints that result from distribution through MVPDs. MVPDs must be willing to allocate both bandwidth on their systems and content acquisition dollars to the cable radio offerings. Trial Ex. 55 at 24 (Del Beccaro WDT); 4/25/17 Tr. 934:21-935:6 (Crawford) (referring to the "competitive environment for television opportunities"); 5/18/17 Tr. 4551:15-16 (Del Beccaro).

SEPFF1806. Within these constraints, all of the various cable radio services – both PSS and CABSAT – transmit similar selections of musical genre channels.

SEPFF1807. Muzak has withdrawn from this proceeding, but it nonetheless will be able to rely on the PSS rates determined in this proceeding. Since 1996, it has provided a consumer music service called DishCD that is distributed through the Dish satellite network. Trial Ex. 29 at 16 (Bender WDT). During the hearing in this case, the Court of Appeals for the D.C. Circuit held that Muzak's PSS status is limited to its historic DishCD service. *SoundExchange, Inc. v. Muzak* LLC, 854 F.3d 713 (D.C. Cir. 2017); 5/10/17 Tr. 3205:11-23 (Bender). Through that service, Muzak continues to provide 32 music channels to subscribers of the Dish television service. Trial Ex. 501 at ¶ 62(d) (Wazzan Corr. WDT).

SEPFF1808. The Judges have of course heard much about the Music Choice PSS service. Music Choice provides 50 channels of audio music programming delivered to subscribers' televisions. It also provides 25 channels of webcasting through a website and mobile app. Trial Ex. 55 at 4 (Del Beccaro WDT); Trial Ex. 501 at ¶ 62(e) (Wazzan Corr. WDT).

SEPFF1809. Among the cable radio services, and as discussed further below, Stingray's CABSAT service has been Music Choice's principal competitor. It began providing CABSAT service in the U.S. in 2010. 5/18/17 Tr. 4579:9-12 (Del Beccaro); Trial Ex. 54 at ¶

147 (Crawford WDT). In 2014, Stingray replaced Music Choice as the provider of music channels on the AT&T U-verse service. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT). Stingray provides 50-75 television music channels through various cable and IPTV providers in the United States, including AT&T. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT). Stingray also provides webcasting through a website and mobile app (although that is not covered by the statutory CABSAT rates). Trial Ex. 57 at 32-33 (Del Beccaro WRT).

SEPFF1810. In addition to its SDARS, Sirius XM provides a CABSAT service. Trial Ex. 29 at 13 (Bender WDT). Like Muzak's PSS, Sirius XM's CABSAT is distributed to subscribers of the Dish television service. It consists of approximately 70 music channels. Trial Ex. 59 at ¶ 34 (Crawford WRT); Trial Ex. 501 at ¶ 62(a) (Wazzan Corr. WDT).

SEPFF1811. With the D.C. Circuit's recent decision in *SoundExchange. v. Muzak*, Muzak also provides a CABSAT service – the legacy DMX service. That service is distributed principally in the form of the SonicTap service provided through DirecTV, although it has some other MVPD customers. Trial Ex. 59 at ¶ 35 (Crawford WRT); Trial Ex. 501 at ¶ 62(c) (Wazzan Corr. WDT); 5/18/17 Tr. 4578:23-4579:3 (Del Beccaro). Muzak provides at least 55 audio channels through DirecTV. Trial Ex. 501 at ¶ 62(c) (Wazzan Corr. WDT).

SEPFF1812. Most of these services provide 50-75 television channels. While a larger number of channels may provide some advantage to a service, that does not seem to be a critical consideration once a service provides the several dozen channels that allow it to cover a wide selection of genres of music, and provide depth of coverage in popular genres. Trial Ex. 501 at ¶ 66 (Wazzan Corr. WDT).

SEPFF1813. To a significant extent, the programming of genre channels on all services (not just cable radio services) is similar. Recordings in heavy rotation on one genre

channel will tend to be in heavy rotation on similar genre channels on other services. Trial Ex. 34 at ¶ 69 (Kushner WDT). Comparing Music Choice's channel lineup with the channels Stingray distributes through AT&T illustrates the point. Music Choice has a "Hit List" channel (channel 1), Trial Ex. 910, and Stingray has a "Hit List" channel (channel 5101), Trial Ex. 928. Music Choice has a "Pop Hits" channel (channel 9), Trial Ex. 910, and Stingray has a pop channel called "Greatest Hits" (channel 5100), Trial Ex. 928. Music Choice has an "Adult Alternative" channel (channel 26), Trial Ex. 910, and Stingray has an "Adult Alternative" channel (channel 5116), Trial Ex. 928. Music Choice has a "Rock Hits" channel (channel 27), Trial Ex. 910, and Stingray has a "Rock" channel (channel 5113), Trial Ex. 928. Music Choice has a "Y2K" channel (channel 8), Trial Ex. 910, and Stingray has a "Y2K" channel (channel 5125), Trial Ex. 928. Music Choice has "Jazz" (channel 44), "Smooth Jazz" (channel 43), and "Latin Jazz" (channel 17), Trial Ex. 910, and Stingray has "Jazz Masters" (channel 5141), "Smooth Jazz" (channel 5141), and "Jazz Latino" on its app, Trial Ex. 928. The comparison could go on and on.

SEPFF1814. The rights for a television-based service that a PSS provider would need to acquire in the hypothetical marketplace for PSS rights are the same ones that are covered by the statutory CABSAT rates, because all the cable radio services are essentially the same. Trial Ex. 501 at ¶ 62(a) (Wazzan Corr. WDT). In particular, both sets of cable radio services share the characteristics the Judges found in *SDARS II* would be important in a benchmark for PSS: delivery through intermediary television system providers and the bundling of the music service with multiple channels of video and other non-music programming. Trial Ex. 501 at ¶ 53 (Wazzan Corr. WDT).

SEPFF1815. After having originally set a standard of comparability so capacious that he considered the discredited musical works benchmark "the best possible benchmark," Trial Ex. 54 at ¶ 61 (Crawford WDT), Dr. Crawford moved the goalpost in his rebuttal statement. There, he emphasized perceived differences in quality between Music Choice's service and the CABSAT services, which he asserted would need to be accounted for if one were to use the statutory CABSAT rates as a benchmark. Trial Ex. 59 at ¶¶ 88-91 (Crawford WRT).

SEPFF1816. However, the principal difference he cited was that Sirius XM does not have a companion video-on-demand service. Trial Ex. 59 at ¶¶ 89-90 (Crawford WRT). At trial, when Dr. Crawford was asked about the differences between Music Choice's PSS and Stingray's CABSAT, he asserted that there "are important differences in those -- in those services." 4/25/17 Tr. 889:7-8 (Crawford). But the first difference he named was simply that "Stingray only recently introduced a video on-demand service." 4/25/17 Tr. 889:10-11 (Crawford); *see also* Trial Ex. 55 at 30 (Del Beccaro WDT); Trial Ex. 57 at 10 (Del Beccaro WRT). Of course, a video service is not a PSS. 17 U.S.C. § 114(j)(11). And Dr. Crawford simultaneously asserts that Music Choice is a "standalone PSS provider[]." Trial Ex. 59 at ¶ 120 (Crawford WRT).

SEPFF1817. From there, Dr. Crawford's assessment of the differences between Music Choice and Stingray's services quickly devolved to "differences in on-screen display." 4/25/17 Tr. 889:15 (Crawford). But the CABSAT services are required by statute to have screen displays that display text data identifying the title of each sound recording they play, along with the album title and the featured recording artist's name, as each recording is being played. 17 U.S.C. § 114(d)(2)(C)(ix). And Sirius XM and Stingray both provide such screen displays.

5/18/17 Tr. 4576:1-14 (Del Beccaro) (Sirius XM's CABSAT has screen displays); 5/18/17 Tr. 4738:16-4739:7 (Williams) (Stingray has screen displays).

SEPFF1818. Dr. Crawford also mentioned "quite a few customer complaints about perceived differences in functionality." 4/25/17 Tr. 889:18-19 (Crawford). Those are apparently the complaints identified in Appendix A.2 of his rebuttal report. Trial Ex. 59 at App. A.2 (Crawford WRT). That appendix identifies 21 anecdotal consumer complaints about the switch from Music Choice to Stingray, most of them from 2015. Out of AT&T's [ ], Trial Ex. 55 at 22 (Del Beccaro WDT), it seems remarkable that a change of music services generated so *few* complaints. Many of the handful of complaints in Dr. Crawford's Appendix A.2 relate to the need to access Stingray channels on AT&T through an app when the service first launched. See also 4/25/17 Tr. 891:1-23 (Crawford). However, that quickly changed. Trial Ex. 57 at 33 (Del Beccaro WRT).

SEPFF1819. In the end, these perceived differences among the various cable radio services are nothing more than the natural variations among services of a particular type. There are two PSS services and three CABSAT services. Of course it is possible to choose one PSS and one CABSAT and find differences in detail between their services, just as there are differences between the two PSS. In *Web IV*, the Judges treated Internet-only customized webcasters like Pandora the same as broadcast simulcasters, despite much greater differences in their services. *See Web IV*, 81 FR at 26320 (determining to treat simulcasters the same as other commercial webcasters). Likewise, while there are clear differences among the various individual subscription interactive services, rates in the marketplace are set with reference to considerations such as average revenue per user and maintaining consistent margins, not

differences in screen displays. Trial Ex. 32 at ¶ 20 (Harrison WDT); 5/16/17 Tr. 3930:18-3931:14 (Harrison).

SEPFF1820. Accordingly, the cable radio providers – PSS and CABSAT – provide services that are the same in all material respects, within the limits of normal variation between providers. Trial Ex. 502 at ¶ 18 (Wazzan Corr. WRT). There are no differences of a kind that are likely to be recognized in the marketplace for sound recording rights. Thus, the rights sold at the CABSAT statutory rights are the same as the rights that a PSS provider would need to buy in the hypothetical market for sound recording rights for a PSS. Similarly, the statutory CABSAT rates require no adjustment based on characteristics of the service such as the number of channels or quality. Trial Ex. 501 at ¶ 66 (Wazzan Corr. WDT); 5/3/17 Tr. 2313:3-11 (Wazzan) ("[w]e're already at apples-to-apples").

iii. CABSAT Services Are Distributed Through The Same Distribution Channels As The PSS

SEPFF1821. Dr. Crawford separately identified downstream rights and the method of end-user purchase and consumption as criteria to be considered in assessing comparability. Trial Ex. 54 at ¶ 50 (Crawford WDT). Because all cable radio services – PSS and CABSAT – are distributed through the same MVPD distribution channels, the CABSAT benchmark is "ideal" in these respects.

SEPFF1822. Dr. Crawford explains as follows:

> In an ideal benchmark market, the buyers . . . would themselves sell the same products in markets further downstream (i.e. to cable and satellite operators). In particular, buyers in the ideal benchmark market would package the sound recording performance rights along with other inputs (such as musical composition performing rights and the PSS's own original creative content) to create audio channels. They would then enter into multi-year long-term contracts to sell the rights to these channels to multi-channel video distributors (MVPDs) who, in tum, would bundle them with other content (sports channels, news channels and other content) and sell them in the retail market to households as part of a digital television service.

Trial Ex. 54 at ¶ 50(4) (Crawford WDT).

SEPFF1823. As is apparent from Section XIII.B.2.ii above, all cable radio services share these characteristics.

SEPFF1824. Buyers of CABSAT sound recording rights, like buyers of PSS sound recording rights, sell cable radio services to cable and satellite operators. Stingray's CABSAT service is distributed through various cable and IPTV providers in the United States, including AT&T. Trial Ex. 501 at ¶ 62(b), (h) (Wazzan Corr. WDT). Like Muzak's PSS, Sirius XM's CABSAT is distributed to subscribers of the Dish television service. Trial Ex. 501 at ¶ 62(a) (Wazzan Corr. WDT).

SEPFF1825. In fact, the PSS and the CABSAT services compete for the same MVPD wholesale buyers. Music Choice launched its residential service on DirecTV in 1994. Trial Ex. 57 at 7 (Del Beccaro WRT). In 2005, it was replaced by DMX. Trial Ex. 57 at 8 (Del Beccaro WRT). Now, Muzak is providing DirecTV's music channels. Trial Ex. 501 at ¶ 62(g) (Wazzan Corr. WDT). This competition may have subsided for some years in the past, but as discussed further in Section XIII.B.2.vi below, Stingray is now competing aggressively in the market for carriage of cable radio services by MVPDs. Music Choice has complained publicly about facing increasing competition from other providers of music channels to MVPDs. Trial Ex. 501 at ¶ 62 (Wazzan Corr. WDT).

SEPFF1826. As discussed further in Part XIII.B.2.ii above, cable radio service providers package the sound recording performance rights they acquire with other inputs to create audio channels. Trial Ex. 502 at ¶ 18 (Wazzan Corr. WRT). Of course, all cable radio services must acquire rights to musical compositions, because musical recordings also embody musical compositions, meaning that musical composition copyright owners have exclusive rights

as to CABSAT performances. 17 U.S.C. § 106(4). CABSAT services also bundle creative content such as screen displays. 5/18/17 Tr. 4576:1-14 (Del Beccaro) (Sirius XM's CABSAT has screen displays); 5/18/17 Tr. 4738:16-4739:7 (Williams) (Stingray has screen displays). Naturally they must program their channels as well. *E.g.*, Trial Ex. 987 at SoundX_000133429 (Stingray channels "programmed by music professionals for a discerning audience").

SEPFF1827. Like PSS services, CABSAT services enter into multi-year contracts with MVPDs. Sirius XM and its predecessor have been providing CABSAT service through Dish since at least 2006. *Designation as a Preexisting Subscription Service*, 71 FR 64639 (2006). Stingray has been distributing its service through AT&T since 2014. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT). [ ]. Trial Ex. 55 at 22 (Del Beccaro WDT).

SEPFF1828. The MVPD purchasers of all cable radio services – including CABSAT services – bundle the cable radio services with other content (sports channels, news channels and other content) and sell them in the retail market to households as part of a digital television service. Trial Ex. 502 at ¶ 18 (Wazzan Corr. WRT). The MVPD distributors that are assumed as a precondition to eligibility for the statutory CABSAT rates are, after all, multichannel *video* programming distributors. 37 C.F.R. § 383.2(e), (f). Dish, DirecTV and AT&T are all television services that have also distributed PSS. Trial Ex. 29 at 16 (Bender WDT); Trial Ex. 55 at 4, 27 (Del Beccaro WDT); Trial Ex. 57 at 7-88 (Del Beccaro WRT).

SEPFF1829. Dr. Crawford also explained that:

> In an ideal benchmark market, the ultimate consumers of the products in which sound recording performance rights are embodied would purchase and consume them in the same manner as in the PSS market. Households (or other endusers) would purchase access to MVPD television bundles for a monthly fee and then consume the PSS provider's audio channels over the course of each month. Critically, if they chose to consume, this consumption would be *passive*: as the

> PSS provider selects the particular tracks to play on each of its channels, end-consumers in the ideal benchmark market could either listen or not to those channels, but could not directly select to which music they would wish to listen.

Trial Ex. 54 at ¶ 50(4) (Crawford WDT).

SEPFF1830. Both PSS and CABSAT services share these characteristics as well. CABSAT services, like PSS, are sold to consumers as part of MVPD television bundles for a monthly fee then consumed over the course of each month. "[C]ritically," Trial Ex. 54 at ¶ 50(4) (Crawford WDT), they are also noninteractive. *E.g.*, 17 U.S.C. § 114(d)(2)(A)(i); Trial Ex. 501 at ¶ 52, 62(f) (Wazzan Corr. WDT); Trial Ex. 502 at ¶ 18 (Wazzan Corr. WRT).

SEPFF1831. Because all cable radio services are distributed through the same distribution channels, the statutory CABSAT rates are "ideal" with respect to Dr. Crawford's criteria concerning identified downstream rights and the method of end-user purchase and consumption.

iv. Cable Radio Services Are The "Same Buyers"

SEPFF1832. The cable radio services – PSS and CABSAT – are the same buyers as that concept is understood in benchmarking.

SEPFF1833. In the case of Muzak, the same company is buying rights for both a PSS service (DishCD) and a CABSAT service (the legacy DMX service). Trial Ex. 502 at ¶ 18 n.22 (Wazzan Corr. WRT); *see also SoundExchange, Inc. v. Muzak LLC*, 854 F.3d 713 (D.C. Cir. 2017).

SEPFF1834. Otherwise, while Muzak and Music Choice, on the one hand, and Stingray, Sirius XM, and Muzak, on the other, are not literally the same sets of companies, as a practical matter, it is difficult to imagine any benchmarking situation where the buyers and sellers in the benchmark and target markets would literally be the same. Trial Ex. 502 at ¶ 18 (Wazzan Corr. WRT).

SEPFF1835. Here, the buyers of both PSS and CABSAT rights are the same in that they provide services that in all material respects are the same, as described above in Sections XIII.B.2.ii and iii. In the case of all cable radio services, a music service is delivered to the television sets of consumers through their cable or satellite provider as part of a subscription bundle consisting overwhelmingly of television programming. PSS and CABSAT services are similarly-situated buyers of sound recording rights, because both create music channels incorporating the licensed sound recordings along with other inputs such as musical work rights and sell them to cable/satellite providers, who in turn resell those channels to consumers along with video content as part of subscription bundles. The consumers in turn purchase and consume CABSAT services and PSS by purchasing such bundles for a monthly fee and then tuning in to the preprogrammed audio channels if they wish. Trial Ex. 502 at ¶ 18 (Wazzan Corr. WRT).

SEPFF1836. The providers of PSS and CABSAT services are also similar in that all of them are multi-platform companies that provide a mix of services.

SEPFF1837. Muzak – the provider of both a PSS that will benefit from the rates set in this proceeding and the legacy DMX CABSAT service – has provided business music service since the 1920s. In 2011, Muzak was purchased by Mood Media Corporation ("Mood"). Mood is primarily a business music provider. Trial Ex. 29 at 16-18 (Bender WDT); Trial Ex. 57 at 6 (Del Beccaro WRT); 4/25/17 Tr. 854:9-13 (Crawford); 5/18/17 Tr. 4577:25-4578:1 (Del Beccaro).

SEPFF1838. Sirius XM provides several different types of services. Of course, it is first and foremost the provider of an SDARS. However, it also provides a CABSAT service, business music service, and Internet streaming. Trial Ex. 501 at ¶ 52 (Wazzan Corr. WDT). Its

SDARS includes a range of non-music programming, Trial Ex. 1 at ¶ 17 (Meyer WDT), and it also provides, or proposes to provide, various data services, Trial Ex. 13 at ¶ 18 (Barry WRT).

SEPFF1839. Stingray is a diversified, international provider of audio and video music services that calls itself "the world-leading provider of multiplatform music products and services." It is present in 152 countries and reaches over 400 million users. Trial Ex. 973 at SoundX_000145759. Its CABSAT service is Music Choice's principal competition in the U.S. cable radio market, as described further in Section XIII.B.2.vi below. As a companion to its CABSAT, it provides a full U.S. video-on-demand service. Trial Ex. 55 at 30 (Del Beccaro WDT); 5/18/17 Tr. 4747:19-21 (Williams). It also provides cable radio services in Canada and Europe, the latter as a result of having acquired Music Choice's former affiliate Music Choice International. Trial Ex. 57 at 9 (Del Beccaro WRT); Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT). Its other service offerings include Concert TV, The KARAOKE Channel, other music video channels, and business music services. Trial Ex. 59 at ¶ 118 (Crawford WRT); Trial Ex. 971; Trial Ex. 973).

SEPFF1840. At times in this proceeding when it has been convenient, Music Choice has tried to deny *its* diverse offerings. For example, Dr. Crawford on multiple occasions characterized Music Choice as a standalone PSS provider. Trial Ex. 59 at ¶¶ 119, 120 (Crawford WRT) ("standalone PSS providers like Music Choice"). However, when pressed at trial, Dr. Crawford acknowledged that "there's no company in the market that offers a standalone PSS." 4/25/17 Tr. 859:8-12 (Crawford).

SEPFF1841. In fact, Music Choice, just like all other cable radio providers, offers a diverse mix of services. It is extremely proud of its video-on-demand service, which it time and again described as a key differentiator of its PSS. Trial Ex. 54 at ¶ 24 (Crawford WDT); Trial

Ex. 55 at 28-30 (Del Beccaro WDT); Trial Ex. 59 at ¶¶ 89-90 (Crawford WRT). In addition, it provides a preprogrammed video offering called Music Choice Play. Trial Ex. 55 at 28 (Del Beccaro WDT). It also offers a business establishment service, and it webcasts, at least to subscribers of its PSS, through a family of apps and a web portal. Trial Ex. 29 at 15 (Bender WDT).

SEPFF1842. It is not surprising that all cable radio providers have diverse lines of business. There are obvious efficiencies to be had from repurposing programming and sharing overhead across multiple lines of business. For example, many of Music Choice's costs are so-called "common costs," meaning that they are shared across its lines of business. Trial Ex. 54 at ¶ 123 (Crawford WDT). Sirius XM likewise realizes such efficiencies by repurposing its satellite radio music channels in its CABSAT. Trial Ex. 59 at ¶ 34 (Crawford WRT). Stingray has enjoyed similar efficiencies in its entry into the U.S. market, leveraging infrastructure and expenses from its foreign cable radio services. Trial Ex. 57 at 9 (Del Beccaro WRT). There are other synergies between the various lines of business as well. For example, as noted above, Music Choice views its video services as differentiating its PSS. Trial Ex. 54 at ¶ 24 (Crawford WDT); Trial Ex. 55 at 28-30 (Del Beccaro WDT); Trial Ex. 59 at ¶¶ 89-90 (Crawford WRT).

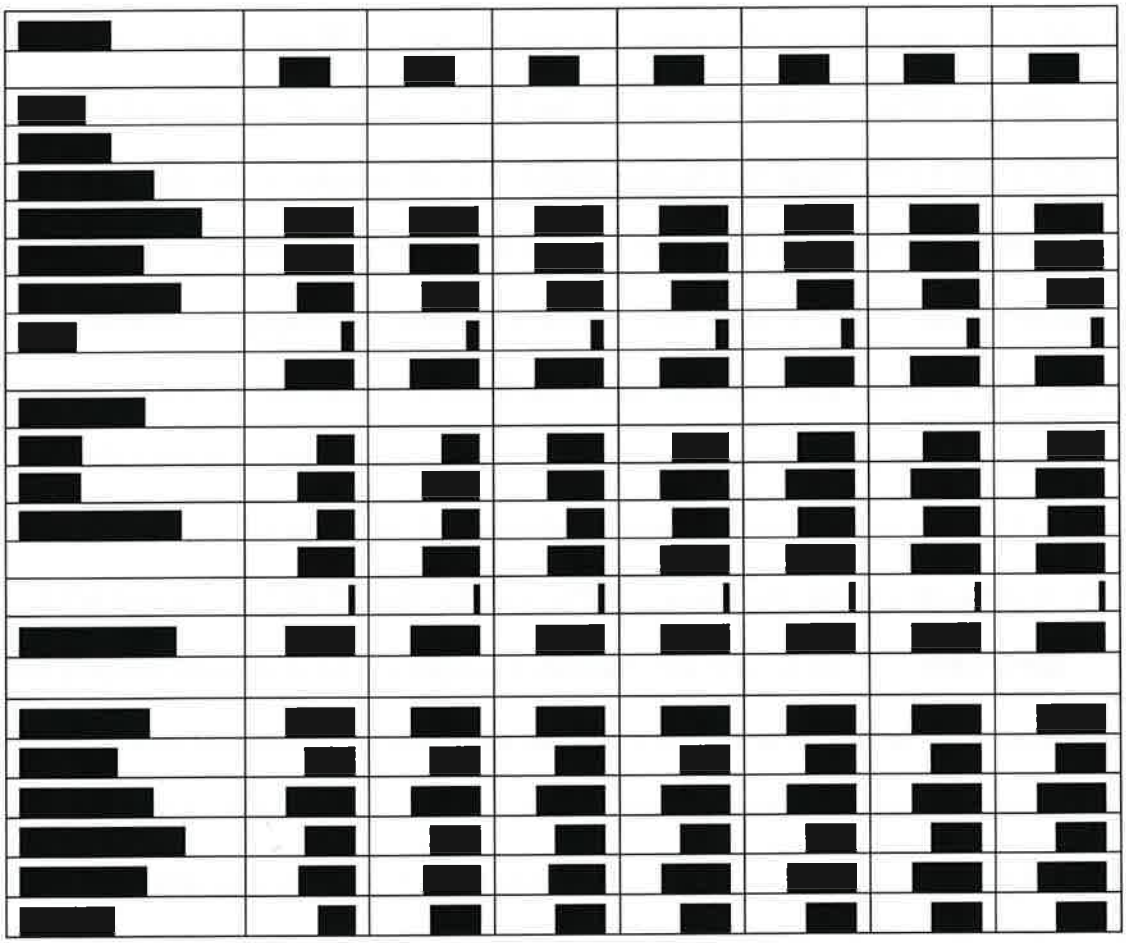
SEPFF1843. To be sure, each individual company in the cable radio business has a somewhat different balance of service offerings. Muzak is primarily a business establishment service provider. Trial Ex. 29 at 16-18 (Bender WDT). Sirius XM is first and foremost the provider of an SDARS. Trial Ex. 501 at ¶ 55 (Wazzan Corr. WDT). Stingray appears primarily to be a cable radio provider, but its roots are in Canada, and it is a relatively new entrant into the U.S. and European markets. Trial Ex. 59 at ¶ 118 (Crawford WRT); Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT); 5/18/17 Tr. 4539:20-22 (Del Beccaro). Music Choice is primarily a PSS

provider, although other service offerings contributed about [ ] of its revenue in 2016, and Music Choice projects that mix to shift significantly over the rate period.

SEPFF1844. The following chart illustrates Music Choice's projected revenue mix over the coming rate period, based on the same forecasts provided to Dr. Crawford and Dr. Wazzan for their calculations:

Music Choice's Revenue Forecast

[RESTRICTED]



Source: Trial Ex. 406 (P&L Tab) (native file).

SEPFF1845. According to Mr. Del Beccaro, Music Choice has derived most of its profits from its commercial business. 5/18/17 Tr. 4523:24-4524:1 (Del Beccaro). Comparing

Music Choice's mix of business to that of its competitor cable radio services, it appears that to the extent Music Choice has financial problems, it is the result of its having chosen to emphasize a less profitable business segment than its competitors, or perhaps having been less successful at competing in more profitable lines of business.

SEPFF1846. While one would naturally expect some variation in sizes and product and service offerings among the various participants in any market, the various cable radio providers are fundamentally similar multi-platform providers of similar services. They are, as Dr. Wazzan put it, "one flavor of an apple versus another flavor. They're very, very close." 5/3/17 Tr. 2316:1-4 (Wazzan). For purposes of identifying a comparable benchmark, they are all the same buyers.

v. The Statutory CABSAT Rates Were Set In A Proceeding Subject To The Willing Buyer/Willing Seller Standard And Are A Market-Like Rate

SEPFF1847. The CABSAT benchmark is not a marketplace benchmark. It is instead a regulated rate. Trial Ex. 501 at ¶¶ 12, 24(d), 64 (Wazzan Corr. WDT); Trial Ex. 502 at ¶ 20 (Wazzan Corr. WRT); 5/3/17 Tr. 2306:18-25 (Wazzan). Sound recording performance royalty rates are heavily regulated, and such regulated rates should be viewed with caution when considering them as a possible benchmark. 5/3/17 Tr. 2299:16-19 (Wazzan).

SEPFF1848. However, it sometimes it not possible to find a benchmark that is entirely free of the shadow of the statutory license. Rather than "the wholesale abandonment of benchmarking," *Web IV*, 81 FR 26331, in the absence of a suitable marketplace benchmark, a benchmark based on a regulated rate may be the best available option. That is the case here. Nobody has identified any suitable marketplace benchmark for the PSS that is not constrained by regulation. Instead, the statutory CABSAT rates are "a market-like rate." 5/3/17 Tr. 2318:35 (Wazzan); *see also* Trial Ex. 502 at ¶¶ 19-20 (Wazzan Corr. WRT).

SEPFF1849. As an initial matter, statutory CABSAT rates are subject to the willing buyer/willing seller standard under 17 U.S.C. § 114(f)(2), and so purport to be fair market rates. Trial Ex. 501 at ¶ 64 (Wazzan Corr. WDT). At least as important, the statutory CABSAT rates have been negotiated with relatively little regulatory overhang, 5/3/17 Tr. 2309:6-14 (Wazzan), and have been accepted over a sustained period by multiple providers of CABSAT services, including Stingray, which made a decision to enter the U.S. market knowing full well the magnitude of the statutory CABSAT rates. 5/3/17 Tr. 2307:18-24 (Wazzan).

SEPFF1850. The history of CABSAT ratemaking is undisputed, although the parties disagree concerning the extent of its relevance. In late 2005, anticipating the launch of what is now its CABSAT service, XM Satellite Radio filed a petition pursuant to Section 114(f)(2)(C) to set rates for a new type of new subscription service that "performs sound recordings on digital audio channels programmed by the licensee for transmission by a satellite television distribution service to its residential customers, where the audio channels are bundled with television channels as part of a 'basic' package of service and not for a separate fee." *In re Digital Performance Right in Sound Recordings and Ephemeral Recordings for a New Subscription Service*, 72 FR 72253, 72254 (2007).

SEPFF1851. At the same time, XM sought to rely on the PSS rates by virtue of its carriage on Dish. *In re Designation as a Preexisting Subscription Service*, 71 FR 64639, 64640 (2006). On referral from the Judges, the Register of Copyrights articulated legal principles of PSS eligibility that, in practical terms, meant that XM was not eligible for PSS status based on its carriage on Dish, and also that DMX was no longer eligible for PSS status based on post-1998 corporate transactions. 71 FR at 64644-47. That created a need for the proceeding initiated by

XM to go forward to set statutory royalty rates for cable radio services that were not in operation in 1998.

SEPFF1852. The participants in that proceeding were SoundExchange, Sirius, XM, and MTV, and they reached a settlement in the case. After publication in the Federal Register, and in the absence of any objections or negative comments, the Judges adopted the settlement. *In re Digital Performance Right in Sound Recordings and Ephemeral Recordings for a New Subscription Service*, 72 FR 72253 (2007); Trial Ex. 59 at ¶ 31 (Crawford WRT). The relevant rates adopted by the Judges were the greater of 15% of Revenue, or the following monthly per-subscriber payments:

From inception through 2006: $0.0075

2007: $0.0075

2008: $0.0075

2009: $0.0125

2010: $0.0150

72 FR at 72255 (§ 383.3(a)(1)(ii)).

SEPFF1853. In the second CABSAT proceeding, SoundExchange, Royalty Logic, and Sirius XM petitioned to participate. The participants jointly requested a stay, and then SoundExchange and Sirius XM reached a settlement. After publication in the Federal Register, and in the absence of any comments and objections, the Judges adopted the settlement. *In re Digital Performance Right in Sound Recordings and Ephemeral Recordings for a New Subscription Service*, 75 FR 14074 (2010); Trial Ex. 59 at ¶ 32 (Crawford WRT). The relevant rates adopted by the Judges were the greater of 15% of Revenue, or the following monthly per-subscriber payments:

2011: $0.0155

2012: $0.0159

2013: $0.0164

2014: $0.0169

2015: $0.0174

75 FR at 14075 (§ 383.3(a)(1)(ii)).

SEPFF1854. In the third CABSAT proceeding, SoundExchange, Music Reports, the National Music Publishers Association ("NMPA"), Spotify, and Sirius XM petitioned to participate. The Judges subsequently dismissed the petitions of NMPA and Music Reports, and Spotify withdrew from the proceeding, leaving only SoundExchange and Sirius XM as participants. They again reached a settlement. After publication in the Federal Register, and in the absence of any comments and objections, the Judges adopted the settlement. *In re Determination of Terms and Royalty Rates for Ephemeral Reproductions and Public Performance of Sound Recordings by a New Subscription Service*, 80 FR 36927 (2015); Trial Ex. 59 at ¶ 33 (Crawford WRT). The relevant rates adopted by the Judges were the following monthly per-subscriber payments:

2016: $0.0179

2017: $0.0185

2018: $0.0190

2019: $0.0196

2020: $0.0202

80 FR at 36928 (§ 383.3(a)(1)).

SEPFF1855. This rate-making history stands in stark contrast to the history of PSS ratemaking. As described further below, rates for the services now known as the PSS were litigated before a CARP in 1997-1998. That proceeding began very shortly after enactment of

the statute creating the digital performance right, so no market for licensing sound recording performance rights existed. Trial Ex. 501 at ¶ 28 (Wazzan Corr. WDT). That left the CARP with a poor selection of proposed benchmarks. Trial Ex. 501 at ¶¶ 29-30 (Wazzan Corr. WDT). Faced with no better options, the Register ultimately relied on musical works rates and a decision by the CARP "to set a low rate favoring the Services." 63 FR at 25406, 25409. PSS rates were settled in two subsequent proceedings, in 2003 and 2007. Trial Ex. 501 at ¶¶ 35-36 (Wazzan Corr. WDT).

SEPFF1856. Dr. Wazzan explained that "[r]ates contained in settlement agreements are not *necessarily* indicative of a market rate—*i.e.*, what a willing buyer and a willing seller would agree to." Trial Ex. 501 at ¶ 41 (Wazzan Corr. WDT) (emphasis added). Thus, care should be taken when considering a settled rate as a benchmark. 5/3/17 Tr. 2299:20-24 (Wazzan). The question is "whether a settlement is arrived at in the shadow of regulatory overhang." 5/3/17 Tr. 2299:20-24 (Wazzan); *see also* 5/3/17 Tr. 2309:6-7 (Wazzan). Because of the regulatory overhang of the *PSS I* decision, Dr. Wazzan found the PSS settlements to be "anchored in the original *PSS I* decision, and thus more reflective of the parties' predictions of how the Judges would adjust that rate and other considerations . . . than of a marketplace royalty rate for the use of sound recordings in a PSS." Trial Ex. 501 at ¶ 42 (Wazzan Corr. WDT); see also 5/3/17 Tr. 2309:6-9 (Wazzan).

SEPFF1857. That is not the case for the statutory CABSAT rates, which is why Dr. Wazzan believes the statutory CABSAT rates to be "a much better benchmark." 5/3/17 Tr. 2309:13-14 (Wazzan). The original CABSAT statutory rates were not burdened by the regulatory overhang of an existing CABSAT rate. As Dr. Wazzan put it, the parties "had a clean sheet of paper." 5/3/17 Tr. 2309:10-13 (Wazzan); *see also* 5/3/17 Tr. 2400:11-13 (Wazzan).

Throughout the history of the statutory CABSAT rate, "Sirius XM negotiated with SoundExchange . . . in an arm's-length, willing buyer/willing seller transaction, and agreed on a rate." 5/3/17 Tr. 2307:5-9 (Wazzan). In doing so, they were constrained by the low PSS rate, which would probably bias the CABSAT rate downwards, but "ultimately as a willing buyer/willing seller they reached some settlement." 5/3/17 Tr. 2400:14-18 (Wazzan). Presumably they would have been mindful of the willing buyer/willing seller standard that would apply if they failed to reach an agreement. 17 U.S.C. § 114(f)(2)(B).

SEPFF1858. This negotiation took place in what Dr. Crawford refers to as a hybrid market (*i.e.*, a market where "[n]egotiations occur in a marketplace setting, but, *in case of impasse*, either party to the negotiation can appeal to a judicial or regulatory body for a rate determination"). Trial Ex. 54 at ¶ 50(1) (Crawford WDT) (emphasis in original); 4/24/17 Tr. 773:6-7 (Crawford) ("clearly the CABSAT market is one of these hybrid markets").

SEPFF1859. Dr. Crawford considers a rate set in a hybrid market to be a suitable benchmark if the parties have similar stakes in the benchmark and target markets. Trial Ex. 54 at ¶ 50(1) (Crawford WDT); Trial Ex. 502 at ¶ 20 (Wazzan Corr. WRT). Dr. Crawford embraced use of regulated musical works rates as a benchmark, because the rate standard applied by the ASCAP and BMI rate courts is "designed to approximate marketplace outcomes." Trial Ex. 54 at ¶ 58 (Crawford WDT). That standard is similar to the willing buyer/willing seller standard that applies in CABSAT proceedings. See 17 U.S.C. § 114(f)(2)(B); *United States v. Broadcast Music, Inc.*, 426 F.3d 91, 95 (2d Cir 2005) ("The rate court is responsible for establishing the fair market value of the music rights, in other words, 'the price that a willing buyer and a willing seller would agree to in an arm's length transaction.'").

SEPFF1860. Dr. Crawford readily found the stakes to be similar in the markets for musical works and sound recordings for a PSS. Trial Ex. 54 at ¶ 58 (Crawford WDT). Because the PSS and CABSAT services are so similar, their stakes in negotiating sound recording royalties are likewise similar. Trial Ex. 502 at ¶ 20 (Wazzan Corr. WRT).

SEPFF1861. Of course, the desire to avoid the cost and disruption of litigation provides an incentive to settle proceedings before the Judges. However, the costs and disruption are felt on both sides of a rate proceeding involving substantial parties, making it "a net equal effect." 5/3/17 Tr. 2407:24-25 (Wazzan); *see also* 4/25/17 Tr. 930:24-932:3 (Crawford). Dr. Crawford conceded that he had no factual basis for thinking litigation costs would have affected SoundExchange and Sirius XM unevenly as they were negotiating the CABSAT settlements. 4/25/17 Tr. 931:8-10 (Crawford). Moreover, settlements are exactly what Congress hoped for when it adopted the current rate-setting procedures. Encouraging settlements was a key goal of in the design of those procedures. H. Rep. No. 108-408, at 30 (2004) ("the Committee intends that the bill as reported will facilitate and encourage settlement agreements for determining royalty rates").

SEPFF1862. That the rates were negotiated by Sirius XM, which is primarily an SDARS provider, does not affect the reliability of the statutory CABSAT rates as a benchmark. Music Choice has suggested that Sirius XM might view its CABSAT service as promotion for its SDARS. Trial Ex. 59 at ¶ 10 (Crawford WRT). However, Dr. Wazzan did not find that argument compelling. 5/3/17 Tr. 2420:10-15 (Wazzan). He does not think that the possibility Sirius XM views its CABSAT as promotional should have an effect on the CABSAT rates they agreed to. 5/3/17 Tr. 2314:4-11 (Wazzan). "There's no evidence that they would simply accept a bad deal." 5/3/17 Tr. 2314:9-10 (Wazzan). Instead, Sirius XM should be motivated not to

overpay, because "they are a profit-maximizing firm." 5/3/17 Tr. 2421:1-2 (Wazzan); *see also* 5/3/17 Tr. 2314:8-9 (Wazzan). In addition, Mr. Del Beccaro [ ]. 5/18/17 Tr. 4575:6-13 (Del Beccaro) ([ ]).

SEPFF1863. Dr. Wazzan was similarly unpersuaded by Dr. Crawford's argument that SoundExchange had excessive market power in negotiating the CABSAT settlements. 5/3/17 Tr. 2315:1-5 (Wazzan). Dr. Crawford conceded that argument "isn't the strongest objection." 4/24/17 Tr. 773:10-11 (Crawford). The analysis in Dr. Crawford's written direct statement is predicated on the assumption that at least the major record labels are "must-haves" for Music Choice, because it "would not be able to operate a viable PSS without sound recording performance licenses covering the vast majority of the licensable music library." Trial Ex. 54 at ¶ 78 & n.62 (Crawford WDT); *see also* 5/16/17 Tr. 3941:13:3942:6 (Harrison) ("we are a must-have for any streaming service"); Section V.F.1.iii, *supra*. If the majors are must-haves, there is no meaningful difference in market power between negotiating with SoundExchange and negotiating with an individual major label. 5/3/17 Tr. 2315:1-21 (Wazzan); *see also* Section V.F.2., *supra*.

SEPFF1864. Music Choice makes much of language in the agreement between SoundExchange and Sirius XM that led to the adoption of the statutory CABSAT rates stating that the agreement is intended to be nonprecedential. *E.g.*, Trial Ex. 59 at ¶ 65 (Crawford WRT). To Dr. Wazzan, this language suggests that the agreed-upon rate "is closer to a market rate . . . because [the parties didn't] have to worry about what is going to happen 20 years from now." 5/3/17 Tr. 2416:2-10 (Wazzan).

SEPFF1865. More importantly, at each turn, the existing CABSAT providers other than Sirius XM had the opportunity to participate in a rate proceeding before the Judges, which would have given them an opportunity to seek a lower rate and standing to object to any settlement to any settlement. 17 U.S.C. § 801(b)(7)(A); 5/3/17 Tr. 2307:10-16 (Wazzan); 5/3/17 Tr. 2400:19-22 (Wazzan); 5/3/17 Tr. 2406:5-19 (Wazzan). However, DMX never participated in any of the three CABSAT proceedings, despite providing a CABSAT service from before the first CABSAT proceeding and continuing into the pendency of the third proceeding. 80 FR at 36927 (*CABSAT III* commenced January 2014); Trial Ex. 29 at 17 (Bender WDT) (DMX transferred service to Muzak May 2014).

SEPFF1866. Even if one were inclined to view the statutory CABSAT rates with skepticism because they are the product of a series of settlements between SoundExchange and Sirius XM, the fact that Stingray is "in the market paying the rate would seem to indicate that it's at least close to a market rate." 5/3/17 Tr. 2314:18-25 (Wazzan). Stingray entered the U.S. market in 2010. 5/18/17 Tr. 4579:9-12 (Del Beccaro); Trial Ex. 54 at ¶ 147 (Crawford WDT). That was roughly the time of *CABSAT II*, so by then, the level and trajectory of the CABSAT rates were clear. Stingray is a large and sophisticated company with the resources to litigate rates if it wanted to, and considerable experience providing cable radio service outside the U.S. Trial Ex. 57 at 9 (Del Beccaro WRT); Trial Ex. 973. It does business in 152 countries and calls itself "the world-leading provider of multi-platform music products and services." Trial Ex. 29 at 29 (Bender WDT); Trial Ex. 973. Stingray could not have been unmindful of the statutory CABSAT rates in its thinking about entering the U.S. market. *See* 5/3/17 Tr. 2307:18-21 (Wazzan); 5/3/17 Tr. 2406:21-2407:9 (Wazzan) ("if Stingray then comes into the market

afterwards and simply accepts the rate and enters the market and willingly pays it, that is evidence in favor of a market rate").

SEPFF1867. By the time of *CABSAT III*, Stingray was an established competitor in the U.S. and taking over the AT&T account from Music Choice. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT). If it thought that the statutory CABSAT rates were many times fair market value, it would have had strong incentives to do something about that, as Dr. Crawford suggests. Trial Ex. 59 at ¶ 124 (Crawford WRT) ("they would have a good case"). As Dr. Wazzan put it, "if they are willingly paying the CABSAT rate and they didn't participate, they must not be terribly troubled by it." 5/3/17 Tr. 2407:7-9 (Wazzan).

SEPFF1868. Stingray is presumably a profit-maximizing entity. 5/3/17 Tr. 2432:9-12 (Wazzan). And the economic calculus for Stingray is clear. Stingray paid [[redacted]] in CABSAT royalties in 2015. Trial Ex. 29 at 29-30 (Bender WDT). Dividing that royalty payment by its reported 2015 CABSAT revenues of [[redacted]], Trial Ex. 1017, yields an effective royalty rate just under [[redacted]]. *See also* Trial Ex. 59 at ¶ 42 (Crawford WRT). If Music Choice were right that the sound recording performance royalty rate for a cable radio service should be in the low single digits – on the order of musical works royalty rates – Stingray could have saved well over [[redacted]] per year on its royalties by presenting its "good case." For an up and coming service, that kind of savings over the long term would easily justify even the substantial litigation budget that Dr. Crawford identifies as the cost of litigating a proceeding. Trial Ex. 59 at ¶ 55 (Crawford WRT) (over [[redacted]]).

SEPFF1869. Instead of litigating to slash the CABSAT rates, Stingray has willingly paid them. 5/3/17 Tr. 2408:16-17 (Wazzan). Stingray also could have sought to enter into direct

licenses if it viewed the statutory CABSAT rate as being above market. However, there is no evidence that has happened. 5/3/17 Tr. 2409:1-16 (Wazzan); 5/3/17 Tr. 2474:7-19 (Wazzan).

SEPFF1870. The statutory CABSAT rates were set in a proceeding subject to the willing buyer/willing seller standard, with minimal regulatory overhang, and have been accepted by substantial and sophisticated providers of CABSAT services – particularly Stingray. 5/3/17 Tr. 2319:4-7 (Wazzan) ("We know that Stingray successfully competes while paying CABSAT rates. . . . It's acceptable in the marketplace."). Accordingly, the CABSAT rates are in Dr. Wazzan's words, "a market-like rate." 5/3/17 Tr. 2318:2-5 (Wazzan); 5/3/17 Tr. 2318:35 (Wazzan). They are certainly the "the best available proxy for a marketplace royalty for PSS." Trial Ex. 501 at ¶ 12 (Wazzan Corr. WDT).

vi. Stingray Is Music Choice's Principal Competitor And Has Opted In To The CABSAT Rates

SEPFF1871. Stingray's having entered the U.S. market despite the statutory CABSAT rates, and its decision simply to accept the rates determined in the *CABSAT III* proceeding, are particularly important because Stingray is Music Choice's principal competitor – and a fierce one at that. As Mr Del Beccaro put it, "our obvious, most intense competition is with Stingray, because we compete with them for cable operators." 5/18/17 Tr. 4563:17-19 (Del Beccaro).

SEPFF1872. Music Choice has tried to portray Stingray as a small player from Canada that does not understand the U.S. market. *E.g.*, Trial Ex. 57 at 6 (Del Beccaro WRT) ("its overall MVPD market share is very small"); Trial Ex. 59 at ¶ 57 (Crawford WRT) ("the Canadian company Stingray"; "it is not at all clear that it will be viable in the long run"); 5/18/17 Tr. 4539:6-7 (Del Beccaro) ("they don't have as – as much of an understanding of the market and understanding of what works with people").

SEPFF1873. However, perhaps it is Music Choice that does not understand the U.S. market. While Music Choice complains about the "significant deterioration" of its business, Trial Ex. 55 at 19 (Del Beccaro WDT), Stingray is in actuality a successful multinational corporation. Trial Ex. 29 at 29-30 (Bender WDT). Internationally, it has a broad portfolio of services, including music audio and video channels distributed through MVPDs and online, as well as business music services. Trial Ex. 59 at ¶ 118 (Crawford WRT); Trial Ex. 971; Trial Ex. 973. Stingray bought Music Choice's former European affiliate in 2011 and now operates it as Music Choice International. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT).

SEPFF1874. Stingray is present in 152 countries and reaches over 400 million users with its services. Trial Ex. 973 at SoundX_000145759. That is approximately eight times the reach of Music Choice. Trial Ex. 55 at 4 (Del Beccaro WDT) ([o]ur programming currently reaches almost 50 million residential customers"). Stingray employs at least 100 music curators. Trial Ex. 973 at SoundX_000145760. And they program more than 400 different genre channels, in 100 genres of music, for distribution in various countries. Trial Ex. 973 at SoundX_000145759-60. Between 2002 and 2008, the years for which data are available, it was "very profitable." Trial Ex. 59 at ¶ 39 (Crawford WRT).

SEPFF1875. Stingray entered the U.S. cable radio market in 2010. 5/18/17 Tr. 4579:9-12 (Del Beccaro); Trial Ex. 54 at ¶ 147 (Crawford WDT). In 2014, it dealt Music Choice a significant blow by replacing Music Choice as the provider of music channels on the AT&T U-verse service. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT). That loss cost Music Choice [[redacted]]. Trial Ex. 55 at 22 (Del Beccaro WDT). Since entering the U.S. cable radio market, Stingray has continued to improve its U.S. offerings. When it first took over the AT&T account, it was necessary to access the Stingray

channels through an app, but that quickly changed. Trial Ex. 57 at 33 (Del Beccaro WRT). Stingray programs audio channels specifically for the United States. 5/18/17 Tr. 4538:24-25 (Del Beccaro). It also provides a full U.S. video-on-demand service. Trial Ex. 55 at 30 (Del Beccaro WDT); 5/18/17 Tr. 4747:19-21 (Williams).

SEPFF1876. [redacted]

SEPFF1877. The two companies are direct competitors in the U.S. market. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT); Trial Ex. 55 at 30-31 (Del Beccaro WDT); 5/18/17 Tr. 4641:25-4642:23 (Del Beccaro) (acknowledging that "Stingray is trying to make inroads in the market and trying to replace your service with its service on other cable carriers"). [redacted]

SEPFF1878. The competition between the companies has been manifested in litigation between them. They are now in patent litigation with each other. Music Choice's press release announcing its patent suit specifically refers to competition from Stingray. Trial Ex. 501 at ¶ 62(h) (Wazzan Corr. WDT). Stingray has also countersued Music Choice. 4/25/17 Tr. 894:5-14 (Crawford).

SEPFF1879. A key feature of this competition has been Stingray's strategy to undercut Music Choice on price. Trial Ex. 55 at 30 (Del Beccaro WDT) ("undercutting our prices"); Trial Ex. 57 at 9 (Del Beccaro WRT) "drastically undercutting our prices to try to 'buy'

the business"); 5/18/17 Tr. 4532:25-4533:6 (Del Beccaro) ("slashed prices"); 5/18/17 Tr. 4579:19-21 (Del Beccaro) ([[redacted]]). In the face of that competition, Music Choice is asking for a reduction in the PSS statutory royalty to help "differentiat[e] Music Choice from various competition." Trial Ex. 55 at 36 (Del Beccaro WDT). However, as Judge Strickler observed during trial, such price competition is *good* from a public policy perspective, even if it is not so good for Music Choice's business. 5/18/17 Tr. 4647:7-25 (Del Beccaro).

SEPFF1880. As discussed in Part XIII.B.2.v above, it is significant that Stingray has had multiple opportunities to participate in proceedings to set CABSAT rates and not bothered to do so. It entered the U.S. market knowing the level and trajectory of the CABSAT rates. Stingray is a large and sophisticated company with the resources to litigate rates, and as a profitable multinational corporation clearly could have participated in a proceeding to seek lower rates if it thought that a massive rate cut was warranted. Instead, the fact that Stingray is "in the market paying the [CABSAT] rate would seem to indicate that it's at least close to a market rate." 5/3/17 Tr. 2314:18-25 (Wazzan); *see also* 5/3/17 Tr. 2319:4-7 (Wazzan) ("Stingray successfully competes while paying CABSAT rates").

vii. CABSAT Services Are More Economically Significant Than The PSS

SEPFF1881. Music Choice seeks to minimize the significance of the CABSAT services. *E.g.*, Trial Ex. 57 at 3 (Del Beccaro WRT) ("Sirius XM provides its CABSAT service to only one affiliate"); Trial Ex. 57 at 9 (Del Beccaro WRT) ("DMX is completely out of the CABSAT market, and Muzak is not even trying to get any additional business"); Trial Ex. 57 at 10 (Del Beccaro WRT) (Stingray's "overall MVPD market share is very small").

SEPFF1882. However, from the perspective of artists and record companies, the CABSAT services are more economically significant than the PSS, despite their relatively small

share of the cable radio market. For its CABSAT service, Sirius XM consistently paid about [redacted] annually in CABSAT royalties during 2013-2015. Stingray's CABSAT service has shown rapid growth over the last several years from [redacted] in CABSAT royalties in 2013 to [redacted] in CABSAT royalties in 2015. Trial Ex. 29 at 29-30 (Bender WDT).

SEPFF1883. Since 2014, the amount of CABSAT royalties has been depressed relative to PSS royalties by Muzak's erroneous classification of the legacy DMX service as a PSS rather than a CABSAT. *See SoundExchange, Inc. v. Muzak LLC*, 854 F.3d 713 (D.C. Cir. 2017). Prior to the commencement of Muzak's effort to classify the legacy DMX service as a PSS, the CABSAT services were paying SoundExchange more in overall royalties than the PSS ([redacted] in 2013 CABSAT royalties as compared to [redacted] in 2013 PSS royalties). Trial Ex. 29 at 30 (Bender WDT). Despite Muzak's erroneous classification of the legacy DMX service as a PSS, in 2015, the CABSAT services paid almost as much in statutory royalties as the PSS ([redacted] in 2015 CABSAT royalties as compared to [redacted] in 2015 PSS royalties). DMX paid [redacted] in CABSAT royalties in 2013, its last full year of paying CABSAT royalties. Trial Ex. 974 at SoundX_000440113.

SEPFF1884. It is possible to estimate the proper 2015 overall PSS royalties by subtracting from the 2015 total PSS royalty payment ([redacted]) the difference between Muzak's 2015 PSS royalty payment [redacted] and its 2013 PSS royalty payment [redacted]. That difference of [redacted] corresponds roughly to the PSS royalty payment Muzak made for the legacy DMX service. Subtracting the difference from the 2015 PSS royalty pool yields a proper PSS royalty pool of [redacted]. Similarly, adding DMX's 2013 CABSAT royalties to the total 2015 total CABSAT royalty pool yields a rough estimate of the proper CABSAT royalty pool of [redacted], or [redacted] more than the PSS, despite

having only a relatively small part of the cable radio market. *See* Trial Ex. 57 at 10 (Del Beccaro WRT).

SEPFF1885. Music Choice users consume a massive amount of music programming. Trial Ex. 502 at ¶ 60 (Wazzan Corr. WRT). As a reality check on the parties' rate proposals, the Judges should recognize that in a free market, record companies would never allow a service with such vast usage that is so undermonetized to undercut services that are paying them more money. Trial Ex. 32 at ¶ 30 (Harrison WDT); Trial Ex. 50 at ¶ 16 (Walker WRT).

viii. The CABSAT Benchmark Requires No Adjustment

SEPFF1886. When using a benchmarking approach, it is sometimes appropriate to make adjustments to a benchmark to reflect differences between the benchmark and target markets. Trial Ex. 501 at ¶ 11 (Wazzan Corr. WDT). Dr. Wazzan recommended no adjustments to the CABSAT benchmark when using it to estimate a fair market value royalty for the hypothetical PSS market.

SEPFF1887. Dr. Wazzan specifically addressed the question whether any adjustment to the CABSAT rates might be appropriate based on differences in the number of channels provided by the PSS and CABSAT services, and concluded that no such adjustment was warranted. Trial Ex. 501 at ¶ 66 (Wazzan Corr. WDT).

SEPFF1888. In other respects, for the reasons described in Sections XIII.B.2.ii-vii above, he concluded that no adjustment is required. 5/3/17 Tr. 2313:3-11 (Wazzan) ("[w]e're already at apples-to-apples"). As groups, the CABSAT services and PSS "are extremely comparable." 5/3/17 Tr. 2305:20-22 (Wazzan). As a result, the unadjusted statutory royalty rates for CABSAT services in 37 C.F.R. Part 383 are the closest thing available to an observable market rate for PSS. Trial Ex. 501 at ¶¶ 12, 65, 94 (Wazzan Corr. WDT).

3. Current PSS Rates Are Significantly Below Market

SEPFF1889. SoundExchange and Music Choice agree that the current statutory royalty rate for PSS does not reflect fair market value given its "problematic genesis." Trial Ex. 55 at 15 (Del Beccaro WDT). Neither party has proposed using the current statutory PSS rate as the starting point for a Section 801(b)(1) analysis. 4/25/17 Tr. 848:6-18 (Crawford).

SEPFF1890. In their litigation positions in this proceeding, the parties disagree whether a fair market value PSS rate would be sharply higher or sharply lower than the current rate. [redacted]

SEPFF1891. In assessing whether the current statutory PSS rate is higher or lower than a fair market value rate, it is important to remember that at no time in the past has the statutory PSS rate ever purported to be a market rate. 5/3/17 Tr. 2305:12-15 (Wazzan). That does not necessarily mean that either of the previous litigated PSS rate proceedings was wrongly decided based on the record available and application of the Section 801(b)(1) objectives at the time. 5/3/17 Tr. 2305:2-11 (Wazzan). It just means that the Judges must look elsewhere to find a market rate for the first step of the Section 801(b)(1) analysis. *See* Section XIII.B.1 *supra*.

i. The *PSS I* Rate Was Based On The Musical Works Benchmark And A Decision To Set A Low Rate Favoring The Services

SEPFF1892. To understand why the current PSS rate is not a fair market value rate – and is below market – one must understand the history of PSS ratemaking. The current statutory rate is derived from (1) royalty rates for musical works, which have been thoroughly discredited as an indicator of sound recording royalty rates, and (2) past policy judgments, including ones based on the marketplace for digital music services 20 years ago. Trial Ex. 501 at ¶ 24(a) (Wazzan Corr. WDT); 5/3/17 Tr. 2301:3-22 (Wazzan). It is clear from a review of the history of PSS rate-setting that the current PSS rate is not a marketplace rate in any sense of that term, and does not provide any meaningful indication of what a market based royalty for sound recording rights for PSS might be. Trial Ex. 501 at ¶¶ 25, 40 (Wazzan Corr. WDT).

SEPFF1893. The Digital Performance Right in Sound Recordings Act of 1995 amended Section 106 of the Copyright Act to give sound recording copyright owners an exclusive right to perform sound recordings publicly by means of digital audio transmissions, subject to certain limitations, including principally the statutory license in Section 114. 17 U.S.C. §§ 106(6), 114. Trial Ex. 501 at ¶ 26 (Wazzan Corr. WDT). The royalty rates and terms for the Section 114 statutory licenses were to be determined by voluntary negotiations among the parties and, where necessary, arbitration conducted under Chapter 8 of the Copyright Act. Trial Ex. 501 at ¶ 26 (Wazzan Corr. WDT).

SEPFF1894. The first proceeding to set Section 114 rates (which we now refer to as "*PSS I*") was conducted during 1996-1998 pursuant to the arbitration provisions then in effect. Trial Ex. 501 at ¶ 27 (Wazzan Corr. WDT). RIAA represented the interests of sound recording copyright owners against three digital music service providers: Digital Cable Radio Associates (DCR) (the provider of the Music Choice service), Digital Music Express, Inc. (the provider of

the DMX service), and Muzak, L.P. (the provider of the DishCD service). *PSS I*, 63 FR at 25395; Trial Ex. 501 at ¶ 27 (Wazzan Corr. WDT).

SEPFF1895. Because the proceeding began very shortly after enactment of the statute creating the digital performance right, no market for licensing sound recording performance rights existed. Accordingly, the parties proposed widely divergent rates based on an array of varying and unsatisfying benchmarks. Trial Ex. 501 at ¶ 28 (Wazzan Corr. WDT).

SEPFF1896. RIAA requested a royalty rate set at 41.5% of a service's gross revenues, which was based on the purchase price of video programming by cable television networks. *PSS I*, 63 FR at 25395-97; *PSS I* CARP Report, Trial Ex. 979 at ¶ 33; Trial Ex. 501 at ¶ 29 (Wazzan Corr. WDT).

SEPFF1897. The services requested a rate of 0.5% to 2.0% of gross revenues. *PSS I*, 63 FR at 25395; *PSS I* CARP Report, Trial Ex. 979 at ¶ 34-36; Trial Ex. 501 at ¶ 30 (Wazzan Corr. WDT). This proposal was based on two benchmarks. The first was fees payable by Music Choice to two affiliated record companies based on their use of sound recordings within the context of the Music Choice (then DCR) partnership agreement, which was entered into before there was any statutory obligation to pay for the use of sound recordings. 5/18/17 Tr. 4518:14-4519:14 (Del Beccaro); Trial Ex. 501 at ¶ 30 (Wazzan Corr. WDT). The other proposed benchmark was the license fees the services paid to performing rights organizations for use of the underlying musical works. *PSS I*, 63 FR at 25396; *PSS I* CARP Report, Trial Ex. 979 at ¶ 124; Trial Ex. 501 at ¶ 30 (Wazzan Corr. WDT). The panel of arbitrators ultimately determined that the services should pay a royalty of 5% of gross revenues. Trial Ex. 501 at ¶ 30 (Wazzan Corr. WDT). It derived this rate from the services' benchmarks. *PSS I*, 63 FR at

25396-97; *PSS I* CARP Report, Trial Ex. 979 at ¶ 126-50; Trial Ex. 501 at ¶ 31 (Wazzan Corr. WDT).

SEPFF1898. The arbitrators were also concerned about the nascent marketplace for digital music services and the participating services' precarious financial condition. *PSS I*, 63 FR at 25406 (referring to concerns about the "continued existence" of the services), 25407 ("it is far from clear whether the Services can survive"), 25408 (services "need to increase [their] subscriber base just to reach a break-even point"); *PSS I* CARP Report, Trial Ex. 979 at ¶ 198(A-B). The services were then the only avenue available for consumers to access digital transmissions of music. *PSS I*, 63 FR at 25407 (referring to the services "opening a new avenue for transmitting sound recordings to a larger and more diverse audience"). As a result, the arbitrators perceived that consumers would be denied access to digital music services if they set a rate that was not sustainable for services that were struggling to find a market. Accordingly, the arbitrators concluded that policy considerations, as applied to the market at the time, suggested that they set a "low" rate favoring the services. *PSS I*, 63 FR at 25406; *PSS I* CARP Report, Trial Ex. 979 at ¶ 198; Trial Ex. 501 at ¶ 32 (Wazzan Corr. WDT).

SEPFF1899. The Register of Copyrights then reviewed the Panel's ruling and ultimately adopted a royalty rate of 6.5%. Trial Ex. 501 at ¶ 33 (Wazzan Corr. WDT). In doing so, the Register concluded that the arbitrators were "arbitrary" in relying on the Music Choice (DCR) partner fee. *PSS I*, 63 FR at 25399. She found that Music Choice's payments to affiliated record companies based on its use of sound recordings "could not accurately reflect the marketplace value of the digital performance right since no such legal right existed at the time the rate was negotiated." *PSS I*, 63 FR at 25409-10; Trial Ex. 501 at ¶ 34 (Wazzan Corr. WDT).

SEPFF1900. Instead, the Register focused on the rates paid for musical works "because these rates represent an actual marketplace value for a public performance right in the digital arena, albeit not the digital performance right in sound recordings." *PSS I*, 63 FR at 25409; Trial Ex. 501 at ¶ 33 (Wazzan Corr. WDT). Finding that the arbitrators were not arbitrary in deciding that Section 801(b)(1) supported setting a "rate favoring the Services," *PSS I*, 63 FR at 25406, and moved by the services' "uphill battle in their struggle to achieve profitability," the Register set a rate close to the 5% level recommended by the arbitrators because that "did not draw an objection from the Services." *PSS I*, 63 FR at 25410.

ii. Musical Works Rates Are An Unreliable Indicator Of The Value Of Sound Recording Rights

SEPFF1901. Even apart from the policy decision in *PSS I* to set a "low" rate favoring the services, *PSS I*, 63 FR at 25406; *PSS I* CARP Report, Trial Ex. 979 at ¶ 198(D), it is clear in retrospect that the musical works benchmark used in *PSS I* as a proxy for a market-based sound recording royalty rate does not actually provide useful information about the value of sound recording rights. In *SDARS II*, the Judges recognized that the *PSS I* decision was based on limited information. 78 FR at 23055; Trial Ex. 501 at ¶ 37(b) (Wazzan Corr. WDT).

SEPFF1902. While Dr. Crawford continues to assert that the musical works benchmark is "the best possible benchmark," Trial Ex. 54 at ¶ 61 (Crawford WDT), even he has to concede that the musical works benchmark has been definitively rejected by the Judges. Trial Ex. 54 at ¶ 60 (Crawford WDT). For that reason, he is not proposing a musical works benchmark in this proceeding. 4/25/17 Tr. 848:6-8 (Crawford).

SEPFF1903. When Dr. Crawford proposed a musical works benchmark in *SDARS II*, the Judges could not have found more decisively that the market for musical works is not probative of royalty rates for sound recording rights:

> [A] benchmark market should involve the same buyers and sellers for the same rights. However, the musical works market involves different sellers (performing rights societies versus record companies) selling different rights. The fact that a PSS needs performing rights to musical works and sound recordings to operate its service does not make the rights equivalent, nor does it say anything about the relative values of those rights.

SDARS II, 78 FR at 23058 (citations omitted); Trial Ex. 501 at ¶ 37(c) (Wazzan Corr. WDT); Trial Ex. 502 at ¶ 11 (Wazzan Corr. WRT).

SEPFF1904. This rejection of the musical works benchmark in *SDARS II* was consistent with prior decisions in webcasting rate proceedings that also rejected the use of musical works rates as a benchmark for sound recording royalties. *Web III*, 76 FR at 13038; *Web II*, 72 FR at 24094-95; *Web I*, 67 FR at 45246-47, 45258-59.

SEPFF1905. Dr. Wazzan opined that the Judges' rejection of Dr. Crawford's musical works benchmark in *SDARS II* was clearly correct. A digital music service provider needs to acquire many inputs to provide its service. These include elements of content that are delivered downstream (*e.g.*, sound recordings, musical works, album cover art, and editorial content such as artist biographies and trivia), infrastructure used to deliver the service (*e.g.*, computer servers and telecommunications), and other inputs (*e.g.*, marketing and the services of programmers for channels). These inputs come from many different sources. It would be illogical to think that the price of editorial content, servers or marketing provides useful information about the price at which a record company would license sound recordings. It would be equally illogical to assume that the price at which a record company would license its sound recordings would be equivalent to the price at which musical work performing rights organizations license their repertoire. That is why Dr. Crawford's own criteria for evaluating benchmarks include having the same sellers, and buying from them the same rights. Trial Ex. 502 at ¶ 12 (Wazzan Corr. WRT); *see also* Trial Ex. 54 at ¶ 50(2), (4) (Crawford WDT).

SEPFF1906. Dr. Crawford acknowledges the obvious facts that performance rights organizations licensing musical works are different sellers than record companies, and are selling a different product. Trial Ex. 54 at ¶ 59 (Crawford WDT). However, he addresses that fundamental problem with only the bald assertion that sound recording royalties should be strictly less than musical work royalties (citing his testimony that the Judges found unpersuasive in *SDARS II*). Trial Ex. 54 at ¶ 59 (Crawford WDT). Dr. Crawford provided no reason to think that ruling might have been incorrect. Trial Ex. 502 at ¶ 13 (Wazzan Corr. WRT). Clearly the statutory PSS rate has its origins in a basis that has now been thoroughly discredited.

iii. PSS Rate Decisions Subsequent To 1998 Were Anchored In The Original *PSS I* Rate

SEPFF1907. Because the *PSS I* rate was based on musical works rates, and the market for musical works is not probative of royalty rates for sound recording rights, all subsequent PSS royalty rate determinations are unreliable indicators of a market rate for sound recordings. Trial Ex. 501 at ¶ 43 (Wazzan Corr. WDT).

SEPFF1908. In 2003, RIAA, the musicians' unions and the PSS reached a settlement of rates and terms for the use of sound recordings by the PSS for the period 2002-2007, which was adopted by the Librarian of Congress. The settled rates were just slightly higher than the rate determined by the Register in *PSS I* – 7% for 2002-2003 and 7.25% for 2004-2007. *Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings by Preexisting Subscription Services*, 68 FR 4744 (2003); *Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings by Preexisting Subscription Services*, 68 FR 39837 (2003); Trial Ex. 501 at ¶ 35 (Wazzan Corr. WDT).

SEPFF1909. In 2007, during the next proceeding to determine PSS rates and terms (*SDARS I*), a settlement was again reached. That settlement continued the 7.25% rate for 2008-

2011, and then provided another small increase, to 7.5%, for 2012. *Adjustment of Rates and Terms for Preexisting Subscription and Satellite Digital Audio Radio Services*, 72 FR 71795, 71796 (2007); *Adjustment of Rates and Terms for Preexisting Subscription and Satellite Digital Audio Radio Services*, 72 FR 61585, 61587 (2007); Trial Ex. 501 at ¶ 36 (Wazzan Corr. WDT).

SEPFF1910. Rates contained in settlement agreements are not necessarily indicative of a market rate—*i.e.*, what a willing buyer and a willing seller would agree to. Trial Ex. 501 at ¶ 41 (Wazzan Corr. WDT). The question is "whether a settlement is arrived at in the shadow of regulatory overhang." 5/3/17 Tr. 2299:20-24 (Wazzan); *see also* 5/3/17 Tr. 2302:25-2303:1 (Wazzan); 5/3/17 Tr. 2309:6-7 (Wazzan). The parties to the 2003 and 2007 PSS settlements would have been aware of the *PSS I* decision and "constrained by that existing rate." 5/3/17 Tr. 2303:4-7 (Wazzan).

SEPFF1911. At the time of the 2003 settlement, the CARP system was still in place for setting statutory royalty rates. By then, one panel of arbitrators had rejected the musical works benchmark. *Web I*, 67 FR at 45246-47, 45258-59. However, there could have been no assurance that a different arbitration panel would not have resuscitated that benchmark. The CARP system was criticized for "the lack of stability and consistency with regard to the . . . reliance on arbitrators instead of permanent judges," which is why Congress "vest[ed] decisionmaking authority in three permanent judges." H.R. Rep. No. 108-408, at 22 (2004). Moreover, Music Choice continued to pursue the musical works benchmark through *SDARS II*, and Dr. Crawford still thinks it is "the best possible benchmark." Trial Ex. 54 at ¶ 61 (Crawford WDT). Music Choice agrees that the 2003 settlement was not "a true willing buyer/willing seller, marketplace transaction reflecting fair market value." Trial Ex. 55 at 10-11 (Del Beccaro WDT).

SEPFF1912. By the time of the 2007 settlement, responsibility for setting statutory royalty rates had been transferred to the Judges. Copyright Royalty and Distribution Reform Act, Pub. L. No. 108-419, 118 Stat. 2341 (2004). During the direct trial opening statements in *SDARS I*, the Judges encouraged the parties to try to negotiate a settlement. Trial Ex. 55 at 11 (Del Beccaro WDT). A prediction at that time that if the rates were litigated, the Judges would set a rate similar to the then-current rate would have been a reasonable one, given the outcome in *SDARS II*.

SEPFF1913. As Mr. Del Beccaro explained, rate "proceedings cost millions of dollars in legal and expert fees *for each party*." Trial Ex. 55 at 12 (Del Beccaro WDT) (emphasis added). Accordingly, it can be rational for the parties to settle "to avoid incurring attorney's fees or other litigation expenses" without making the settlement a reliable indicator of fair market value. *Vardon Golf Co. v. BBMG Golf Ltd.*, 156 F.R.D. 641, 651 (N.D. Ill. 1994); Trial Ex. 501 at ¶ 41 (Wazzan Corr. WDT).

SEPFF1914. Because of the regulatory overhang of the *PSS I* decision, Dr. Wazzan found that the PSS settlements do not provide useful information about a market rate for the PSS. 5/3/17 Tr. 2302:18-24 (Wazzan). Instead, he found them to be "anchored in the original *PSS I* decision, and thus more reflective of the parties' predictions of how the Judges would adjust that rate and other considerations . . . than of a marketplace royalty rate for the use of sound recordings in a PSS." Trial Ex. 501 at ¶ 42 (Wazzan Corr. WDT); *see also* 5/3/17 Tr. 2309:6-9 (Wazzan).

SEPFF1915. In the most recent proceeding to determine PSS rates and terms (*SDARS II*), the Judges determined that the appropriate royalty rates for the PSS were 8% of gross revenues for 2013 and 8.5% for 2014 through 2017. *SDARS II*, 78 FR at 23061; Trial Ex.

501 at ¶ 37 (Wazzan Corr. WDT). Music Choice requested a rate of 2.6% of gross revenues, based on its payments for musical works. *SDARS II*, 78 FR at 23056. As noted above, the Judges thoroughly rejected reliance on the musical works benchmark, both as a matter of law and as a matter of fact. *SDARS II*, 78 FR at 23055, 23058; Trial Ex. 501 at ¶ 37(a)-(c) (Wazzan Corr. WDT). SoundExchange requested higher rates derived from an examination of over 2,000 marketplace agreements. *SDARS II*, 78 FR at 23057. The Judges also rejected this benchmark, finding that the marketplace agreements SoundExchange's expert analyzed concerned music products and services that were not comparable because the buyers were different from the target PSS market. *SDARS II*, 78 FR at 23058; Trial Ex. 501 at ¶ 37(d) (Wazzan Corr. WDT).

SEPFF1916. The Judges were thus left with no basis in the record for starting their analysis with anything other than the existing 7.5% royalty rate, although they acknowledged that it was not "a market benchmark rate." *SDARS II*, 78 FR at 23058. Perceiving a lack of evidence that the rate was too high or too low, they proceeded to apply the Section 801(b)(1) objectives to that rate. Because of a planned channel expansion, the Judges determined as a policy matter that it would be fair to increase the rate by one percentage point (in two steps). *SDARS II*, 78 FR at 23058-60; Trial Ex. 501 at ¶ 37(e) (Wazzan Corr. WDT).

SEPFF1917. Dr. Wazzan believes it is clear from this history that the current PSS rate is not a marketplace rate in any sense of that term. Trial Ex. 501 at ¶ 40 (Wazzan Corr. WDT). In *SDARS II*, the Judges recognized unequivocally that the PSS rate should not be derived from the musical works rate, because "the fact that a PSS needs performing rights to musical works and sound recordings to operate its service does not make the rights equivalent, nor does it say anything about the relative values of those rights." *SDARS II*, 78 FR at 23058.

SEPFF1918. Although the current PSS rate was not *directly* based on the musical works rate, it was *indirectly* based primarily on that rate. After all, the 8.5% rate was derived from the then-existing rate based on the 801(b)(1) objectives. Although that rate was itself the product of two settlements, it represented only a modest increase over the original 1998 PSS rate, which was derived primarily from the musical works rate, and secondarily a policy decision to set a "low" rate favoring the services based on the digital music environment and the services' financial condition in the late 1990s. Trial Ex. 501 at ¶¶ 40, 43 (Wazzan Corr. WDT).

SEPFF1919. Even now, after a few incremental increases over the 20 years since the *PSS I* decision, the statutory royalty rate for the PSS is only 8.5%. 37 C.F.R. § 382.3(a). That is only about [[redacted]] times Music Choice's effective musical work performance royalty rate of [[redacted]]. Trial Ex. 55 at 9 (Del Beccaro WDT); Trial Ex. 501 at ¶ 39 & n.49 (Wazzan Corr. WDT). As described in Section XIII.B.3.iv below, sound recording royalty rates are generally a much larger multiple of musical works royalty rates. It is "obvious" that a few incremental increases in the rate have not broken the linkage between the current rate and the discredited musical works benchmark. 5/3/17 Tr. 2303:11-14 (Wazzan); *see also* Trial Ex. 501 at ¶ 39 (Wazzan Corr. WDT).

SEPFF1920. That conclusion does not necessarily mean that *PSS II* was wrongly decided based on the record available and application of the Section 801(b)(1) objectives at the time. 5/3/17 Tr. 2305:2-11 (Wazzan). However, it does mean that the current PSS rate should be understood as a product of its history rather than a product of market forces. The Judges must look elsewhere to discern the market value of a license for the use of sound recordings in a PSS. Trial Ex. 501 at ¶ 43 (Wazzan Corr. WDT).

iv. Sound Recording Royalty Rates For Other Types Of Services Are A Significant Multiple Of Musical Work Rates

SEPFF1921. While the current PSS rate is only a small increment over Music Choice's effective musical works rate, in other cases where both sound recording and musical work performance rights apply and rate information is available, sound recording rates are a significant multiple of musical work rates. 5/3/17 Tr. 2303:11-18 (Wazzan); 5/3/17 Tr. 2383:13-16 (Wazzan).

SEPFF1922. Publicly-available information about the musical work royalties paid by digital music services is scarce. However, Dr. Wazzan was able to find relatively recent information for Spotify and Pandora that allowed him to compare their sound recording and musical work royalty rates. Trial Ex. 501 at ¶ 39 nn. 47-48 (Wazzan Corr. WDT).

SEPFF1923. In the case of Spotify's interactive streaming service, Dr. Wazzan found that its sound recording royalty payments were almost five times its corresponding musical work payments. This was based on comments Spotify filed in the Copyright Office explaining that it "currently pays around 70% of its revenue to rightsholders, with payments for the right to make available compositions receiving about 21% of the amount that the record labels get in accordance with the statutory rate." Comments of Spotify USA Inc. in Copyright Office Docket No. 2014-03, at 13 (May 23, 2014). When Spotify refers to the statutory rate in the language quoted above, it appears that Spotify is referring to the all-in (performance and reproduction/distribution) rate for interactive streaming currently provided in the Judges' "mechanical" rate regulations at 37 C.F.R. § 385.13(a)(3), (b)(2). To be clear, Spotify's musical works data includes both performance royalties and reproduction/distribution royalties. However, the payments to sound recording copyright owners presumably do as well, so this

reflects a reasonable comparison of the value of the sound recording and musical work rights involved. Trial Ex. 501 at ¶ 39 n.47 (Wazzan Corr. WDT).

SEPFF1924. In the case of Pandora's noninteractive streaming service, Dr. Wazzan found that its sound recording royalty payments were approximately 13 times its corresponding musical work payments. ASCAP provided the data in comments it filed in the Copyright Office:

> In fiscal year 2013, Pandora paid to SoundExchange, the digital performance rights organization that collects and distributes royalties to record labels and recording artists for the use of sound recordings by digital services, thirteen times what it paid to songwriters and publishers for the same exact performances of their musical works (55.9% of total revenue for sound recordings but only 4.3% of its total revenue for musical works).

Comments of ASCAP in Copyright Office Docket No. 2014-03, at 27-28 (May 23, 2014); *see also Broadcast Music, Inc. v. Pandora Media, Inc.*, 140 F. Supp. 3d 267 (S.D.N.Y. 2015) (setting BMI rate of 2.5% of revenues); *In re Pandora Media*, 6 F. Supp. 3d 317 (S.D.N.Y. 2014) (setting ASCAP rate of 1.85% of revenues), *aff'd* 785 F.3d 73 (2d Cir. 2015). Pandora subsequently reached new agreements with ASCAP and BMI at undisclosed rates. However, Dr. Wazzan thought it unlikely that Pandora agreed to pay a higher rate than had just been determined by the rate court, at least in the short term. Trial Ex. 501 at ¶ 39 n.48 (Wazzan Corr. WDT).

SEPFF1925. Each of these comparisons involves at least one set of regulated rates, so these multiples do not necessarily reflect the marketplace either. Nonetheless, these large multiples are notable when compared with the PSS. Trial Ex. 501 at ¶ 39 (Wazzan Corr. WDT). The data can be visualized graphically as follows:

Comparison of Sound Recording and Musical Works Rates

[RESTRICTED]

Source: Trial Ex. 501 at ¶ 39 & nn.47-49 (Wazzan Corr. WDT).

SEPFF1926. The Judges have previously noted empirical evidence of differences between the sound recording and musical works markets. *Web II*, 72 FR at 24095.

SEPFF1927. Almost 20 years after the *PSS I* decision, the sound recording statutory royalty rate for the PSS is only about [ ] times Music Choice's effective musical work performance royalty rate of [ ]. Trial Ex. 55 at 9 (Del Beccaro WDT); Trial Ex. 501 at ¶ 39 & n.49 (Wazzan Corr. WDT). That low multiple provides yet another reason to doubt that the current PSS rates reflect the marketplace. Trial Ex. 501 at ¶ 39 (Wazzan Corr. WDT).

v. Record Companies Would Not Agree To License At The Current PSS Rates

SEPFF1928. In this proceeding, Mr. Del Beccaro takes the patronizing view that record companies should gladly want to slash Music Choice's royalty rates, but simply don't understand their own interests as well as he does. Trial Ex. 55 at 37 (Del Beccaro WDT) ("It is

in everyone's interest to provide the requested rate relief to Music Choice."); Trial Ex. 55 at 35 (Del Beccaro WDT) ("[t]he lawyers on the digital rights side of the companies do not understand that by driving our rights costs up they are cutting off their noses to spite their faces.").

SEPFF1929. However, at trial Mr. Del Beccaro had to acknowledge the reality that record companies would not voluntarily license Music Choice at a royalty rate equal to, or below, the current statutory PSS rate. They would insist on a higher royalty rate. As Mr. Del Beccaro explained:

> [F]rom a practical standpoint, there is no chance that the major labels would discuss with us a lower rate. They wouldn't even – it is such a non-concept. You know, they – we have discussed audio rates many times and as recently as March in detail, and they do not want to discuss a compromise rate or anything like that. They have simply tried to get us to pay higher rates.

5/18/17 Tr. 4645:6-18 (Del Beccaro).

SEPFF1930. Again Mr. Del Beccaro stated:

> [T]he major record companies are not going to open a negotiation with us and talk about a lower rate. You know, they already have in their minds, it is a floor, it is too low, so their conversations are always we should have it higher.

5/18/17 Tr. 4620:23-4621:3 (Del Beccaro); *see also* 5/18/17 Tr. 4655:9-12 (Del Beccaro) (agreeing that "the record companies think that the PSS rates are too low").

SEPFF1931. Thus, it is not surprising that in the case of Music Choice's video services, it pays sound recording royalties at negotiated rates [ ]. Trial Ex. 55, at 21 (Del Beccaro WDT). Specifically:

[

SEPFF1932. There are good reasons why Mr. Del Beccaro is wrong about a record company's interests and motivations in negotiating with Music Choice. The issue, as Mr. Walker explained it, is that the PSS essentially give away what Sony considers to be a premium product – 24x7 music with no in-stream advertising and little or no on-screen advertising – and Music Choice offers no migration path for users to a higher-revenue offering. Trial Ex. 50 at ¶ 19 (Walker WRT).

SEPFF1933. Music Choice subscribers consume a massive amount of that premium product. Using Music Choice listenership data from Trial Ex. 934, Dr. Wazzan calculated total Music Choice listening to be on the order of [

[redacted] Trial Ex. 502 at ¶ 60 n.81 (Wazzan Corr. WRT).

SEPFF1934. However, the statutory license percentage rate structure does not require PSS to monetize that heavy usage effectively, and their services generate much less per-user revenue than any other type of royalty-paying service. Trial Ex. 32 at ¶ 30 (Harrison WDT); Trial Ex. 50 at ¶ 19 (Walker WRT). In fact, Music Choice's PSS statutory royalty payment amounts to only about [redacted] cents per listener per year. Trial Ex. 59 at ¶ 265 (Crawford WRT); *see also* Trial Ex. 502 at ¶ 57 & n.75 (Wazzan Corr. WRT).

SEPFF1935. That small annual per-subscriber royalty stands in sharp contrast to annual royalty revenue per user from other types of services. Annual per-user royalty revenue from subscription interactive and noninteractive music services is approximately [redacted] and [redacted], respectively. For nonsubscription noninteractive services, the annual per-user revenue is [redacted]. Trial Ex. 502 at ¶ 57 (Wazzan Corr. WRT); Trial Ex. 28 at ¶ 41,Table 2 (Willig WDT). For a CABSAT service, the annual per-subscriber royalty for 2017 is 22.2 cents. 37 C.F.R. § 383.3(a)(1)(ii) (1.85 cents per month x 12 = 22.2 cents per year).

SEPFF1936. Mr. Walker explained that in thinking about licensing any digital music service business partner, Sony would place a high priority on making sure that the potential licensee has a sound monetization strategy and the potential to generate significant per-user revenues, particularly where there is risk that the service will cannibalize use of other more profitable services. That is a significant issue for the PSS, where "[i]t would require migration of only a trivial portion of Music Choice usage to higher-paying services for record companies and artists to receive the same revenue they currently earn from the PSS under the statutory license." Trial Ex. 502 at ¶ 59 (Wazzan Corr. WRT).

SEPFF1937. As described at length in Section V, sellers incur an opportunity cost when sales in one market substitute for or diminish sales in other markets. Trial Ex. 8 at 19 (Shapiro WDT). As Professor Willig put it, opportunity costs are incurred when "sales through one distribution channel reduce (substitute for, or 'cannibalize') sales through other distribution channels (thereby reducing compensation earned by content creators from those other channels . . . .)." Trial Ex. 46 at ¶ 20 (Willig WRT).

SEPFF1938. Economists in this proceeding broadly agree that opportunity costs represent a floor below which a willing seller in an unregulated market will not price its products. Professor Shapiro put it this way: "Professor Willig and I are in agreement in one very important respect. We both are of the view that a critical factor in determining the rate at which a record company will license its music to a music service is the opportunity cost to that record company of having its music played on that service." Trial Ex. 9 at 34 (Shapiro WRT). Professor Farrell agreed that, in an unregulated market, a record label would not agree to license its catalogue at less than its opportunity cost. 4/24/17 Tr. 662:21-663:1 (Farrell).

SEPFF1939. For these reasons, Mr. Walker explained that Sony "would much rather have users use the basic tier of a free, ad-supported digital radio service, rather than a PSS, because such services are more effective at monetizing our recordings and pay royalties at a much higher rate. Even though they do not generate nearly as much per-user revenue for us as mid-tier or on-demand services, they generate much more per-user revenue for us than the PSS." Trial Ex. 50 at ¶ 18 (Walker WRT).

SEPFF1940. One additional opportunity cost of PSS is presented by the CABSAT services. With Stingray actively competing for MVPD customers and willing to pay the CABSAT rates, it would be foolish for record companies to license a PSS at the current statutory

PSS rates when Stingray is prepared to pay almost [ ] times as much on a per-subscriber basis. *See* 5/3/17 Tr. 2350:3-10 (Wazzan) ([ ]).

SEPFF1941. Mindful of the risk of cannibalization presented by a hypothetical PSS license, Mr. Walker testified that Sony "certainly" would not license a PSS "at anything like the current statutory rate." Trial Ex. 50 at ¶ 16 (Walker WRT). Mr Harrison agreed that "the pricing makes no sense for a record company in the current environment." Trial Ex. 32 at ¶ 30 (Harrison WDT).

vi. Music Choice Has Not Even Sought Direct Licenses At Less Than The Current PSS Rate

SEPFF1942. A good sign that the current statutory PSS rate is below-market is the lack of direct license agreements for PSS. If the statutory rate was above market, one would expect to see the marketplace respond with direct license agreements at lower rates. If the statutory rate was below market, however, one would expect to see no agreements, because services would be motivated to rely on the statutory license. They would not tend to seek, and licensors would not be motivated to grant, licenses at lower rates. Thus, the absence of agreements suggests that the PSS statutory rate is likely below market. Trial Ex. 501 at ¶ 47 (Wazzan Corr. WDT); 5/3/17 Tr. 2302:13-17 (Wazzan).

SEPFF1943. One would certainly expect to see direct licenses if the statutory PSS rate were above market by as much as Music Choice claims. 5/3/17 Tr. 2302:3-17 (Wazzan). Dr. Crawford calculates that "the royalty that would arise in the hypothetical market for PSS sound recording performance rights is 3.5% of residential audio service revenues and under no circumstances would be higher than 5.6% of residential audio service revenues." Trial Ex. 54 at

¶ 17 (Crawford WDT). Dr. Crawford's 3.5% rate is only 41% of the current 8.5% statutory rate. 37 C.F.R. § 382.3(a).

SEPFF1944. If Dr. Crawford were right that willing record company sellers would happily enter into direct licenses at a rate 59% less than the current statutory PSS rate, Music Choice "would reject it [the statutory rate]. They would say it's above market, it's not a fair price, I'm not going to pay it. And then you would see direct licenses would occur that are below that rate." 5/3/17 Tr. 2302:5-14 (Wazzan). Music Choice's incentives to pursue such licenses are clear: Music Choice could have saved [ ] annually based on its 2015 PSS royalty payment of [ ] if it had entered into direct licenses at a 59% discount from the current statutory PSS rate. Trial Ex. 29 at 15-16 (Bender WDT).

SEPFF1945. [ ] Trial Ex. 55 at 29 (Del Beccaro WDT); 5/18/17 Tr. 4546:16-19 (Del Beccaro).

SEPFF1946. [ ] 5/18/17 Tr. 4618:7-4619:3 (Del Beccaro); 5/18/17 Tr. 4546:20-25 (Del Beccaro).

SEPFF1947. [ ]

e.

4. Adoption Of The CABSAT Per-Subscriber Rate Structure Is Justified By Music Choice's And Muzak's Pricing Practices

SEPFF1948. Just as SoundExchange proposes that a per-subscriber rate be part of the royalty rate structure for SDARS (*see* Section XII.A above), SoundExchange proposes employing a per-subscriber rate for PSS.

SEPFF1949. The principal reason for that is that the benchmark CABSAT rates are a per-subscriber rate. 37 C.F.R. § 383.3(a)(1). One could certainly entertain converting them to a percentage rate. Dr. Crawford estimates that Music Choice would pay between [ ] under SoundExchange's rate proposal. Trial Ex. 59 at ¶ 113 (Crawford WRT). Similarly, dividing Stingray's [ ] in 2015 CABSAT statutory royalties by its reported 2015 CABSAT revenues of [ ] yields an effective percentage rate just under [ ]. Trail Ex. 1017 at SoundX 000145808. However, there should be good reasons to make such a conversion. Here, there are not.

SEPFF1950. First, a per-subscriber rate is the metric by which Music Choice is paid by its MVPD customers. Trial Ex. 54 at ¶ 15 (Crawford WDT); Trial Ex. 55 at 22-23 (Del

Beccaro WDT); 5/18/17 Tr. 4530:13-4531:13 (Del Beccaro) ([ ]). [ ] Trial Ex. 54 at ¶ 119 (Crawford WDT). By seeking a per-subscriber rate, SoundExchange is asking for nothing more than the simplicity and assurance that Music Choice seeks for its own benefit when it negotiates with MVPDs in the free market. Artists and record companies are of course forced sellers under the statutory license, but this proceeding is akin to Music Choice's renegotiations with its MVPD customers. Artists and record companies should receive the same kind of revenue protection from the PSS that lie downstream from them that Music Choice does in its market negotiations.

SEPFF1951. A per-subscriber rate is easier to apply than a percentage rate. Trial Ex. 26 at ¶ 27 (Orszag Am. WDT). By contrast, the current percentage rate structure requires allocation of revenues. Music Choice's video-on-demand service is always bundled with its PSS service. Trial Ex. 54 at ¶ 146 (Crawford WDT). Thus, to isolate just "monies derived from the operation of the programming service of the Licensee," 37 C.F.R. § 382.2 (definition of Gross Revenues) requires a complicated allocation of its bundle revenue. Trial Ex. 54 at ¶¶ 147-48 (Crawford WDT). The Judges have recognized that a "penny-rate structure . . . will result in fewer overall transaction cost issues." *Phonorecords I*, 74 FR at 4517.

SEPFF1952. As described in Section XII.A above), such allocations can give rise to disputes. While such disputes have not materialized between SoundExchange and Music Choice in recent memory, that may simply be because Music Choice has not been audited under the statutory license for over a decade. Trial Ex. 48 at 28 n.12 (Bender WRT). An audit has just recently commenced. Notice of Intent to Audit, 82 FR 7878 (2017). It is clear from Dr.

Crawford's description of the allocation issues that such allocations are a matter upon which people could disagree. Trial Ex. 54 at ¶¶ 146-48 (Crawford WDT).

SEPFF1953. A per-subscriber metric is also more transparent. The Judges have previously recognized that reasonable rates and terms should be "methodologically transparent." Underpayment Decision, No. 2006-1 CRB DSTRA, at 12-13; *see also SDARS II*, 78 FR at 23073. Transparency of royalty payments is important in a statutory license context, because the statutory license operates on the honor system. SoundExchange receives only minimal rate calculations on licensees' statements of account. Trial Ex. 48 at 13 (Bender WRT). As a result, SoundExchange does not typically have visibility into allocations and other details of royalty calculation until it conducts an audit, at its own expense, and sometimes with a fair bit of resistance from the licensee. Trial Ex. 48 at 13 (Bender WRT). With a per-subscriber metric, the royalty calculations are more straightforward and obvious than with a percentage rate involving allocations that are not disclosed to SoundExchange.

SEPFF1954. Marketplace agreements generally use both a percentage-of-revenue and a per-subscriber metric (and often, where feasible, a per-play rate as well) and require the distribution service to pay under the metric that yields the highest royalties. Trial Ex. 26 at ¶ 27 (Orszag WDT).

SEPFF1955. Dr. Crawford argues that a percentage of revenue metric is more flexible. Trial Ex. 59 at ¶ 186 (Crawford WRT). However, the flexibility that Music Choice seeks is the flexibility to continue slashing the price of the music it distributes while artists and copyright owners receive less and less. When Music Choice first launched, it was sold as a premium, ala carte, service to cable subscribers, and Music Choice charged MVPDs an affiliate

fee of $3.95 per subscriber per month. It quickly cut its affiliate fee to $2.50 per subscriber per month. Trial Ex. 55 at 22 (Del Beccaro WDT); *PSS I* CARP Report, Trial Ex. 979 at ¶ 54.

SEPFF1956. By the time of the *PSS I* CARP proceeding, Music Choice was "repositioning Music Choice as a basic and near-basic service." *PSS I* CARP Report, Trial Ex. 979 at ¶ 55. Its standard-tier pricing was between 20 and 35 cents per subscriber per month, and averaged [[redacted]] per subscriber per month. Trial Ex. 55 at 23 (Del Beccaro WDT); *PSS I* CARP Report, Trial Ex. 979 at ¶ 55. At the 6.5% rate adopted in *PSS I*, that [[redacted]] fee corresponded to a statutory royalty payment of [[redacted]] per subscriber per month. By the time of the *SDARS II* proceeding, Music Choice's average affiliate fee revenue was down to [[redacted]] per customer. Trial Ex. 55 at 23 (Del Beccaro WDT). At the 8% rate applicable for the first year of the *SDARS II* rate period, that corresponded to a statutory royalty payment of [[redacted]] per subscriber per month. Music Choice's average affiliate fees have continued to fall since. Trial Ex. 55 at 23 (Del Beccaro WDT).

SEPFF1957. In *Phonorecords I*, the Judges rejected an argument for flexibility just like the one made by Dr. Crawford, explaining that such price cutting may mean that a percentage of revenues is a poor proxy for measuring the value of the usage involved, and that the Section 801(b)(1) objectives require protecting copyright owners from the effects of such price cutting by statutory licensees:

> [T]his purported business flexibility "advantage" raises serious questions of fairness precisely because the percentage of revenue metric may be a less than fully satisfactory proxy for measuring more usage or the actual intensity of the usage of the rights in question. It is not fair to fail to properly value the reproduction rights at issue in this proceeding. Such a result is at odds with the stated policy objective of the statute to afford the copyright owner a fair return for his creative work.

Phonorecords I, 74 FR at 4517.

SEPFF1958. It would be even less fair for the Judges, applying the same Section 801(b)(1) standard, to restrict the downstream pricing flexibility of record companies (in the cases in which they control their pricing) by locking them into fixed per-unit costs upstream as happened in *Phonorecords I*, and then to provide record companies' downstream licensees the PSS a percentage rate allowing infinite flexibility to discount the price they pay record companies (when record companies are forced sellers) as Music Choice proposes here.

SEPFF1959. In addition, both Music Choice and Muzak have charged certain of their affiliates prices that do not reflect the full value of the music service being delivered, which makes it inappropriate to employ a percentage-of-revenue metric. Trial Ex. 501 at ¶ 90 (Wazzan Corr. WDT). Each of those issues is discussed in further detail below.

i. Music Choice Has Not Charged Its Partners Arm's-Length Prices

SEPFF1960. Music Choice is partially owned by cable companies – including Comcast, Time Warner Cable, and Cox – and it is undisputed that Music Choice charges lower prices to its MVPD owners than to other MVPDs. Trial Ex. 501 at ¶ 91 (Wazzan Corr. WDT); Trial Ex. 59 at ¶ 198 (Crawford WRT). For example, in 2016, Music Choice's partners all paid [[redacted]] per subscriber per month. The weighted average (based on the number of subscribers) was [[redacted]] for non-partners, with a minimum of [[redacted]]. Trial Ex. 502 at ¶ 85 (Wazzan Corr. WRT). However, the parties disagree concerning why that is. Trial Ex. 59 at ¶¶ 200-05 (Crawford WRT).

SEPFF1961. Dr. Crawford asserts that the pattern of pricing observed by Dr. Wazzan "is perfectly consistent with the widespread practice of providing quantity discounts to the largest cable companies by owners of content distributed on cable systems." This issue arose late in *SDARS II*, and indeed the Judges concluded that "the differences in subscriber fees

between affiliates and non-affiliates *could be* unrelated to the operator's status vis-à-vis Music Choice." *SDARS II*, 78 FR at 23061 (emphasis added). However, on the more complete record that SoundExchange has been able to develop concerning this issue in this proceeding, it is evident that Music Choice is not charging its partners arm's-length prices.

SEPFF1962. In fact, at trial, Mr. Del Beccaro [ ] 5/18/17 Tr. 4581:1-3 (Del Beccaro) ([ ]). A close review of Music Choice documents confirms that Music Choice's partner fees are not arm's-length, and are almost certainly below market. In view of that, the CABSAT benchmark should not be converted to a percentage rate.

a. Music Choice's Partners Have Significant Strategic Interests in Music Choice and Commercial Arrangements With It

SEPFF1963. Dr. Crawford asks rhetorically "why would Music Choice's other owners agree to a 'sweetheart' deal with Cox if it reduced the value of the company?" Trial Ex. 59 at ¶ 201 (Crawford WRT). The answer is that Music Choice's partners are not mere financial investors. Instead, from the very beginning, its partners have participated in Music Choice for strategic reasons. [ ] The mix of strategic and investment goals makes the economics of the commercial arrangements inherently suspect.

SEPFF1964. To get a full picture of this issue, one needs to examine the history of investments in Music Choice in some detail. Music Choice provided detail concerning its investment history in an interrogatory response. Trial Ex. 504 at 5-10. At trial, Mr. Del Beccaro confirmed that he had reviewed this response before it was submitted. 5/18/17 Tr. 4634:9-11 (Del Beccaro). The following paragraphs unpack this information chronologically.

SEPFF1965. Music Choice was formed as a stand-alone entity on March 1, 1991. Trial Ex. 55 at 2 (Del Beccaro WDT); Trial Ex. 504 at 10. [

SEPFF1966. [ ] The Music Choice service launched to customers sometime that year. Trial Ex. 55 at 6 (Del Beccaro WDT).

SEPFF1967. [

]

SEPFF1968. [

]

SEPFF1969. [

] Beyond the mere dollars paid to the record companies however, they received both (1) the ability to announce that for the

first time, an entity performing sound recordings was paying royalties to sound recording copyright owners, something terrestrial radio broadcasters had refused to do, and (2) the partnership's support for congressional enactment of the digital performance right. Trial Ex. 55 at 8 (Del Beccaro WDT); *PSS I* CARP Report, Trial Ex. 979 at ¶ 165; *PSS I*, 63 FR at 25401-02. At trial, Mr. Del Beccaro agreed that the value the record companies received was significant, calling it "a major concession." 5/18/17 Tr. 4518:14-23 (Del Beccaro).

SEPFF1970. There is no reason to think that the MVPD partners investing in Music Choice did any less well with respect to their own strategic and commercial interests. [Pursuant to that agreement, *it received the service free for five years*. *PSS I* CARP Report, Trial Ex. 979 at ¶¶ 162-166.

SEPFF1971. [In 2012, EMI's record label business was sold to UMG, and its music publishing business was sold to an investor consortium. Trial Ex. 442 at MC0016911; Trial Ex. 501 at ¶ 92(b) (Wazzan Corr. WDT).

SEPFF1972. [ ]

SEPFF1973. [

]

SEPFF1974. [

]

SEPFF1975. Over the course of this proceeding, there has been some controversy about whether Music Choice was or was not majority owned by its cable company partners at a particular time. [

] Mr. Del Beccaro testified that at a later date it may have been in the 49-50% range. 5/18/17 Tr. 4638:11-4639:13 (Del Beccaro). [

] 5/18/17 Tr. 4638:18-4639:3 (Del Beccaro). Ultimately, Dr. Wazzan concluded that "it doesn't matter if they are majority-owned or significantly-owned." 5/3/17 Tr. 2363:24-25 (Wazzan). As explored further below, this isn't a case where a majority overrode the will of the minority. [

]

SEPFF1976. [ ] For Jerrold, it was launching a business it had spent four years incubating, getting outside investment, and [ ]. For Comcast, Continental, Cox and Time Warner (through its Time Warner Cable subsidiary), it was being among the entities controlling a new television content supplier for their cable systems and among the first cable systems to offer digital music. In the case of the record company affiliates, it was securing a digital performance right and opening a new market for their recordings.

SEPFF1977. [ ] In the case of Time Warner Cable, its affiliation agreement provided five years of *free* carriage. *PSS I* CARP Report, Trial Ex. 979 at ¶¶ 162-66. Presumably the other MVPD partners did not invest on terms that were unfavorable to their strategic and commercial interests.

SEPFF1978. In *PSS I*, the Register rejected reliance as a benchmark on the fee paid by Music Choice to WMG and Sony incidental to the partnership agreement, for two reasons: (1) the Register perceived the non-monetary benefits the record companies received for their campaign for a performance right as being extremely valuable; and (2) the participants in *PSS I* agreed that the agreement to pay a royalty "was merely one of eleven interdependent co-equal agreements which together constituted the partnership agreement." *PSS I*, 63 FR at 25401-02. The Register "recogniz[ed] that complex transactions encourage tradeoffs among the various

provisions and lead to results that most likely differ from those that would result from a separately negotiated transaction." *PSS I*, 63 FR at 25402. As a result, the Register was troubled by the "strong ties between provisions in a negotiated document [that] raise the question of how much give-and-take occurred in negotiating the final terms." *PSS I*, 63 FR at 25402.

SEPFF1979. The Judges should be similarly troubled by any other arrangements between Music Choice and its partners. From its formation, the Music Choice partnership has always been about the partners cooperating to pursue their respective strategic and commercial interests. Because of the possible tradeoffs involved among the investment, strategic and commercial aspects of the partners' Music Choice arrangements, the Register held that the commercial arrangements associated with the record company-affiliated investments "most likely differ from those that would result from a separately negotiated transaction" and so were not reliable as an indication of fair market value. *PSS I*, 63 FR at 25402. For the same reason, the Judges should be suspicious of commercial arrangements between Music Choice and its MVPD partners.

b. Carriage by Music Choice's MVPD Partners Is Linked To Partnership Status

SEPFF1980. The grounds for suspicion inherent in the Music Choice partnership structure are confirmed by the history and details of its partner affiliate agreements. In the late 1990s, about the time of *PSS I*, Music Choice repositioned its service from being a premium, a la carte offering to being a basic cable inclusion. Trial Ex. 55 at 22 (Del Beccaro WDT); *PSS I* CARP Report, Trial Ex. 979 at ¶¶ 54-55.

SEPFF1981. [[redacted]

SEPFF1982. [

Where there were strategic and investment considerations in the mix, such as not triggering the loss of their sunk investments in the partnership, as well as commercial pricing considerations, the possibility of tradeoffs could "lead to results that most likely differ from those that would result from a separately negotiated transaction." *PSS I*, 63 FR at 25402.

SEPFF1983. [

SEPFF1984. [

[redacted]

SEPFF1985. [redacted] That is consistent with Music Choice's pricing at the time of the *PSS I* proceeding, which had just concluded. At that time, Music Choice's standard-tier pricing was between 20 and 35 cents per subscriber per month. Trial Ex. 55 at 23 (Del Beccaro WDT); *PSS I* CARP Report, Trial Ex. 979 at ¶ 55.

SEPFF1986. [redacted]

SEPFF1987. [

SEPFF1988. [

SEPFF1989. Music Choice claims that its MVPD partner affiliate fees are simply a function of their size at the time their contracts were entered into. Trial Ex. 59 at ¶¶ 202-04 (Crawford WRT).

SEPFF1990.

[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	

Trial Ex. 410, Sch. B at MC0012248. [redacted]

SEPFF1991. [redacted]

SEPFF1992. [redacted]

SEPFF1993. [

SEPFF1994. [

SEPFF1995. App

SEPFF1996.

SEPFF1997.

SEPFF1998. [However, this theory is contradicted by his own testimony. [Trial Ex. 57 at 6 (Del Beccaro WRT); *see also* 5/18/17 Tr. 4574:22-4575:5 (Del Beccaro); 5/18/17 Tr. 4578:1-5 (Del Beccaro). Indeed, Mr. Del Beccaro characterized what they did as "basically giv[ing] away its residential business," Trial Ex. 57 at 7 (Del Beccaro WRT), and characterized the price they pay as "an almost free price." Trial Ex. 57 at 8 (Del Beccaro WRT). Dr. Crawford reiterates that "the rates DISH Network and DirecTV pay for these residential services are below-market rates in the context of a stand-alone residential service." Trial Ex. 59 at ¶ 37 (Crawford WRT).

SEPFF1999. [

[redacted]

[redacted]]

ii. Muzak Has Charged Artificially Low Affiliate Fees To Obtain Collateral Benefits

SEPFF2000. [redacted] Trial Ex. 57 at 6 (Del Beccaro WRT) *see also* Trial Ex. 59 at ¶ 76 n.67 (Crawford WRT); 5/18/17 Tr. 4574:22-4575:5 (Del Beccaro); 5/18/17 Tr. 4578:1-5 (Del Beccaro). Dr. Crawford reiterates that the rate DISH Network pays Muzak is "below-market . . . in the context of a stand-alone residential service." Trial Ex. 59 at ¶ 37 (Crawford WRT).

SEPFF2001. As Mr. Del Beccaro explained, Muzak's business establishment service had high satellite costs in the 1980s and 1990s, including broadcast centers, playback facilities, and uplink facilities, as well as expensive receiver systems. Trial Ex. 57 at 6 (Del Beccaro WRT). Muzak's solution to that problem was "to basically give away its residential business to DISH in exchange for a long-term deal to use DISH's satellite infrastructure for Muzak's more important commercial background business. This allowed Muzak to shut down its expensive, dedicated commercial satellite platform and use DISH's playback, uplink, and satellites for free." Trial Ex. 57 at 7 (Del Beccaro WRT); *see also* Trial Ex. 59 at ¶ 36 (Crawford WRT). Mr. Del Beccaro characterized the price Muzak pays as "an almost free price." Trial Ex. 57 at 8 (Del Beccaro WRT).

SEPFF2002. Muzak has withdrawn from this proceeding, but it nonetheless will be able to rely on the PSS rates determined in this proceeding. Trial Ex. 29 at 16-18 (Bender WDT). It is plainly unfair to artists and copyright owners for Muzak to "give away" its PSS

service, while receiving hugely valuable benefits that are not captured by the percentage-of-revenue metric used in the current PSS rate structure, and paying only a small percentage of "almost free" as a statutory royalty for the recordings it uses. The PSS should pay a much higher royalty, and it should be structured as a per-subscriber fee to ensure that artists and record companies are fairly compensated if a PSS charges what Dr. Crawford called a "below-market" affiliate fee.

C. The Webcasting Rates In Part 380 Provide A Reasonable Basis For Estimating The Fair Market Value Of The Use Of Sound Recordings In Internet Transmissions Made As Part Of A PSS

1. Music Choice Provides Webcasts That Are A Growing Part Of Its Business

SEPFF2003. In addition to transmitting performances of music through MVPD networks to television sets, Music Choice webcasts over the Internet through a family of apps and a website, at least to its MVPD subscribers. Trial Ex. 29 at 15 (Bender WDT); Trial Ex. 55 at 4 (Del Beccaro WDT); Trial Ex. 57 at 25-26 (Del Beccaro WRT); Trial Ex. 501 at ¶ 67 (Wazzan Corr. WDT).

SEPFF2004. Legislative history describing the creation of the PSS category explains that "if a cable subscription music service making transmissions on July 31, 1998, were to offer the same music service through the Internet, then such Internet service would be considered part of a preexisting subscription service." H.R. Conf. Rep. No. 105-796, at 89 (1998). SoundExchange does not believe it is necessary to decide in this proceeding whether or not Music Choice's webcasts qualify as part of its PSS under that standard, because the purpose of this proceeding is to set rates for the activities that a PSS is permitted to undertake. Trial Ex. 29 at 30 (Bender WDT); Trial Ex. 48 at 30-31 (Bender WRT).

SEPFF2005. However, that does not mean that Music Choice's webcasting should simply be ignored. Music Choice claims to have been webcasting since 1996. Trial Ex. 57 at 25 (Del Beccaro WRT). But it has [ ] even if Mr. Del Beccaro insisted that it was still [" "]. 5/18/17 Tr. 4658:16-4659:1 (Del Beccaro); *see also* 5/18/17 Tr. 4661:9 (Del Beccaro) ([ ]). It must have been much more [" "] 20 years ago, or even five years ago at the time of *SDARS II*.

SEPFF2006. Internet streaming is a growing part of consumers' music enjoyment generally, and a rapidly growing part of Music Choice's business. The cable industry has pushed for a concept sometimes referred to as "TV everywhere," which allows subscribers to access cable television programming not only in their homes but everywhere. [ ] Trial Ex. 55 at 40 (Del Beccaro WDT); 5/18/17 Tr. 4602:14-19 (Del Beccaro); see also 5/3/17 Tr. 2316:7-10 (Wazzan) (webcasting . . . appears to be an increasingly important part of Music Choice's business).

SEPFF2007. At trial, when Mr. Del Beccaro was presented with a Music Choice document identifying [ ] aggregate listener hours of webcasting in January 2015, he said [ ] 5/18/17 Tr. 4660:25-4661:6 (Del Beccaro). Multiplying [ ] listener hours by an estimated 14.97 individual-recording performances per hour yields an estimated [ ] webcast performances by Music Choice in January 2015. *See* Trial Ex. 8 at 53 (Shapiro WDT) (estimating 14.97 plays per hour on Sirius XM). Multiplying an estimated [ ] webcast performances by the statutory royalty rate for commercial webcasters that was then in effect ($0.0023) yields an estimated value of

[ ]. *See Web III*, 79 FR at 23128. Multiplying that by 12 yields annual webcasting usage of [ ], which is more than most webcasters, who pay only the minimum fee. Trial Ex. 48 at 25 (Bender WRT).

SEPFF2008. Mr. Del Beccaro confirmed that its webcasting has [ ] in the time since. 5/18/17 Tr. 4658:24-4659:1 (Del Beccaro). Multiple times he estimated Music Choice's current webcast listenership at [ ] 5/18/17 Tr. 4599:9 (Del Beccaro); 5/18/17 Tr. 4658:21-22 (Del Beccaro).

SEPFF2009. Using Music Choice listenership data from Trial Ex. 934, Dr. Wazzan calculated total Music Choice listening to be on the order of [ ] Trial Ex. 502 at ¶ 60 n.81 (Wazzan Corr. WRT).

SEPFF2010. Multiplying [ ] listener hours by [ ] yields [ ] listener hours per month of webcasting. Multiplying that by an estimated 14.97 individual-recording performances per hour yields an estimated [ ] webcast performances by Music Choice per month at this time. Multiplying that by the current statutory royalty rate for commercial subscription webcasters ($0.0022) yields an estimated value of [ ] per month.

See 37 C.F.R. § 380.10(a)(1). Multiplying that by 12 yields annual webcasting usage of [[redacted]], which is sufficiently material that the Judges should concern themselves with it in this proceeding.

2. Music Choice Should Pay Webcasting Rates For Its Webcasting

SEPFF2011. SoundExchange proposes that the applicable commercial webcasting rates in Part 380 apply to any ancillary webcasting that may be part of a PSS. SoundExchange Amended Proposed Rates and Terms at App. A § 382.11(a)(2) (filed June 14, 2017); Trial Ex. 29 at 30 (Bender WDT); Trial Ex. 48 at 30-31 (Bender WRT). Mr. Del Beccaro acknowledged that it is appropriate for Section 114 royalties to be paid based on webcasting performances, where royalties scale based on a recording actually being received by a listener. Trial Ex. 55 at 16-17 (Del Beccaro WDT).

SEPCL40. To be clear, this proposal is *not* an effort to limit the scope of the PSS license. The scope of the PSS license is whatever Congress said it is. 17 U.S.C. § 114(j)(11). However, the Judges were directed by Congress to "determine reasonable rates and terms of royalty payments for subscription transmissions" by a PSS. 17 U.S.C. § 114(f)(1)(A). In doing so, the Judges are to "distinguish among the different types of digital audio transmission services then in operation." 17 U.S.C. § 114(f)(1)(A). The Judges have also made plain that when setting rates under Section 801(b)(1), they seek "to unambiguously relate the [royalty] fee charged for a service . . . to the value of the sound recording performance rights covered by the statutory licenses." *SDARS II*, 78 FR 23072. Here, an Internet-based PSS distributed to mobile apps over the Internet is sufficiently different from the core PSS television-based service that the Judges must consider whether the value of the sound recording usage involved is sufficiently reflected in

a rate set with a television-based service in mind, now that Music Choice's webcasting has increased to a significant level.

SEPFF2012. As an economic matter, Dr. Wazzan concluded that Music Choice's Internet streaming should be valued separately from its television-based service. 5/3/17 Tr. 2316:21 (Wazzan) ("This is purely an economics point."); *see also* Trial Ex. 501 at ¶ 69 (Wazzan Corr. WDT) ("I do not have an opinion on the legal question whether Music Choice's Internet streaming is properly considered part of its PSS"). Specifically, he found that the most reasonable way to value webcasting by a PSS would be to apply to the PSS the same statutory rates that would apply to ancillary Internet streaming by the CABSAT services. Trial Ex. 501 at ¶ 12 (Wazzan Corr. WDT).

SEPCL41. That is certainly the case if SoundExchange's CABSAT benchmark is employed. The CABSAT rates in Part 383 are quite clearly limited to a service "transmitted to residential subscribers of a television service" through an MVPD using "a technology that is incapable of tracking the individual sound recordings received by any particular consumer." Internet streaming is something else, because streams are typically transmitted to devices other than televisions, over the public Internet. Because Internet transmissions are made on a one-to-one basis, Internet performances can be counted. Trial Ex. 501 at ¶ 70 (Wazzan Corr. WDT); 5/3/17 Tr. 2316:5-8 (Wazzan).

SEPCL42. Given these limitations, it is clear that a provider of a CABSAT service that wished to simulcast its channels over the Internet in reliance on the statutory license could not pay only the CABSAT rates in Part 383; it would need to pay for its Internet streaming at the rates in Part 380. *See* 37 C.F.R. § 380.7 (defining Licensee as an entity providing an

Internet streaming service); Trial Ex. 501 at ¶ 71 (Wazzan Corr. WDT); 5/3/17 Tr. 2316:11-2317:3 (Wazzan).

SEPFF2013. As a benchmark, the webcasting rates are similar to the CABSAT rates. The Part 380 streaming rates are not a *marketplace* benchmark, because they are regulated rates. However, Dr. Wazzan concluded that reproducing the economic analysis from *Web IV* was unwarranted for an ancillary activity of the PSS, and the Part 380 rates were recently determined by the Judges under the willing buyer/willing seller standard and thus purport to be fair market rates. In the absence of any apparent marketplace benchmark for the value of the use of sound recordings ancillary to a PSS, if one accepts that the CABSAT rates in Part 383 provide the best available approximation of a market based royalty for the core PSS television-based service, it follows that the Part 380 rates that would be paid for Internet streaming ancillary to such a service must provide a reasonable approximation of a market royalty for Internet streaming ancillary to the core PSS television-based service. Trial Ex. 501 at ¶ 73 (Wazzan Corr. WDT).

SEPFF2014. While CABSAT services are required to pay separate webcasting royalties for their webcasting, it came to SoundExchange's attention in 2015 that Stingray had stopped paying webcasting royalties. When that happened, SoundExchange inquired of Stingray whether it was continuing to operate a webcasting service in reliance on the statutory license. At that time, Stingray assured SoundExchange that it was not operating a webcasting service in 2015. Trial Ex. 48 at 31 & n.14 (Bender WRT); Trial Ex. 454. [[redacted]]

SEPFF2015. In early 2017, Stingray notified SoundExchange that it wished to resume webcasting under the statutory license as of January 2017. Trial Ex. 455. [ ] Trial Ex. 48 at 31 & n.14 (Bender WRT).

SEPFF2016. If the task is to value Music Choice's webcasting today, it is not relevant that Music Choice has been webcasting for a long time (at much lower levels of intensity). Neither is it relevant how long SoundExchange has known about Music Choice's webcasting (again at a much lower level of intensity than today). 5/3/17 Tr. 2317:4-10 (Wazzan).

D. Music Choice's Rate Proposal Is Based On A Previously Rejected Application Of The Nash Framework And Is Unreasonable.

SEPFF2017. In *SDARS II*, Dr. Crawford presented an Asymmetric Nash Bargaining Framework as part of Music Choice's case. *SDARS II*, 78 FR at 23056. The Judges in *SDARS II* rejected Dr. Crawford's use of the Nash Framework analysis, concluding that it was "not useful corroborating evidence," and concurred with Judge Roberts' "more spirited rejection" of Dr. Crawford's application of the Nash Framework. *SDARS II*, 78 FR at 23058 n. 17. The Judges also found that "Music Choice provided no data to support the theoretical approximations in the market for any intellectual property rights." *SDARS II*, FR at 23058.

SEPFF2018. In the current proceeding, Dr. Crawford has once again presented the same Asymmetric Nash Bargaining Framework ("Nash Framework"). Trial Ex. 54 (Crawford

WDT); 4/24/17 Tr. 710:13-20 (Crawford); 4/25/17 Tr. 849:2-5 (Crawford). And once again, Dr. Crawford in this proceeding has made many of the same key assumptions that he relied on in *SDARS II*. 4/25/17 Tr. 850:8-11, 851:10-13 (Crawford). Among other things, in the current proceeding he relied on the same assumptions that he relied on in *SDARS II* regarding the threat point for a PSS provider and the threat point for a record company, and used the same capital asset pricing model.

SEPFF2019. While Dr. Crawford in the current proceeding has tried to correct some of the details of his application of the Nash Framework in *SDARS II*, his use of that framework in the current proceeding remains fatally flawed and should once again be rejected. Trial Ex. 502 at ¶ 23 (Wazzan Corr. WRT).

1. Dr. Crawford's Reliance On The Nash Bargaining Framework Is Inappropriate For Analyzing The PSS.

SEPFF2020. The Nash Framework was developed to formalize bargaining dynamics between parties, and can be a useful tool for characterizing the features of bilateral bargaining. However, the Nash Framework is unsuitable for the purposes to which Dr. Crawford has put it. Trial Ex. 502 at ¶ 22 (Wazzan Corr. WRT).

SEPFF2021. As an initial matter, the Nash Framework assumes that the analyzed negotiation is independent of any other negotiation or strategic consideration. Trial Ex. 502 at ¶ 24 (Wazzan Corr. WRT) (citing Doug Kidder & Vince O'Brien, The Nash Bargaining Solution, 49 Les Nouvelles 1, ¶ 12 (Mar. 2014)). Dr. Crawford's analysis assumes that negotiations between record companies and the PSS would occur in a vacuum. It ignores negotiations involving third parties. In reality, however, there are other parties, because the PSS are intermediaries between the record companies and the cable/satellite providers. Trial Ex. 502 at ¶ 24 (Wazzan Corr. WRT); 5/3/17 Tr. 2475:6-21 (Wazzan). Given the existence of these other

parties' constraining the negotiation between the hypothetical record label and PSS provider, Dr. Crawford's application of the Nash Framework is inappropriate in this context.

SEPFF2022. Dr. Wazzan provided an example that illustrates how Music Choice's position as an intermediary could affect the bargaining dynamics. Music Choice is owned in part by cable companies – including Comcast, Cox, and Time Warner Cable – and it [ ]. Trial Ex. 501 at ¶ 91 (Wazzan Corr. WDT). Because [ ] (at least when they are calculated as a percentage of revenue), it is likely that in a hypothetical negotiation, record companies would [ ], thereby influencing the bargaining dynamics of Music Choice's affiliation arrangements with its partners.

SEPFF2023. In other words, there are three competing interests, not merely two, as required by Dr. Crawford's approach. Trial Ex. 502 at ¶ 25 (Wazzan Corr. WRT). [ ] 5/3/17 Tr. 2338:13-25 (Wazzan).

SEPFF2024. Dr. Crawford himself recognized the significance of the interdependence among record label, PSS provider and MVPD, writing that it "has important implications for how outcomes would be determined in a hypothetical market for sound recording performance rights." Trial Ex. 54 at ¶ 36 (Crawford WDT). However, Dr. Crawford then ignored these "important implications." In effect, Dr. Crawford attempted to model a two-

party negotiation, when what was actually required was a model of something more akin to a three-party negotiation. Trial Ex. 502 at ¶¶ 26-27 (Wazzan Corr. WRT); 5/3/17 Tr. 2475:15-21 (Wazzan).

SEPFF2025. Significantly in *SDARS II*, Judge Roberts (whose "spirited rejection" of Dr. Crawford's Nash Framework was joined by the other Judges), specifically faulted Dr. Crawford for ignoring this issue:

> Dr. Crawford's efforts to apply the Nash Framework to royalties to be paid by Music Choice only contemplates a two-party transaction between record labels and Music Choice, even though Music Choice is the intermediary between cable operators that actually perform the sound recordings in the output market. The presence of an intermediary disrupts and complicates the Nash analysis because it introduces an additional bargain in the output market and requires that all three bargains be considered jointly. Dr. Crawford did not take this complicating factor into consideration. *SDARS II*, 78 FR at 23083 (Roberts, J., dissenting) (internal citation omitted).

SEPFF2026. The majority agreed with this critique. *SDARS II*, 78 FR at 23058 n. 17 ("The Judges concur with his assessment"). Nonetheless, Dr. Crawford made no effort to address that critique in his direct testimony.

SEPFF2027. Dr. Crawford tried to lend credence to his adoption of the Nash Framework by noting that "[t]he Asymmetric Nash Bargaining Framework is among the most widely applied tools within economics to analyze negotiations between firms," and listed four "[r]ecent empirical applications of the Nash Bargaining approach." Trial Ex. 54 at ¶¶ 36, 65 (Crawford WDT). However, Dr. Wazzan reviewed the four papers cited by Dr. Crawford in support of his position and determined that none of those papers assesses whether the prerequisites for applying the Nash Framework have been met or whether the assumptions made in each of those papers hold in the real world, nor do they demonstrate that the Nash Framework can be used to determine the prices that result from three-party interfirm negotiations. Trial Ex. 502 at ¶ 28 (Wazzan Corr. WRT).

SEPFF2028. In short, while the Nash Framework may be widely discussed in the economic literature because it formalizes and simplifies bargaining dynamics, it is not appropriate to use it to calculate a PSS royalty rate. Trial Ex. 502 at ¶ 29 (Wazzan Corr. WRT).

2. Even If The Nash Framework Were Properly Applicable Here, Dr. Crawford's Quantitative Analysis Would Still Be Incorrect.

SEPFF2029. Even assuming that the Nash Framework was an appropriate analytical tool in this context, Dr. Crawford's estimates of a market rate for PSS would still be deeply flawed. His model is very sensitive to the parameter inputs used. Differences in the inputs can produce widely different profit split and royalty rate outputs. Trial Ex. 502 at ¶ 30 (Wazzan Corr. WRT). Setting aside this lack of robustness in the model, if the Judges are to have any hope of deriving an accurate estimate with Dr. Crawford's model (again assuming it was appropriate to use such a model in this context in the first place), it would be extremely important to use accurate and justifiable inputs. Dr. Crawford has failed in this regard. Trial Ex. 502 at ¶ 30 (Wazzan Corr. WRT).

SEPFF2030. In Dr. Crawford's bargaining model, there are three "Nash Factors" that determine the outcome of a negotiation, Trial Ex. 54 at ¶ 82 (Crawford WDT):

- The Joint Agreement Profits, which "are the total profits (i.e., the profits to be shared between the two firms) that could be generated if the upstream record label and downstream PSS were able to reach an agreement." Trial Ex. 54 at ¶ 67 (Crawford WDT).

- Each firm's Threat Point, which "is the profit that would accrue to each of the record label and PSS if they were *unable* to reach an agreement." Trial Ex. 54 at ¶ 67 (Crawford WDT). The model allows for the possibility of negative or positive Threat Points. Trial Ex. 54 at ¶ 85 n.71 (Crawford WDT). A party's Threat Point will be negative when it loses profits in the absence of an agreement. Trial Ex. 54 at ¶ 85 (Crawford WDT). By contrast, a party's Threat Point will be positive when it gains profits in the absence of an agreement.

- Each firm's Bargaining Power, which "is a number between 0 and 1 representing the strength of each of the record label and PSS in the hypothetical negotiation." Trial Ex. 54 at ¶ 67 (Crawford WDT).

SEPFF2031. Dr. Crawford provided two numerical examples that illustrate his bargaining model. Trial Ex. 54 at ¶¶84-87 (Crawford WDT). In both examples, Joint Agreement Profits are 20 and the record label and PSS provider have equal Bargaining Power (*i.e.*, 0.5). Trial Ex. 502 at ¶ 33 (Wazzan Corr. WRT). The calculations for each of Dr. Crawford's examples are set forth in Appendix A to Dr. Wazzan's written rebuttal testimony. Trial Ex. 502 at Appendix A (Wazzan Corr. WRT).

i. Dr. Crawford Incorrectly Assumes That Music Choice's Threat Point Should Be Zero, When His Own Testimony Shows That It Should Be Negative.

SEPFF2032. First, Dr. Crawford failed to account for the fact that in the hypothetical negotiation he purports to model, Music Choice would lose profits from its other lines of business if it was not able to reach an agreement with a record label. Accordingly, it should have a negative Threat Point. Trial Ex. 502 at ¶ 31 (Wazzan Corr. WRT).

SEPFF2033. Dr. Crawford provides an example that illustrates just this phenomenon, except applied to the record label participant in the negotiation:

> Suppose, however, that the record label earns an additional profit of 4 in another market if it is able to reach an agreement with the PSS provider in the PSS market (e.g. from digital downloads of the songs played by the PSS). Its Threat Point in the bargaining problem is its profit *in the case of disagreement*. In case of disagreement, the record label *loses* the profit from digital downloads prompted by PSS listening and its threat point is therefore -4 (i.e. *less* than 0).

Trial Ex. 54 at ¶ 85 (Crawford WDT) (footnote omitted; emphasis in original).

SEPFF2034. Just as it is theoretically possible that the hypothetical record company could lose profits from non-PSS business in the absence of an agreement with the hypothetical PSS provider (although SoundExchange does not believe that to be true, as described in Section XIII.D.2.iii below), it is theoretically possible that the hypothetical PSS provider could lose profits from non-PSS business in the absence of an agreement with the hypothetical record

company. If that were the case, on either side of the bargaining table, the relevant party's Threat Point would be negative. *See* Trial Ex. 54 at ¶ 85 (Crawford WDT); 4/24/17 Tr. 721:25-722:6 (Crawford) ("each firm's threat point is the profit that would arise to each – either the record label or the PSS provider, if they were not able to reach an agreement"). As Judge Strickler pointed out, the Threat Point is called that because, if the parties are unable to reach an agreement, they could face a threat. 4/24/17 Tr. 753:5-754:22 (Crawford) ("In other words, it is game theory here. Right? THE WITNESS: Absolutely.").

SEPFF2035. Dr. Crawford chose to construct his Nash model to replicate a negotiation between a hypothetical PSS provider and a hypothetical major record company. Trial Ex. 54 at ¶ 78 (Crawford WDT). This was a carefully-considered simplifying assumption that he made after concluding that the costs of doing otherwise were not worth it. 4/24/17 Tr. 715:3-716:11 (Crawford).

SEPFF2036. Dr. Crawford also believed and assumed that at least the major record labels are "must-haves" for Music Choice, because it "would not be able to operate a viable PSS without sound recording performance licenses covering the vast majority of the licensable music library." Trial Ex. 54 at ¶ 78 & n.62 (Crawford WDT); *see also* Trial Ex. 54 at ¶ 173 (Crawford WDT) ("in the absence of an agreement between Music Choice and a record label, Music Choice would not be able to offer a viable residential audio service and would therefore have economic profits of zero"); 5/16/17 Tr. 3941:13:3942:6 (Harrison) [[redacted]]

SEPFF2037. Music Choice has three product lines: residential audio, residential video, and commercial audio. These product lines do not operate independently of each other. Indeed, it is notable that the providers of both the PSS (Music Choice and Muzak) and the

CABSAT services (Sirius XM, Stingray and Muzak) have multiple service offerings. Trial Ex. 502 at ¶ 37 (Wazzan Corr. WRT).

SEPFF2038. Despite Music Choice's having diversified service offerings, Dr. Crawford concluded that Music Choice would go out of business altogether without its residential music business:

> Music Choice was founded to provide a residential audio service, and the residential audio service remains the most important in terms of revenues and company strategy. The provision of any Incremental Products [such as residential video and commercial audio] are only commercially viable due to the existence of the residential audio services business. If the residential audio services business were to cease, then Music Choice would cease providing *any* services (it would close altogether) . . . .

Trial Ex. 54 at ¶¶ 84-87 (Crawford WDT)

SEPFF2039. Mr. Del Beccaro agreed with this assessment. 5/18/17 Tr. 4645:22-25 (Del Beccaro) (if Music Choice did not offer a residential audio service, "we would be out of business"); *see also* Trial Ex. 55 at 27 (Del Beccaro WDT) ("Music Choice's audio and video services are always bundled together and viewed as complementary parts of a single offering"); 5/18/17 Tr. 4551:14-16 (Del Beccaro) ([[redacted]]).

SEPFF2040. Music Choice's witness Damon Williams also confirmed that "the residential audio channels remain the heart and soul of what we do." Trial Ex. 56 at 5 (Williams WDT). He further testified that the residential audio channels are Music Choice's "core service, and is our service that all customers have and know." Trial Ex. 56 at 5 (Williams WDT).

SEPFF2041. Dr. Wazzan simply connected the dots in Dr. Crawford's assumptions: "Dr. Crawford is the one who said that . . . his Nash model has a major record label as the party at the table. And he goes on to say that they have market power. He then goes on to say if Music Choice cannot strike a deal, they would likely go out of business. You don't have to go

any further than that to then demonstrate they have a negative threat point." 5/3/17 Tr. 2461:6-15 (Wazzan).

SEPFF2042. [ ]

Trial Ex. 502 at ¶ 40 (Wazzan Corr. WRT); *see also* 5/3/17 Tr. 2339:24-2340:10 (Wazzan) ("[I]f Music Choice fails to reach a deal, Dr. Crawford has conceded that, you know, they would go out of business completely as an enterprise. Because of that, they would lost their commercial business and they would lose their video business. The loss of those revenues then becomes their negative threat point."); 5/3/17 Tr. 2343:14-20 (Wazzan) [ ]

SEPFF2043. When Judge Strickler pressed Dr. Crawford to opine on this analysis at trial, he tried to argue that the record company should want to do a deal to realize "gains from trade," but ultimately conceded that "the threat point is that they will shut you down," and that the label's ability to shut down Music Choice is properly considered "utilizing the threat point." 4/24/17 Tr. 753:5-754:22 (Crawford).

SEPFF2044. To correct Dr. Crawford's model to reflect Music Choice's negative Threat Point, Dr. Wazzan first calculated Music Choice's profits from its residential video and commercial audio businesses using the financial data contained in documents produced by Music Choice. To calculate revenues and costs specific to the residential video and commercial audio businesses, he took the difference between the company-wide and residential music figures. For example, company-wide revenue in 2016 is [ ]. Trial Ex. 406 (P&L tab).

Residential music revenue in 2016 is [[redacted]]. Trial Ex. 54 at App. B.1, B.3 (Crawford WDT). Revenue for residential video and commercial audio in 2016 is equal to the difference between these two figures, or [redacted]. Trial Ex. 502 at ¶ 42 (Wazzan Corr. WRT).

SEPFF2045. Next, Dr. Wazzan added Music Choice's profits from its residential video and commercial audio businesses to the Joint Agreement Profits calculated by Dr. Crawford. For example, in 2016, the Joint Agreement Profits are [redacted] and Music Choice's profits from its residential video and commercial audio businesses are [redacted]. The Incremental Profits, which are split among the record labels and Music Choice, are accordingly [redacted]. The corrected royalty rates using this approach, which are almost 3 times higher than Dr. Crawford's rates, are reported in row [b] of the table following the paragraph below. Trial Ex. 502 at ¶ 43, App. B-1, B-2 (Wazzan Corr. WRT). For comparison, the rates calculated by Dr. Crawford are reported in row [a].

SEPFF2046. Dr. Wazzan then repeated the foregoing analysis using Music Choice's internal forecasts for 2018 to 2022, rather than the Joint Agreement Profits calculated by Dr. Crawford. The corrected royalty rates, which are over 6 times higher than Dr. Crawford's rates, are reported in row [c] of the table below (Table 2 from Dr. Wazzan's written rebuttal testimony). Trial Ex. 502 at ¶ 48, App. B-3, B-4 (Wazzan Corr. WRT).

Joint Agreement Profits As % Of Unadjusted Residential Audio Service Revenue

[RESTRICTED]

		20% to SX 80% to MC	50% to SX 50% to MC	80% to SX 20% to MC
Crawford (Exhibit B.3)	[a]	[redacted]	[redacted]	[redacted]
Corrected (1.5%)	[b]	[redacted]	[redacted]	[redacted]
Corrected (MC forecast)	[c]	[redacted]	[redacted]	[redacted]

ii. Music Choice's Financial Allocations Are Flawed And Dr. Crawford Was Not Qualified to Make Them.

SEPFF2047. To conduct his Nash Framework analysis, Dr. Crawford needed to determine a PSS's costs and revenues from its statutory residential audio service. 4/25/17 Tr. 863:13-19 (Crawford). In the ordinary course of business, however, Music Choice does not maintain separate financial statements from its three lines of business (residential audio, residential video, commercial). Instead, most of those costs and revenues are commingled, and Music Choice maintains financials statements on a company-wide basis. 4/25/17 Tr. 864:4-16 (Crawford). *See also* Trial Ex. 55 at 27 (Del Beccaro WDT) (Music Choice does not allocate the shared costs or revenues in the ordinary course of business); 5/18/17 Tr. 4624:21-4625:4 (Del Beccaro) (Music Choice does not maintain a separate balance sheet for its residential audio service, and instead accounts for costs and revenues for the overall business as a whole).

SEPFF2048. Accordingly, Dr. Crawford had to find a way to allocate a portion of Music Choice's overall costs and revenues to its residential audio service. As Dr. Crawford admitted, this was not a "trivial" task. 4/25/17 Tr. 865:3-7 (Crawford).

SEPFF2049. Dr. Crawford was not qualified to make these allocations. He is not an accountant, does not hold any academic degrees in accounting, and did not major in accounting. Dr. Crawford was not qualified by the Judges as an expert in accounting. 4/25/17 Tr. 865:8-21 (Crawford). In fact, Dr. Crawford has never been qualified by any court as an expert in accounting. 4/25/17 Tr. 863:13-21 (Crawford). Nor did Dr. Crawford mention anywhere in his written testimony that he relied on the assistance of an accountant in making cost and revenue allocations.

SEPFF2050. Instead, Dr. Crawford read a few articles about how to allocate costs and revenues. Trial Ex. 54 at ¶¶ 127, 139 (Crawford WDT); 4/25/17 Tr. 866:13-25, 875:5-18

(Crawford). Based on his reading of those articles, Dr. Crawford asked employees at Music Choice to make cost and revenue allocations for the hypothetical situation in which Music Choice offered only a standalone residential audio business. 4/25/17 Tr. 867:1-16 (Crawford).

SEPFF2051. Dr. Crawford's lack of qualifications and knowledge about the allocations renders his analysis inherently unreliable. *See, e.g., SDARS II*, 78 FR at 31844 ("Dr. Crawford's effort to extract costs and revenues from this data for the PSS service alone for use in his surplus analysis cannot be credited because of his lack of familiarity with the data's source.").

SEPFF2052. Dr. Crawford's reliance on Music Choice employees to disaggregate the costs and revenues from the business as a whole and to make the allocations for the hypothetical standalone PSS service was unreasonable. In fact, in the prior SDARS proceeding, Mr. Del Beccaro testified that this information "cannot be disaggregated." *SDARS II*, 78 FR at 31844. At the hearing, Dr. Crawford could not recall the names of the Music Choice employees who actually made the allocations, and his written testimony likewise does not disclose that information. 4/25/17 Tr. 869:7-17 (Crawford). He acknowledged, however, that Music Choice did not use an outside accounting firm in preparing its allocations. 4/25/17 Tr. 877:4-8 (Crawford). Nor did Dr. Crawford speak with any of Music Choice's outside auditors in assessing the accuracy of Music Choice's allocations. 4/25/17 Tr. 877:17-20 (Crawford).

SEPFF2053. As part of the Nash Framework analysis, Dr. Crawford also had to make projections of cost and revenue allocations for future years. Again, lacking any qualifications in accounting, Dr. Crawford simply "made a judgment about what was the right mix of historical data and future projections on which would be best to rely." 4/25/17 Tr. 870:3-5 (Crawford). Moreover, where he relied on Music Choice's projections, Dr. Crawford admitted

that he failed to look back at Music Choice's prior projections to assess whether and to what extent Music Choice's projections tend to be accurate. 4/25/17 Tr. 871:9-13 (Crawford). At the hearing, Dr. Crawford tried to deflect criticism of this deficiency by suggesting that Music Choice's projections are accurate because they are a function of Music Choice's contracts with cable operators. [ ] 4/25/17 Tr. 871:3-872:20 (Crawford).

SEPFF2054. Dr. Crawford also admitted that the cost allocations that he relied on for his Nash Bargaining analysis contain a significant error. 4/25/17 Tr. 883:20-22 (Crawford) ("Q: So that shouldn't be included in your model, correct? A: Yes."). Specifically, in determining the costs of a PSS in the hypothetical world in which Music Choice were to reach a market rate with a single record company for a standalone PSS, Dr. Crawford allocated to Music Choice the legal costs of litigating the *SDARS II* and *SDARS III* proceedings. However, as Dr. Crawford conceded at the hearing, the allocation of those costs was an error because Music Choice would not incur any CRB litigation costs in the hypothetical world in which Music Choice were to reach a market rate with a single record company. 4/25/17 Tr. 882:12-883:22 (Crawford).

SEPFF2055. This error is significant. First, of course, it renders the results of Dr. Crawford's Nash Bargaining analysis unreliable, because the analysis rests in part on an erroneous cost allocation. More significantly, this error reflects the larger problem of Dr. Crawford's lack of qualifications – the allocations are based on a host of assumptions about which of Music Choice's costs and revenues are properly attributed to its residential audio service, and Dr. Crawford and the Music Choice employees simply are not qualified to know

how to accurately make those allocations. Dr. Crawford's error casts doubt in the reliability of the entire exercise.

iii. Dr. Crawford Incorrectly Asserts That The Record Labels' Threat Point Should Be Negative, When It Likely Should Be A Large Positive.

SEPFF2056. Dr. Crawford incorrectly concludes that the PSS provide a promotional benefit to the record labels that should result in their having a negative Threat Point, while failing to account for the opportunity cost that record labels incur when they license music to the PSS. Trial Ex. 502 at ¶ 31 (Wazzan Corr. WRT).

SEPFF2057. Dr. Crawford concludes that "Music Choice provides a promotional benefit to sound recording copyright holders," but is unable to quantify "an estimate of the economic profits associated with the promotional benefits to record companies of the Music Choice service." Trial Ex. 54 at ¶¶ 104, 176 (Crawford WDT). He therefore excludes the alleged promotional benefit from his bargaining analysis by setting the record company's Threat Point equal to zero. Trial Ex. 54 at ¶ 94 (Crawford WDT).

SEPFF2058. It is important to address Dr. Crawford's conclusion in this regard because he argued repeatedly that the exclusion caused him to overestimate the royalty that Music Choice should pay to the record labels. Trial Ex. 54 at ¶¶ 18, 113, 176, 209, 215, 219 (Crawford WDT). As Dr. Wazzan showed, however, Dr. Crawford overstated Music Choice's promotional benefits, and gave short shrift to the record company's opportunity costs of a license to Music Choice. Taking both those considerations into account, Dr. Wazzan concluded that the record company's Threat Point should be positive rather than zero or negative. Indeed, Dr. Wazzan concluded that it likely should be a *large* positive number. Thus, Dr. Crawford's model *understated* a marketplace royalty, possibly by a large amount. Trial Ex. 502 at ¶ 49 (Wazzan Corr. WRT).

SEPFF2059. As an illustration of the possible effect of accounting for the record company's positive Threat Point, Dr. Wazzan recalculated the payoffs to the record label and PSS provider based on Dr. Crawford's numerical examples.[157] Dr. Wazzan's calculations are set forth in paragraphs 61-62 and Appendix A of his Corrected Written Rebuttal Testimony. Trial Ex. 502 at ¶ 61 (Wazzan Corr. WRT). They show that, by disregarding the opportunity cost that a record company incurs when it licenses its sound recordings to a PSS, Dr. Crawford likely overstated the Incremental Profits – *i.e.*, the size of the pie to be split. Thus, Dr. Crawford's model *understated* the total profits that would accrue to the record labels; this means that the royalty that should be paid by Music Choice to SoundExchange is higher than Dr. Crawford has estimated. Trial Ex. 502 at ¶ 61 (Wazzan Corr. WRT).

a. Music Choice's Anecdotal Evidence Of Promotional Benefits Is Irrelevant, Outdated, And Insufficient to Prove Causation.

SEPFF2060. Dr. Crawford contended there is "an enormity of evidence" of Music Choice's promotional benefits. Trial Ex. 54 at ¶ 104 (Crawford WDT). But despite this sweeping claim, he provided no direct evidence that plays on Music Choice today actually result in sales that would not otherwise have occurred in the absence of such plays. In addition, Dr. Crawford failed to provide any evidence whatsoever that, on balance, Music Choice brings collateral benefits to record companies in excess of the opportunity costs it imposes on them. Trial Ex. 502 at ¶ 50 (Wazzan Corr. WRT).

SEPFF2061. Dr. Crawford based his conclusion that the PSS have promotional benefits to record companies on three basic arguments. *First*, he noted that a Copyright

[157] The precise numbers in Dr. Wazzan's corrected calculations are for expositional purposes only. Like Dr. Crawford, Dr. Wazzan observes that real-world promotional or substitutional effects are difficult to quantify, and he does not adjust his own proposed royalty rate on this basis. Trial Ex. 502 at ¶ 63 (Wazzan Corr. WRT). Nonetheless, this recalculation shows the potential impact of Dr. Crawford's flawed assumption.

Arbitration Royalty Panel previously found that the PSS promote record companies' businesses by providing "constant airplay of new types of music not readily accessible in the marketplace, which in turn stimulated record sales." Trial Ex. 54 at ¶ 97 (Crawford WDT). However, that decision was rendered 20 years ago, when record sales were robust and no other digital music services were in operation. Even if the conclusion was well-founded then, the very different market conditions 20 years ago provide no useful information about the effects of the PSS on the economics of a record company today. Trial Ex. 502 at ¶ 52 (Wazzan Corr. WRT); *see also* 4/25/17 Tr. 859:17-19 (Crawford) (acknowledging the market for sound recordings has changed over the last twenty years); Section X *supra* (discussing current music marketplace, including the decline in permanent copy sales and the rise in platforms that allow digital access); Section IV.H.2.iii (explaining that digitization of music industry requires different analysis of promotional effects, including significant attention to platform substitution).

SEPFF2062. *Second*, Dr. Crawford asserted that "Music Choice's on-air displays provide important information about artists that listeners otherwise might not have easy access to," and points to a study by Ipsos OTX MediaCT showing that Music Choice's viewers are interested in "being exposed to new artists and music." Trial Ex. 54 at ¶ 103 (Crawford WDT). However, these observations about Music Choice listeners' interest in discovering new music provide no proof at all as to whether these listeners actually consume more of the music *on other platforms* as a result of exposure on Music Choice, as opposed merely continuing to enjoy it on Music Choice. Trial Ex. 502 at ¶ 53 (Wazzan Corr. WRT). In the absence of this missing analytical link, Dr. Crawford's observations cannot be used to draw conclusions about the Service's promotional effect.

SEPFF2063. Moreover, Dr. Crawford's assertions about Music Choice's screen displays overestimate their uniqueness. Pursuant to 17 U.S.C. § 114(d)(2)(C)(ix), almost all services operating under the statutory license are required to display text data identifying the title of each sound recording they play, along with the album title and the featured recording artist's name, as each recording is being played. 17 U.S.C. § 114(d)(2)(C)(ix). [redacted] 5/18/17 Tr. 4576:1-14 (Del Beccaro) (Sirius XM's CABSAT has screen displays); 5/18/17 Tr. 4738:16-4739:7 (Williams) (Stingray has screen displays).

SEPFF2064. *Third,* Dr. Crawford's principal promotional argument rests on his claim that Music Choice engages in a variety of promotional activities on behalf of record labels and artists. In making this claim, Dr. Crawford relied solely on the anecdotal testimony of Music Choice employees Damon Williams and David Del Beccaro. Trial Ex. 59 at ¶¶ 96-101 (Crawford WRT); 4/25/17 Tr. 922:3-17 (Crawford); 5/1/17 Tr. 1841:11-21 (Ford); *see also* Trial Ex. 54 at ¶ 18 (Crawford WDT) (acknowledging that his conclusions regarding promotion are based on "qualitative evidence" only). This testimony is at odds with the Judges' decisions in past CRB proceedings and irrelevant to a reasoned analysis of promotion.

SEPFF2065. Mr. Williams and Mr. Del Beccaro have simply regurgitated the same kind of anecdotal evidence – including tweets, blog posts and "thank you" notes – that Music Choice has presented and that the Judges have rejected before. Dr. Crawford employs precisely the same approach to promotion that he used – and that the Judges rejected – in his testimony in *SDARS II*. *See SDARS II*, 78 FR at 23081, 23083 (Roberts, J., dissenting) (noting that Dr. Crawford relied on testimony about alleged promotion from Damon Williams and concluding

such evidence on promotion "is mostly anecdotal and weak"); 78 FR at 23058 n.17 ("the Judges concur" with Judge Roberts' assessment); *see also* Trial Ex. 41 (Ford WRT) at 1, 9.

SEPFF2066. Music Choice's witnesses do nothing to address the issues the Judges have raised in prior SDARS/PSS and Webcasting proceedings with regard to anecdotal evidence of promotion, and there is no reason to reach a different conclusion here. *See* Trial Ex. 41 at 1, 9 (Ford WRT) (testimony regarding promotion is nearly identical to the testimony offered in prior proceedings and that the Judges have consistently rejected before: It consists only of anecdotal claims of a qualitative nature, and does nothing to address the issues raised in earlier decisions).

SEPFF2067. Numerous deficiencies of this type of anecdotal evidence are detailed in Dr. Ford's testimony and in Sections IV.H.2.iv *supra*, including that it fails to address relative promotional and substitutional effects of the target versus benchmark; that it fails to address the average promotional effect across all recordings subject to the statutory license; that it confuses correlation with causation; and that it fails to adequately account for platform substitution.

SEPFF2068. As discussed therein, the relevant economic issue is *relative* promotion. *SDARS II*, 78 FR at 23066-67; *Web IV*, 81 FR at 26322; Trial Ex. 41 (Ford WRT) at 4 ("the promotion question that matters in a rate proceeding is *relative promotion*; that is, whether the target service is, on the whole, more or less promotional than the chosen benchmark"). But Music Choice has presented no evidence at all of a relative difference between target and benchmark markets.

SEPFF2069. Additionally, Music Choice fails to present evidence of *average promotional effect*. *See Web IV*, 81 FR at 26326-29 (finding that it is the *net* promotional or substitutional effect that matters); Trial Ex. 41 (Ford WRT) at 6. To the extent that Mr. Williams's and Mr. Del Beccaro's testimony includes examples of purported promotional

activities of Music Choice, Music Choice makes no claim that these examples are representative or based on a random sample of all sound recordings played. *See generally* 5/1/17 Tr. 1861:7-1864:3 (Ford) (responding to question from Judge Strickler about possibility of relying on a random sample of recordings). Like Sirius XM, Music Choice highlights a cherry-picked handful of releases which "constitute a miniscule sliver of the recordings used" on the Service. Trial Ex. 41 (Ford WDT) at 2; 5/18/17 Tr. 4743:4-11 (Williams) (testifying that he chose examples that are "especially indicative of Music Choice's promotional value"). Mr. Williams's testimony provides a detailed discussion of fewer than 20 releases over a period of years, whereas Music Choice's reports of use under the statutory license show that the service played over [[redacted]] unique sound recordings in the first 11 months of 2016 alone. Trial Ex. 41 (Ford WRT) at 2; Trial Ex. 56 (Williams WDT).

SEPFF2070. Even Dr. Crawford acknowledges that in assessing a service's promotional effect, one must consider its "net promotional benefit" – not its alleged promotion of an individual track or artist. Trial Ex. 54 at ¶ 102 (Crawford WDT); 4/25/17 Tr. 851:20-852:6 (Crawford). As an economic matter, a few non-randomly selected anecdotes do "not provide useful information about whether, *overall*, Music Choice produces more or less higher-value consumption of music on other platforms." Trial Ex. 502 at ¶ 56 (Wazzan Corr. WRT) (noting that promotions discussed in Music Choice's testimony appear to be mutually beneficial, independent transactions).

SEPFF2071. Like Sirius XM's proffered anecdotes, the examples on which Music Choice relies are far from average. Mr. Williams's and Mr. Del Beccaro's testimony focuses disproportionately on new releases and popular artists. *See generally* Trial Ex. 56 (Williams WDT). But, as Mr. Williams himself acknowledged, a substantial portion of Music Choice's

channels do not even play new music. 5/18/17 Tr. 4754:18-21 (Williams) (testifying that [ ]). Indeed, Mr. Williams testified that he selected his examples precisely *because* they were not average: He chose the anecdotes described in his testimony because he viewed them as "especially indicative of Music Choice's promotional value." 5/18/17 Tr. 4743:4-11 (Williams). These cherry-picked anecdotes say nothing about the Service's average promotional effect. *See also* Trial Ex. 502 at ¶ 56 (Wazzan Corr. WRT); Trial Ex. 41 (Ford WRT) at 4-6 (in Figure 1, anecdotes provided fall on the positive tail of Panel A); Trial Ex. 23 (Ford WDT) at 17; 5/1/17 Tr. 1850:9-1853:6 (Ford)..

SEPFF2072. Music Choice's testimony also ignores substitutional effects entirely, despite the Judges' past findings and Dr. Crawford's admission that "net promotional effect" matters. Trial Ex. 54 at ¶ 102 (Crawford WDT); 4/25/17 Tr. 851:20-852:6 (Crawford); *Web IV*, 81 FR at 26326-29; *see also* Section IV.H.2 *supra* (promotion includes both promotional effects and substitutional effects); Trial Ex. 23 (Ford WDT) at 5-6 (variable *E* reflects both promotional effects (*E* is positive) and substitutional effects (*E* is negative)); *id.* at 10 (promotion matters in bargain only if it provides more income to the record label from complementary music platforms net of any substitutional effect on other platforms).

SEPFF2073. Dr. Crawford's justification for dismissing the possibility that a PSS might cannibalize other forms of music consumption is unconvincing. He asserts that Music Choice engages in promotional activities on behalf of copyright owners and that these activities must be indicative of a "net promotional benefit" to record companies, because otherwise a rational record company would not devote resources to engaging with Music Choice. *See* Trial Ex. 56 at ¶ 245. But as Dr. Wazzan observes, many of the examples on which Dr. Crawford relies are actions of the *record companies* themselves, not of Music Choice. Trial Ex. 502 at ¶¶

53-54 (Wazzan Corr. WRT) (citing Trial Ex. 54 at ¶¶ 99-100 (Crawford WDT), in which Dr. Crawford notes that *record companies* provide promotional copies of sound recording, make calls Music Choice, meet with Music Choice to discuss promotional opportunities, and express gratitude for plays). Several witnesses, including Mr. Williams, testified that the incremental cost of many of the allegedly promotional activities Music Choice cites is minimal. *See, e.g.*, 5/18/17 Tr. 4750:15-4751:21 (Williams).

SEPFF2074. Dr. Wazzan further testified that Dr. Crawford's "breezy dismissal of any cannibalization . . . ignores the existence of the statutory license." Where there is a statutory license that Music Choice can take advantage of, Music Choice will fill its channels with recordings regardless of what any individual record company does. In such an environment, it would be entirely rational for a record company to have a certain level of engagement with Music Choice to boost its share of the royalties paid, so long as those efforts do not cost it more than the incremental statutory royalties it can obtain through such efforts." Trial Ex. 502 at ¶ 55 (Wazzan Corr. WRT).

SEPFF2075. Despite its witnesses' unsupported, generalized claims regarding promotion, Music Choice does not request any specific rate reduction on this basis. As Dr. Ford and Dr. Wazzan explain, it would be difficult if not impossible to collect the necessary data to be able to quantify promotion and substitution in a way that would be useful in determining a rate. Trial Ex. 502 at ¶ 51 (Wazzan Corr. WRT) ("The possible effects of plays on a streaming service on record company sales, usage of other music services, negotiated royalty rates and other record company decision-making are a complicated topic."); Trial Ex. 43 at 6 (Ford WRT).

SEPFF2076. Music Choice's witnesses agree. Both Dr. Crawford and Mr. Williams repeatedly testified that they cannot and did not quantify the alleged promotional effects of

Music Choice. In his written direct testimony, Dr. Crawford acknowledged that "[q]uantifying [alleged promotional] benefits is a difficult empirical challenge and I was unable to do so given the data at my disposal." Trial Ex. 54 at ¶ 18 (Crawford WDT). In his rebuttal testimony, he noted that although a detailed empirical analysis would have been preferable, he did not conduct one. Trial Ex. 59 at ¶ 16 (Crawford WRT) ("In a perfect world, I would offer a detailed empirical analysis of the promotional effects of PSS services. Unfortunately, such an undertaking is difficult and I do not."); *see also* 4/25/17 Tr. 851:20-852:6 (Crawford) (testifying that he was not able to quantify Music Choice's alleged promotional effect).

SEPFF2077. Mr. Williams likewise conceded that his testimony does not quantify alleged promotional or substitutional effects, and that assessing relative promotional or substitutional effects would be impossible.

> A. I don't think you can really try to measure Sirius XM and Music Choice. I think it is everything that we have talked about in this hearing and in my testimony today that there is an ecosystem. There is a music industry, and there is an ecosystem across a lot of different media, platforms.
>
> And the way you can measure things is when you do very specific promotional programs that can be monitored and measured and you can put some metrics against it. But I can't, you know, really give you an answer to say something is substitutional or something is better than the other –
>
> Q. Okay.
>
> A. – in that way.

5/18/17 Tr. 4752:10-25 (Williams); *see also id.* at 4749:15-22 (Williams) (as of the hearing date, Music Choice does not study the relationship between sales and Music Choice play).

SEPFF2078. As Mr. Williams describes, one of the many reasons that it would be challenging to attempt to quantify Music Choice's net promotional effect is that in an environment of interdependent platforms and services and multi-faceted promotional strategies, it is exceptionally difficult to establish that any particular action actually causes any particular effect on paying consumption. Trial Ex. 41 (Ford WRT) at 6; Trial Ex. 23 (Ford WDT) at 8-10; *see also* 5/16/17 Tr. 4120:3-4121:25 (Barros) (describing multifaceted nature of label's promotional efforts). [redacted] 5/18/17 Tr. 4755:12-17 (Williams).

b. Music Choice's Anecdotes Are Unreliable and Significantly Overstate Whatever Promotional Benefits the Service Might Provide.

SEPFF2079. Dr. Ford researched the specific releases mentioned in Mr. Williams's testimony. Based on this research, he concludes that – in addition to the issues discussed above – many of the anecdotes Music Choice provides are unreliable in and of themselves. Trial Ex. 41 (Ford WRT) at 11.

SEPFF2080. Like Sirius XM, Music Choice relies on anecdotal evidence that record labels express gratitude to the Service for playing their music and at times enter deals related to promotional events, such as on-the-air performances. *See* Section IV.H.2.iv *supra* (discussing numerous flaws with reliance on this type of evidence). As Dr. Ford details, these anecdotes overstate and misrepresent promotional effects, even with regard to the particular releases discussed. Trial Ex. 41 at 11-24 (Ford WRT).

SEPFF2081. For instance, Music Choice identifies expressions of gratitude it reportedly received in connection with a pre-release promotion it conducted for Chris Brown's album "Royalty." Trial Ex. 41 (Ford WRT) at 14-15 (citing Trial Ex. 55 (Del Beccaro WDT) at

41-42; Trial Ex. 55 (Williams WDT) at 19-20, 34-36). Although Mr. Del Beccaro claims that "[t]he head of urban music for Chris Brown's label specifically told us that Music Choice is responsible for more urban music sales for Sony than any other outlet," Trial Ex. 55 (Del Beccaro WDT) at 42, he provides no measure which would allow the Judges to quantify or otherwise confirm this implausible statement. In fact, Dr. Ford testifies that he specifically discussed this release with executives from Mr. Brown's label RCA. When asked about Music Choice's role as to their urban music sales, [ ]. Trial Ex. 41 (Ford WRT) at 14-15.

SEPFF2082. Music Choice fails to acknowledge the numerous factors that led to the success of this album, separate and apart from any impact the Service may have had. Chris Brown was an extremely successful artist long before Music Choice conducted its promotion, and the promotion does not seem to have materially affected pre-release sales. Both "Royalty" and Mr. Brown's previous album "X" had nearly identical pre-orders (approximately [ ] each), indicating that Brown had an established audience base. Trial Ex. 41 (Ford WRT) at 14-15 (citations omitted). This consistency offers no indication that Music Choice's promotion is somehow responsible for "Royalty's" success. Instead, it supports Dr. Ford's conclusion – and the position of Mr. Brown's label – that Music Choice was not uniquely responsible for pre-release sales of "Royalty."

SEPFF2083. As Mr. Williams himself conceded at trial, the allegedly "promotional" emails between record companies are Music Choice are just a common "courtesy" to say "thank you" and are "just a matter of practice of doing business." 5/18/17 Tr. 4746:12-4747:7 (Williams). This view comports with the testimony of SoundExchange witnesses and with the Judges' past findings. *See, e.g.*, *Web IV*, 81 FR at n.41 (finding it likely that expressions

of gratitude were displays of "common courtesy"); 5/1/17 Tr. 1853:7-1855:10 (Ford) (expressions of gratitude are "primarily courtesy" and are "often requested by the Services themselves").

SEPFF2084. Notwithstanding the various thank-you notes and tweets cited by Mr. Williams and Mr. Del Beccaro, the record companies do not consider Music Choice to be an important promotional platform. *See* Trial Ex. 34 at ¶ 16 (Kushner WDT) ("while many American homes have access to the PSS as part of their cable or satellite television packages, the PSS do not ever seem to have generated a lot of consumer excitement, and we at Atlantic have never viewed them as a major outlet for our music"); Trial Ex. 50 at ¶ 16 (Walker WRT) ("I have never heard anyone at Sony express the view that Music Choice is an important promotional platform. In fact, in the absence of the statutory license, Sony probably would not be willing to grant licenses to the PSS with their current business model. It certainly would not do so at anything like the current statutory rate."); *see also* Trial Ex. 32 at ¶ 30 (Harrison WDT) (While "Music Choice may be a good vehicle for its cable company owners to acquire music inexpensively for inclusion as a feature of their subscription packages," the "pricing makes no sense for a record company.").

SEPFF2085. During each of Dr. Ford's nine teleconferences with record labels whose releases were discussed in the Services' testimony, he was "told consistently that [[redacted]]" Trial Ex. 41 (Ford WRT) at 15.

SEPFF2086. Record labels are not even able to accurately gauge how many people hear a song when it is added to Music Choice's rotation. Music Choice tracks only its total

subscribers. Unlike both terrestrial radio and streaming services, it does not track how many people are listening to a given channel at a given time. Trial Ex. 41 (Ford WRT) at 7-8; 5/1/17 Tr. 1845:18-21 (stating that promotional impact is "questionable in part because they don't know who's listening. There is no audience measurement, unlike radio.

SEPFF2087. Dr. Crawford's premise that record labels expend resources on promoting to Music Choice is also overstated. *See* Trial Ex. 54 at ¶¶ 99-100 (Crawford WDT) (asserting that Music Choice must benefit record companies, because otherwise a rational record company would not devote resources to engaging with the Service). Many of Music Choice's examples of labels' promotion to the Service are free or of little incremental cost to the labels. Ford WRT at 15 n.64. For instance, although Mr. Williams states that some record companies "service" Music Choice by giving them promotional copies of recordings, "the marginal cost of allowing Music Choice to download a copy of a recording (along with every radio station) is approximately zero." *Id.* (citing Trial Ex. 56 (Williams WDT) at 21-22).

SEPFF2088. Record labels employ a promotions staff that is responsible for engaging with numerous outlets. None of these employees are tasked solely with promoting to Music Choice. 5/18/17 Tr. 4713:5-11 (Williams). Instead, labels' marketing and promotions teams employ a multifaceted approach, designed to build awareness in a variety of different ways. *See, e.g.*, Trial Ex. 34 at ¶¶ 53-71 (Kushner WDT) (emphasizing that "we do not view any platform as uniquely promotional," and stating that in "significant respects the various platforms are similar"); 5/18/17 Tr. 4713:5-11 (Williams) (promotions departments that lobby Music Choice also lobby terrestrial radio stations); 5/18/17 Tr. 4720:13-4721:1 (Williams) (labels use the same approach "not just at Music Choice" but "across the entire industry").

SEPFF2089. There is also no evidence that Music Choice receives more attention than other platforms. The evidence shows that even one of Music Choice's most popular channels reaches approximately the same number of listeners as one or two local terrestrial radio stations combined, there is no reason to believe record labels lobby Music Choice more. Trial Ex. 56 at 12 (Williams WDT); 5/18/17 Tr. 4741:7-20, 4751:18-21 (Williams).

SEPFF2090. In fact, Mr. Williams testified that the record labels' marketing and promotions employees who contact Music Choice and other services "probably don't even know what a PSS royalty is." Their jobs are to promote air play throughout the industry, across numerous outlets. 5/18/17 Tr. 4721:15-20 (Williams); *see also* 5/18/17 Tr. 4728:22-4729:1 (Williams) (testifying that "Music Choice is just one part of the puzzle").

SEPFF2091. Although Music Choice has failed to present quantitative evidence that it promotes the sale of music, there is substantial evidence that music promotes Music Choice. As discussed in Section IV.H.2.iv *supra*, the impact of music on the Service's income is a necessary consideration in determining net promotional effects. [5/18/17 Tr. 4760:25-4761:10 (Williams) (Music Choice benefits when artists like Chris Brown do special events or in-studio performances).

SEPFF2092. The Five Finger Death Punch anecdote discussed in Mr. Williams's testimony demonstrates the promotional benefits that Music Choice derives from its engagement with record companies. *See* Trial Ex. 56 at 13-14 (Williams WDT) (highlighting Music Choice's "premiere" of the album "Got Your Six" by the metal band Five Finger Death Punch); 5/18/17 Tr. 4743:4-11 (Williams) (testifying that he chose this examples because it is especially indicative of Music Choice's promotional value). As Dr. Ford notes, Music Choice's own

documents indicate that the Service received benefits from this promotion: "Among the things it says worked well is that [ ] To secure these benefits in the future, it expresses its [ ] In fact among the batch of thank you emails accompanying Mr. Williams' testimony is [ ]." Trial Ex. 41 at 19-20 (Ford WRT) (citing internal Music Choice documents).

SEPFF2093. Although Music Choice billed this promotion as a "Five Finger Death Punch premier," Mr. Williams clarified that both Pandora and Sirius XM premiered the album before Music Choice, and that such sequencing is typical of new releases. He testified that had Music Choice been permitted to premier the album on the same day as these other services, it would have led to a higher level of engagement among Music Choice subscribers. 5/18/17 Tr. 4743:16-4744:13 (Williams) (explaining that "if we were first to the marketplace, we would have been the first one to, to draw attention to say that we have something").

SEPFF2094. Because music is often released on multiple platforms and promoted in multiple ways at the same time, the causal connection between any one service and copyright owner income is nearly impossible to quantify. Trial Ex. 41 (Ford WRT) at 7; 5/1/17 Tr. 1854:7-1855:2, 1858:7-1861:3 (Ford) (describing "multiple treatment problem" in assessing promotional effect); 5/18/17 Tr. 4755:12-17 (Williams) [( ]

SEPFF2095. Music Choice's multiple services further complicate such an analysis. Music Choice includes video services and business establishment services that are not subject to

the PSS statutory license. To the extent that Mr. Williams submits anecdotes of promotional events that relate to these other Music Choice services, that evidence is not relevant to the economic analysis in this case. 4/25/17 Tr. 923:19-924:9 (Crawford).

c. Even Dr. Crawford Did Not Credit The PSS' Purported Promotion Effect In His Nash Analysis.

SEPFF2096. If there were any reliable evidence that Music Choice is promotional, one would have expected Dr. Crawford to rely on it. Instead, even Dr. Crawford ultimately concluded that "I am not aware of any compelling evidence on net promotion or net substitution." 4/24/17 Tr. 745:23-25 (Crawford); *see also* 4/24/17 Tr. 742:24-743:5 (Crawford) ("And unfortunately, as we have discussed, or has been discussed in this proceeding previously, it is often very hard to quantify these promotional effects. And, therefore, to be conservative I, again, assumed that that threat point is zero. So I assumed that a threat point for the record labels is also zero."). *See also* Trial Ex. 41 (Ford WRT) at 9, 25; (Services have failed to ask the Judges to apply any specific adjustment for promotion); 5/24/17 Tr. 559:2-5 (Shapiro) (Sirius XM's expert economist likewise testifying that he did not quantify promotional effect).

SEPFF2097. Dr. Crawford's testimony alone should be sufficient to put to rest the assertion that Music Choice is promotional.

d. The Existence Of The PSS Impose Significant Opportunity Costs On Record Companies.

SEPFF2098. Dr. Crawford also fails entirely to account for the opportunity cost that record labels incur when they license music to the PSS. Trial Ex. 502 at ¶ 31, 49 (Wazzan Corr. WRT).

SEPFF2099. In fact, there is considerable reason to believe that the existence of Music Choice imposes significant opportunity costs on record companies in today's market. As Dr. Wazzan testified, "record labels receive substantially higher revenue from interactive and

non-interactive music services than from the PSS. Annual per user revenue from Music Choice is approximately [[redacted]]. The equivalent figure for subscription interactive and noninteractive music services is approximately [[redacted]] and [[redacted]], respectively. Even for nonsubscription noninteractive services, the annual per-user revenue is [[redacted]]. Trial Ex. 502 at ¶ 57 (Wazzan Corr. WRT) (internal footnote citations to Willig WDT omitted). For a CABSAT service, the annual per-subscriber royalty for 2017 is 22.2 cents. 37 C.F.R. § 383.3(a)(1)(ii) (1.85 cents per month x 12 = 22.2 cents per year); *see* Section XIII.B.3.v *supra*.

SEPFF2100. Thus, "it is clear that the record labels would prefer music users to switch from the PSS to higher revenue interactive and non-interactive services, as record company witnesses have testified. Every person who listens to music though the lower revenue PSS is potentially a lost consumer of higher revenue services. In other words, the record labels incur an opportunity cost when they license music to the PSS." Trial Ex. 502 at ¶ 57 (Wazzan Corr. WRT) (citations omitted).

SEPFF2101. The testimony of record company witnesses confirms Dr. Wazzan's view. Mr. Walker (Sony) explained that "we would much rather have users use the basic tier of a free, ad-supported digital radio service, rather than a PSS, because such services are more effective at monetizing our recordings and pay royalties at a much higher rate. Even though they do not generate nearly as much per-user revenue for us as mid-tier or on-demand services, they generate much more per-user revenue for us than the PSS." Trial Ex. 50 at ¶ 18 (Walker WRT). *See also* Trial Ex. 50 at ¶ 17 (Walker WRT) ("In our thinking about digital music service business partners, we place a high priority on making sure that a potential licensee has a sound monetization strategy and the potential to generate significant per-user revenues for us. These

considerations are particularly critical where there is risk that the service will cannibalize use of other more profitable services.").

SEPFF2102. Similarly, Mr. Harrison testified that "[w]e consider the opportunity costs of every deal we contemplate." Trial Ex. 32 at ¶ 29 (Harrison WDT). He explained that that PSS "deliver our recordings into the homes of tens of millions of subscribers, but pay only pennies per subscriber per year." Trial Ex. 32 at ¶ 30 (Harrison WDT). While "Music Choice may be a good vehicle for its cable company owners to acquire music inexpensively for inclusion as a feature of their subscription packages," the "pricing makes no sense for a record company." Trial Ex. 32 at ¶ 30 (Harrison WDT).

SEPFF2103. The results of an Ipsos survey conducted in July 2016 demonstrate that Music Choice viewers use a variety of alternative music services. The most popular are [ ]. In addition, a substantial percentage of Music Choice viewers who use alternative music services do so on a daily or almost daily basis; [ ]. Trial Ex. 502 at ¶ 58 (Wazzan Corr. WRT).

SEPFF2104. Dr. Wazzan explained that it would require migration of only a trivial portion of Music Choice usage to higher-paying services for record companies and artists to receive the same revenue they currently earn from the PSS under the statutory license. Trial Ex. 502 at ¶ 59 (Wazzan Corr. WRT). "For example, record labels receive approximately [ ] per year from a subscription noninteractive service (sometimes referred to as a "mid-tier" service). It would require only approximately [ ] of Music Choice's approximately [ ] total subscribers to subscribe to a mid-tier service for the record labels to receive

approximately the same revenue they currently earn from Music Choice." Trial Ex. 502 at ¶ 59 (Wazzan Corr. WRT). *See also* Trial Ex. 50 at ¶ 19 (Walker WRT) (Music Choice's "product offerings are similar to the mid-tier services, but generate much less per-user revenue than any other type of royalty-paying service. And they offer no migration path for users to a higher-revenue offering. To be an attractive business partner for us today, the PSS would need to monetize our recordings more effectively and pay much higher royalties.").

SEPFF2105. Similarly, if "one considers just the [ ] of Music Choice subscribers who already use Pandora on a daily or almost daily basis, it would require only [ ] of these subscribers to subscribe to a mid-tier noninteractive service such as Pandora's for the record companies to earn revenue approximately equivalent to Music Choice's statutory royalty payments. Trial Ex. 502 at ¶ 59 (Wazzan Corr. WRT).

SEPFF2106. Even a small migration to ad-supported noninteractive services could also replace Music Choice's statutory royalties if it was to go out of business. Music Choice users consume a massive amount of music programming – on the order of [ ]. Trial Ex. 502 at ¶ 60 (Wazzan Corr. WRT). Assuming for simplicity 15 tracks per hour, and given a webcasting statutory royalty rate for 2017 of $0.0017 for a commercial noninteractive service, only roughly [ ] of Music Choice usage would have to migrate to an ad-supported noninteractive service to generate statutory royalties equivalent to those paid by Music Choice. Trial Ex. 502 at ¶ 60 (Wazzan Corr. WRT).

iv. Dr. Crawford Adopts An Arbitrary Bargaining Power Range, When It Likely Should Be Close To 1.

SEPFF2107. Dr. Crawford's Nash Framework analysis does not derive a specific result with respect to the parties' relative bargaining power. Instead, it merely provides a broad and arbitrary range for the relative bargaining power of record labels and the PSS. Trial Ex. 502

at ¶¶ 31, 64 (Wazzan Corr. WRT). *See also* 4/25/17 Tr. 884:19-22 (Crawford) (acknowledging that he did not rely on any direct evidence to reach his determination about the bargaining power of each hypothetical party).

SEPFF2108. In his calculations, Dr. Crawford set the Bargaining Power parameter to three arbitrary levels: 50/50; 80/20 in favor of record labels; and 20/80 in favor of the PSS. He then determined three widely different royalty rates, one for each arbitrary level. But Dr. Crawford failed to provide any justification for the chosen levels. On the contrary, he stated that Bargaining Power parameters are "difficult to determine" and "at the frontier of economic research." Trial Ex. 54 at ¶ 105 (Crawford WDT). His model leads to three arbitrary and widely-divergent results, and he left it to the Judges to guess at the appropriate parameters. Trial Ex. 502 at ¶ 65 (Wazzan Corr. WRT).

SEPFF2109. The evidence suggests that it is probably closer to 1 than 0. Record labels seem fairly indifferent to Music Choice's continued operation. For example, Mr. Harrison testified that it would be "foolish" for a record company to enter into a license with Music Choice at the current rates. Trial Ex. 32 at ¶ 29 (Harrison WDT). Similarly, Mr. Walker testified that Sony Music "probably would not be willing to grant licenses to the PSS with their current business model" and "certainly would not do so at anything like the current statutory rate." Trial Ex. 50 at ¶ 16 (Walker WRT). Dr. Ford testified that in his interviews of record label business affairs, marketing, promotions and sales staff, he found that [ ]. Trial Ex. 41 at 14 (Ford WRT).

SEPFF2110. By contrast, as Dr. Crawford conceded, Music Choice would cease to be a going concern if it could not obtain licenses from record companies. This fact suggests that

the Bargaining Power parameter would tilt in favor of record companies in the absence of the statutory license. Trial Ex. 502 at ¶ 67 (Wazzan Corr. WRT).

SEPFF2111. In terms of Dr. Crawford's model, recognizing the superior bargaining power of record companies means affording to the hypothetical record company the lion's share of the profits to be split (assuming it was proper to use the model in this context). Based on Dr Wazzan's corrections to Dr. Crawford's model that are discussed in Section XIII.D.2.i above, assigning to the record company a bargaining power parameter of 80% or more would yield a royalty rate in the range of [ ] higher. Trial Ex. 502 at ¶ 68 (Wazzan Corr. WRT).

E. Analysis And Application Of The Section 801(b) Objectives To The PSS

SEPFF2112. The § 801(b)(1) objectives and their proper application are discussed in Section X of these Findings of Fact with respect to the SDARS. They apply in the same way to the PSS. As Dr. Wazzan testified, the first three objectives can be summarized as seeking to derive a free market rate, and then considering whether policy objectives might warrant any deviation. Trial Ex. 501 at ¶ 18 (Wazzan Corr. WDT). If the Judges adopt SoundExchange's rate proposal, no adjustment will be necessary to account for any of the four statutory factors. However, if the Judges adopt Music Choice's rate proposal, push forward the current statutory rate, or adopt a similarly low rate, then an upward adjustment would be necessary in provide copyright owners a fair return, to reflect their greater contributions to the product made available to the public and to avoid further disruption of the industries involved.

1. The Judges' Precedent And Economic Theory Indicate That The First Three Section 801(b) Factors Are Satisfied By A Market Rate.

SEPCL43. The first three statutory objectives address issues that are accounted for in market prices. Accordingly, the Judges have held that an adjustment based on these factors is warranted only when the benchmark market and the hypothetical target market under

the statutory license are different in ways relevant to these objectives. Thus, in this case, the relevant inquiry is whether the target market (PSS) is different from the benchmark market (CABSAT and webcasting) in ways that require an adjustment. Trial Ex. 501 at ¶ 75 (Wazzan Corr. WDT).

SEPFF2113. Dr. Wazzan concluded that no such adjustment based on the first three factors is warranted if the Judges adopted SoundExchange's rate proposal for the PSS. Trial Ex. 501 at ¶ 75 (Wazzan Corr. WDT). Dr. Wazzan reviewed the written direct testimony of Jonathan Orszag, who explained why setting market-based rates is consistent with the first three Section 801(b)(1) objectives, and agreed with his analysis. Trial Ex. 501 at ¶ 19 (Wazzan Corr. WDT).

SEPFF2114. In brief, and as explained in the written direct testimony of Dr. Wazzan, the first policy objective is best served by rates that are sufficiently high to encourage artists and record companies to create new works, but at the same time not so high as to dissuade distributors from undertaking the investments necessary to distribute copyrighted recordings. Market-based rates satisfy these conditions. As to the second policy objective, "fairness" is satisfied by an outcome that arises through arm's length dealings in the marketplace. *See SDARS I* at 4095 ("[A] fair income is . . . consistent with reasonable market outcomes."). The third statutory objective is also best satisfied by license fees that reflect marketplace negotiations, because such negotiations are likely to reflect the respective contributions of copyright owners and users. Trial Ex. 501 at ¶ 20 (Wazzan Corr. WDT).

SEPFF2115. The first three objectives do not compel an adjustment from SoundExchange's proposed rates, because they are satisfied by marketplace rates, and no differences between the PSS and CABSAT services suggest that an adjustment would be

warranted. Dr. Crawford devotes many pages of his testimony to a discussion of why he believes that each of the first three Section 801(b)(1) objectives counsels a below-market PSS royalty. However, his discussion misses the point. The Judges have made clear that in applying these Section 801(b)(1) objectives, they are not to consider how well the target service stacks up against the objectives in the abstract, but whether there are differences between the benchmark market and the target market that warrant an adjustment. *SDARS II*, 78 FR at 23,061, 23,094. Dr. Crawford does the former. Trial Ex. 502 at ¶ 73 (Wazzan Corr. WRT).

2. First Objective: Adoption Of SoundExchange's PSS Rate Proposal Would Promote The Availability Of Creative Works to the Public.

SEPFF2116. SoundExchange has proposed a benchmark based on the current CABSAT rates. PSS and CABSAT services (along with Internet simulcasting by PSS and CABSAT services) appear to provide equivalent availability of creative works to consumers. Trial Ex. 501 at ¶ 76 (Wazzan Corr. WDT). For this straightforward reason, no adjustment to SoundExchange's proposed rates is necessary.

SEPFF2117. Music Choice routinely encourages the Judges to turn back the clock twenty years to the *PSS I* proceeding. In that proceeding, the panel was persuaded that PSS increased the availability of recordings to the public because they offered diverse programming at a time when no other digital music services were in the market. Significantly, however, the panel recognized that "a future Panel may reach an entirely different result based on the then-current economic state of the industry." *PSS I*, 63 Fed. Reg. at 25,405 (citing *PSS I* CARP Report, Trial Ex. 979 at ¶ 202).

SEPFF2118. In fact, the market has changed greatly in 20 years. Consumers can access similarly-diverse selections of channels through many different types of noninteractive services (webcasting, SDARS, CABSAT) and even more diverse selections of recordings

through on-demand services. As the Judges are well aware, there are vastly more consumer options for digital music programming than existed twenty years ago. While it may be that PSS once contributed uniquely to the availability of recordings, the PSS are now just one of many sources from which consumers may access recordings. Trial Ex. 501 at ¶ 77 (Wazzan Corr. WDT).

SEPFF2119. Dr. Crawford writes that Music Choice could potentially go out of business if the royalty increases and argues that this would reduce demand for new music and new artists. He further argues that consumers would have fewer options available to them. Trial Ex. 54 at ¶¶ 194-203 (Crawford WDT). These arguments are to no avail.

SEPFF2120. First, Dr. Crawford ignores the fact that other music sources would fill any void created by Music Choice's absence. [5/18/17 Tr. 4532:25-4533:6 (Del Becarro) (identifying Stingray as competitor). In fact, Stingray has already successfully replaced Music Choice on one major cable operator – AT&T. 5/18/17 Tr. 4641:25-4642:23 (Del Beccaro) (agreeing that Music Choice faces competition from Stingray; Stingray tries to undercut Music Choice on price; Music Choice lost AT&T to Stingray, and Stingray is trying to replace Music Choice with other cable carriers). [Ex. 502 at ¶¶ 76, 83 (Wazzan Corr. WRT); 5/3/17 Tr. 2329:18-25 (Wazzan). In short, Dr. Crawford's analysis is static (*i.e.*, all things being equal), whereas the market is likely to react dynamically. Trial Ex. 502 at ¶ 76 (Wazzan Corr. WRT).

SEPFF2121. If these services were paying higher royalties, such as the CABSAT royalty, such actions would benefit record labels, artists, and/or consumers. This is particularly true given that, according to Mr. Del Beccaro, Stingray pays SoundExchange at a higher rate on a per-customer basis, even as Stingray is charging lower rates to cable companies on a per customer basis. 5/18/17 Tr. 4646:4-4647:6 (Del Beccaro). In other words, the record companies and artists are induced to create more recordings at the same time as customers pay a lower price – under this scenario, the availability of works to the public is maximized.

SEPFF2122. Furthermore, survey results demonstrate that Music Choice viewers already use a variety of alternative music sources on a daily or almost daily basis. Many of these channels already provide a range of free channels focused on new music (*e.g.*, Pandora's Today's Music and Spotify's Fresh Finds channels). Dr. Crawford's assertion that "whatever replaced Music Choice would be unlikely to be as open to new artists and new music as is Music Choice" is without support. Trial Ex. 54 at ¶ 195 (Crawford WDT). Although he cites to testimony by Mr. Williams that terrestrial radio is becoming ever less open to new artists, he fails to consider any other competing music sources (*e.g.*, Pandora, Spotify). Trial Ex. 502 at ¶ 75 (Wazzan Corr. WRT).

SEPFF2123. Recent history demonstrates how this dynamic can work. As Dr. Wazzan testified, Live365 was a large, early webcaster, and the sole commercial webcaster to litigate the *Web III* proceeding. Despite a reduction in the royalty rate applicable to its transmissions (due to the *Web IV* decision), it shut down in early 2016 because it lost the support of its investors. However, others stepped in to fill its void. And after a year's hiatus, Live365 came back with a restructured business and plans to pursue a more profitable business model. Trial Ex. 502 at ¶ 77 (Wazzan Corr. WRT).

SEPFF2124. Conversely, low PSS rates have a negative effect on availability, because of opportunity costs to copyright owners, and greater competition for other services including CABSAT services. Adopting the CABSAT rates for PSS is fully consistent with the first objective; lower rates would be inconsistent with that objective. Trial Ex. 501 at ¶ 77 (Wazzan Corr. WDT).

SEPFF2125. In addition, to the extent that Music Choice contends that the first statutory factor justifies a downward departure based on Music Choice's alleged promotional effect on the distribution of sound recordings, that argument fails for all the reasons discussed above. Music Choice bases this argument on anecdotal evidence in the form of "courtesy" and "thank you" emails, with no quantitative support whatsoever. As discussed above, this is precisely the same kind of evidence the Judges have rejected in prior proceedings. Moreover, this argument ignores a record company's opportunity costs of a license to Music Choice. Trial Ex. 502 at ¶ 79 (Wazzan Corr. WRT).

3. Second Objective: Adoption Of SoundExchange's PSS Rate Proposal Would Provide Copyright Owners A Fair Return And The PSS A Fair Income.

SEPFF2126. In *SDARS I*, the Judges assigned an economic meaning to fairness, stating that "a fair income is . . . consistent with reasonable market outcomes." *SDARS I* at 4095. Use of CABSAT and webcasting rates for PSS is consistent with this statutory objective, as the CABSAT and webcasting rates purport to approximate a marketplace rate. Conversely, continuing to offer below-market rates to PSS is manifestly contrary to any reasonable effort to approximate existing economic conditions. Trial Ex. 501 at ¶ 78 (Wazzan Corr. WDT).

SEPFF2127. As Mr. Orszag testified, the second objective should not be employed to install a floor under the rate of return earned by the content distributor. In fact, absent a demonstration that benchmark rates somehow have been inflated by the exercise of monopoly

power, any reduction to benchmark rates in the name of "fairness" will amount to nothing more than a subsidy to music service that confers upon the company an unwarranted competitive advantage *vis-à-vis* rival distributors of sound recordings, and that weakens the incentives to create new sound recordings and to undertake investments in the distribution of sound recordings. Trial Ex. 26 at ¶ 17 (Orszag WDT).

i. Decreasing or Maintaining The PSS Rate Would Deny Copyright Owners A Fair Return.

SEPFF2128. As discussed above, the record shows unequivocally that the PSS pay lower royalty rates than all other music services. *See also, e.g.*, 5/18/17 Tr. 4621:25:4623:1 (Del Beccaro) (agreeing that Music Choice pays a lower royalty rate for sound recordings than all the other types of digital music services that pay for the use of sound recordings; and that SDARS, CABSAT, BES, webcasters, video services, interactive webcasters all pay higher royalty rates).

SEPFF2129. The PSS rates are so low because the statutory rates have subsidized the companies that offer PSS (Music Choice and Muzak). But these below-market rates have a negative impact on copyright owners and artists, who receive unreasonably small royalty payments from the PSS.

SEPFF2130. If there were any doubt that the PSS rates do not provide a fair return to copyright owners, Mr. Del Beccaro resolved it at trial. If the statutory PSS rate was above or close to a fair market rate, one would expect to see record companies agree to direct licenses at or below the statutory rate. But Mr. Del Beccaro testified that no copyright owner has agreed to a direct license for Music Choice's PSS below the statutory rate since 1994, and that "no record company" would "open a negotiation with us and talk about a lower rate," because "they already have in their minds, it is a floor, it is too low." 5/18/17 Tr. 4618:21-4619:3, 4620:15-4521:9 (Del Beccaro).

SEPFF2131. Mr. Del Beccaro is correct on this point. The evidence is clear that the current PSS rate is far below a market rate and thus does not provide record companies with a return that resembles a fair market return. Trial Ex. 50 at ¶ 16 (Walker WRT) ("In fact, in the absence of the statutory license, Sony probably would not be willing to grant licenses to the PSS with their current business model. It certainly would not do so at anything like the current statutory rate."); Trial Ex. 32 at ¶ 29 (Harrison WDT) (stating that it would be "foolish" for a record company to enter into a license with Music Choice at the current statutory rate).

SEPFF2132. Decreasing the statutory rate (as Music Choice proposes) would only exacerbate this problem, and would make the return to copyright owners even less fair than it currently is. Moreover, as set forth in the section of these Findings of Fact that discusses the Section 801 factors with respect to the SDARS, record companies are increasingly reliant on statutory royalties. To be sure, PSS royalties are less than SDARS royalties, but the same point holds true: record companies must rely on an array of royalty streams to earn a fair return on their investments, and that includes royalties from the PSS.

SEPFF2133. In addition, as discussed in Section XIII.B.4 above, the third objective counsels against maintaining the current percentage-of-revenue rate structure for PSS. The PSS have both priced their services at below-market prices, and Music Choice now seeks to preserve its flexibility to slash the price of music without limitation. Trial Ex. 59 at ¶ 186 (Crawford WRT). In *Phonorecords I*, the Judges rejected an argument for flexibility just like the one made by Dr. Crawford, explaining that such price cutting may mean that a percentage of revenues is a poor proxy for measuring the value of the usage involved, and that the Section 801(b)(1) objectives require protecting copyright owners from the effects of such price cutting by statutory licensees:

> [T]his purported business flexibility "advantage" raises serious questions of fairness precisely because the percentage of revenue metric may be a less than fully satisfactory proxy for measuring more usage or the actual intensity of the usage of the rights in question. It is not fair to fail to properly value the reproduction rights at issue in this proceeding. Such a result is at odds with the stated policy objective of the statute to afford the copyright owner a fair return for his creative work.

Phonorecords I, 74 FR at 4517.

ii. Increasing The PSS Rate Would Not Be Unfair.

SEPFF2134. As an overall enterprise, Music Choice is currently profitable. 5/18/17 Tr. 4623:21-23 (Del Beccaro). Music Choice has continued to offer its PSS service for thirty years, as part of its profit-maximizing effort. 5/18/17 Tr. 4624:6-20 (Del Beccaro). As discussed in greater detail below, the evidence shows that at SoundExchange's proposed rates, Music Choice would continue to operate its PSS, albeit with less profit. As Music Choice's expert Dr. Crawford testified, Section 801(b) does not guarantee a copyright user a certain level of profitability. 4/25/17 Tr. 901:6-18 (Crawford).

SEPFF2135. As even Mr. Del Beccaro has admitted, Music Choice's primary competitor is Stingray. 5/18/17 Tr. 4641:25-4642:23 (Del Beccaro). While Music Choice may quibble that the quality of its service is superior to Stingray's, there can be no real dispute that Stingray's CABSAT service is interchangeable with Music Choice's PSS service. They offer consumers the same functionality – a residential audio service. Indeed, at least one cable provider (AT&T) has replaced Music Choice with Stingray. Stingray pays the CABSAT rate for its residential audio service. There is nothing unfair about asking Music Choice to pay the same rates for functionally the same service as its chief competitor.

4. Third Objective: Adoption Of SoundExchange's PSS Rate Proposal Would Reflect The Relative Roles Of Copyright Owners And PSS Providers.

SEPFF2136. As an initial matter, PSS and CABSAT services have similar roles and make similar contributions, in that they all provide essentially the same service, as described above. Trial Ex. 501 at ¶ 79 (Wazzan Corr. WDT). Likewise, copyright owners perform the same roles with respect to both CABSAT services and PSS – creating, marketing and distributing the recordings that the services monetize to attract an audience. Trial Ex. 501 at ¶ 81 (Wazzan Corr. WDT). For these reasons, there is no basis for a downward departure from SoundExchange's proposed rate.

SEPFF2137. Notably, Music Choice's wholesale distribution model seems to be relatively inexpensive to operate. Between 2013 and 2016, it spent less than [▇] of revenue on property and equipment. Trial Ex. 501 at ¶ 79 (Wazzan Corr. WDT). By way of comparison, Sirius XM's capital expenditures were 3% of its total revenues in 2015, and Pandora spent 2.8% of its total revenues on capital expenditures during the same period. Trial Ex. 501 at ¶ 80 (Wazzan Corr. WDT).

SEPFF2138. By contrast, record companies spend over 20% of their revenue on artists & repertoire and marketing. Trial Ex. 501 at ¶ 81 (Wazzan Corr. WDT). The contributions, investments and risks of record companies are discussed in the section of these Findings of Fact that discussed the Section 801 factors with respect to the SDARS. All of those contributions are equally relevant to analysis of the Section 801 factors with respect to the PSS, and should be considered here as well. That evidence makes clear that the copyright owners' massive contributions and investments dwarf those of Music Choice.

SEPFF2139. Dr. Crawford argued that the royalty should account for the idea that record labels do not make decisions with the PSS market in mind. As an initial point, there is

little use in defining a "PSS market," as there are a number of non-PSS services that directly compete with the PSS (clearly the CABSAT services, and to some extent other services). Nevertheless, one cannot deny the fact that the record labels do in fact make these investments, without which the PSS would have no sound recordings to use for their services. Trial Ex. 502 at ¶ 80 (Wazzan Corr. WRT).

SEPFF2140. Dr. Crawford also tried to discount the record labels' substantial contributions to identifying new creative talent and producing and marketing the recordings that Music Choice uses to draw viewers, simply because of the low statutory royalties that the PSS pay. While Dr. Crawford is right that the PSS pay a low royalty relative to their high volume of usage and listenership, his argument is circular and proves too much. As Dr. Wazzan explained, if it really were the case that the royalties paid by Music Choice ([redacted] in 2015) were too little to matter, and that its royalties should therefore be reduced (making its royalties even less significant), that logic would eventually lead to the conclusion that only the handful of statutory licensees paying more statutory royalties than Music Choice should pay royalties, and everyone else should have their statutory royalties reduced to zero. That is not consistent with how markets work or how the Judges have described the Section 801(b)(1) objectives. Trial Ex. 502 at ¶ 81 (Wazzan Corr. WRT).

SEPFF2141. Nor is an adjustment needed to compensate Music Choice's investors for their contributions. According to Mr. Del Beccaro, Music Choice's investors have invested [redacted] of capital in Music Choice. Trial Ex. 55 at 20 (Del Beccaro WDT). But all of that capital was invested a long time ago; specifically, in the first twelve years of Music Choice, with no investments since then. In other words, there has been no investment by them in the last eighteen years, and the investors have realized returns on their investments. Moreover, those

investments have helped fuel Music Choice's non-statutory video service line of business. 5/18/17 Tr. 4630:23-4631:21 (Del Beccaro).

5. Fourth Objective: The Current PSS Rate And Music Choice's Proposed Rate Are Disruptive, While SoundExchange's Proposed Rate Is Not.

SEPCL44. The fourth statutory factor reflects a policy judgment that changes in statutory rates should be implemented in a manner that does not "directly produce[] an adverse impact that is substantial, immediate and irreversible in the short-run" and that "threaten[s] the viability of the music delivery service currently offered to consumers under this license." *SDARS I* at 4097.

SEPFF2142. Dr. Wazzan testified that this fourth factor is different from the previous three in that it appears on its face to be counter-market (but in actuality is not). As he explained, "[a]ctual economic markets do not shield competitors from competition nor are they designed to avoid disruption. Consider the various industries that no longer exist as a result of competitive forces (e.g., the horse and buggy as popular means of transportation). In short, market forces constantly act to produce the types of impact this factor could be construed as seeking to limit. However, we know that the rate setting process is intended to generate rates that approach those that would be observed in an unregulated free market." Trial Ex. 502 at ¶ 82 (Wazzan Corr. WRT). Thus, Dr. Wazzan interpreted this factor to mean simply that caution should be exercised in the rate setting process so as not to harm the market (in the long or short term) by artificially setting the rate too low or too high. In prior proceedings, the Judges have phased in rate increases when they have thought that was justified as a matter of policy. Trial Ex. 502 at ¶ 82 (Wazzan Corr. WRT).

SEPFF2143. It is important to note that the Judges have held that no service is assured of a statutory royalty rate that will allow it to operate profitably. *SDARS I* at 4095;

SDARS II at 23,067. If the PSS cannot, by some combination of lower profits, higher prices, reduced expenses, or subsidy from other lines of business operate their services while paying marketplace prices for the inputs used in their services, the economically-appropriate result is that other providers who can do so (such as the CABSAT services) should be allowed to do so. In fact, as discussed above, however, there are a number of substitutes for Music Choice's PSS, including Stingray, and it is likely that these sources would fill any void created by Music Choice's absence. Trial Ex. 502 at ¶¶ 83, 86 (Wazzan Corr. WRT).

SEPFF2144. Indeed, even Music Choice's expert witness Dr. Crawford testified that "there's no requirement for the Judges to set rates to guarantee that the PSS survive." 4/25/17 Tr. 862:20-22 (Crawford). Dr. Crawford likewise agreed that there is nothing in Section 801(b)(1) that guarantees a copyright user a certain level of profitability, or that requires the Judges to set rates to ensure that an inefficiently operated service can remain in business. 4/25/17 Tr. 901:6-18 (Crawford).

SEPFF2145. As Dr. Wazzan testified, "the rate setting process is not intended to introduce protectionist artificial market frictions in the sense that non-competitive participants are subsidized and allowed to continue to exist in the long term. Rather it is intended to approximate market rates, in the absence of a free market, so that supply and demand will reach a pareto-optimal equilibrium. This is best achieved with a market rate." Trial Ex. 501 at ¶ 86 (Wazzan Corr. WDT).

i. The Artificially Low PSS Rate Is Disruptive Because It Provides Music Choice An Insurmountable Competitive Advantage.

SEPFF2146. In the market for residential cable audio services, Music Choice faces competition from Stingray (and, to a lesser extent, Muzak and Sirius XM's CABSAT service).

4/25/17 Tr. 902:4-903:1 (Crawford) (stating that Music Choice, Stingray, Muzak and Sirius XM participate in the "cable audio market").

SEPFF2147. Music Choice enjoys a distinct and unfair advantage over Stingray, Sirius XM and potential new entrants into the market – the artificially low PSS rates. Trial Ex. 502 at ¶ 81 n.112 (Wazzan Corr. WRT) (noting that Music Choice internal documents [ ]). Dr. Wazzan testified that the "[e]xistence of below-market PSS rates is a significant barrier of entry" and helps explain why "we don't see a lot of CABSATs in the market." 5/3/17 Tr. 2318:9-12 (Wazzan). "[A]ny new entrant who wanted to come in is faced with an entrenched, below-market rate paying competitor," *i.e.*, Music Choice. 5/3/17 Tr. 2318:13-16 (Wazzan).

SEPFF2148. [ ] *See* 5/18/17 Tr. 4532:25-4533:6 (Del Beccaro) ([ ]); Trial Ex. 55 at 36 (Del Beccaro WDT) (discussing need to differentiate Music Choice from Stingray). According to Mr. Del Beccaro, higher royalty rates could [ ]. 5/18/17 Tr. 4536:21-4537:4 (Del Beccaro).

SEPFF2149. At the same time as Stingray is competing more aggressively with Music Choice, consumer demand for Music Choice's residential audio service is decreasing as consumers have more ways than ever before to listen to digital streams of music, and changes in

the cable television market are driving down prices for Music Choice's programming. Trial Ex. 55 at 23 (Del Beccaro WDT) (discussing downward pressure on prices); 5/18/17 Tr. 4522:23-4523:1 (Del Beccaro) ("the market has become tougher financially and the available pie gets smaller every year because of the dynamics in the cable industry and the television market").

SEPFF2150. But it would be patently unfair to require copyright owners and artists to continue subsidizing Music Choice with below-market rates so that Music Choice can compete more effectively with Stingray or other new entrants, or to compensate Music Choice for changes in the cable industry. Such a subsidy fosters Music Choice's inefficient operation and risks disrupting the market for residential audio services. Trial Ex. 501 at ¶ 84 (Wazzan Corr. WDT).

SEPFF2151. Dr. Crawford euphemistically described the situation: "it's not really a matter of record labels subsidizing poor performance, but, rather, record labels modifying their payments in response to a changed market environment." 4/25/17 Tr. 933:25-934:4 (Crawford). That is simply an artful dodge of the obvious and unavoidable facts: the artificially low PSS rate is used to insulate Music Choice from market forces, at the record companies' expense.

ii. SoundExchange's Proposed Rate Would Not Be Disruptive.

SEPFF2152. [5/3/17 Tr. 2328:17-22 (Wazzan) (SoundExchange's rate proposal would not put Music Choice out of business). Music Choice has regularly earned profits and made distributions to its partners. Table 3 from Dr. Wazzan's corrected written rebuttal testimony summarized Music Choice's net income, operating cash flow and partner distributions from 2012 to 2015.

Table 3 [Restricted]

SEPFF2153. According to Music Choice's forecasts that provided the basis for Dr. Crawford's and Dr. Wazzan's calculations, Music Choice would be profitable as an enterprise at CABSAT rates in 2018 and for the remainder of the coming rate period.

SEPFF2154. Dr. Crawford calculated Music Choice's audio royalties (for both sound recordings and musical works) based on PSS and CABSAT rates. For 2018, he forecast that at PSS rates, Music Choice's audio royalty expense (for both sound recordings and musical works) would be [[redacted]]. Trial Ex. 59 at ¶ App. B.1 (Crawford WRT). For 2018, he forecast that at CABSAT rates, Music Choice's audio royalty expense (for both sound recordings and musical works) would be [[redacted]]. Trial Ex. 59 at ¶ App. B.2 (Crawford WRT). The difference between those two numbers – [[redacted]] – is, according to Dr. Crawford's calculations, the 2018 rate increase being sought by SoundExchange in this proceeding.

SEPFF2155. However, Music Choice's enterprise-wide financial forecasts project that (assuming no rate increase) Music Choice's 2018 EBITDA will be [[redacted]] and its 2018 after-tax net income will be [[redacted]]. Trial Ex. 406 (P&L tab). Thus, according to Music Choice's own forecasts, it would be profitable as an enterprise at CABSAT rates in 2018.

The picture only improves from there, since Music Choice forecasts that its EBITDA will increase at about a [ ] compound annual growth rate to reach [ ] in 2022, and that its after-tax net income will increase at about a [ ] compound annual growth rate to reach [ ] in 2022. Trial Ex. 406 (P&L tab). That rate of growth [ ] the 3% annual adjustments built into the current CABSAT statutory rates through 2020, and that SoundExchange has proposed continuing in the PSS rates for 2021 and 2022.

SEPFF2156. Furthermore, the evidence shows that Music Choice would have been even more profitable if it charged its partners [.] Trial Ex. 502 at ¶ 87 (Wazzan Corr. WRT); *see* Section B.4.i *supra*. For example, Music Choice [.] Trial Ex. 502 at ¶ 87 (Wazzan Corr. WRT). In addition, as Dr. Wazzan explained, "Music Choice also has the power to mitigate the effects of a rate increase, at least to a significant extent, because [.] Trial Ex. 502 at ¶ 88 (Wazzan Corr. WRT).

SEPFF2157. Based on the evidence, Dr. Wazzan summarized Music Choice's claim that higher rates would force it out of business as a "red herring": "In short, ordering Music Choice to pay statutory royalties at the CABSAT rates would, all other things being equal, render it less profitable. But the alarm that Music Choice sounds about any increase in rates permanently putting an end to its business is a red herring. As described above, its own forecasts show that it would remain profitable. But even if its financial prospects were to turn more dire than it is currently projecting outside this proceeding, so that an increase in rates might threaten to make Music Choice's business unprofitable, that is simply because of its choice to [

[redacted]]. In other words, the increased royalty rates would not threaten the viability of the music delivery service—but only its business model of [[redacted]]. Trial Ex. 502 at ¶ 89 (Wazzan Corr. WRT).

SEPFF2158. In addition, adoption of SoundExchange's rate proposal would mean that the playing field would be level for competitors in the market – Music Choice would pay the same statutory rate as the other providers of residential audio services (the CABSAT providers, currently including Stingray and Sirius XM). As discussed above, this would not disrupt the industry involved (which Music Choice's expert Dr. Crawford defined as the cable radio industry, which includes both the PSS and CABSAT services, *see* 4/25/17 Tr. 902:4-903:1 (Crawford)), because even if Music Choice were to cease offering its residential audio service to certain cable providers, that void would be filled by other market participants such as Stingray, including possibly new entrants who would no longer face the barrier to entry posed by Music Choice's preferential royalty rates. Ex. 502 at ¶¶ 76, 83 (Wazzan Corr. WRT); 5/3/17 Tr. 2318:9-16 (Wazzan).

SEPFF2159. That is not disruption. Rather, it is competition.

XIV. License Terms And Regulatory Language

SEPCL45. Sections 112(e)(3) and 114(f)(1)(A) require this Court to adopt "terms" for the Section 112 and 114 statutory licenses as well as "rates." Terms includes "such details as how payments are to be made, when, and other accounting matters." S. Rep. No. 104–128, at 30 (1995), *as reprinted in* 1995 U.S.C.C.A.N. 356, 377.

SEPCL46. The Judges have concluded that in setting terms, their "mandate . . . is to adopt terms that are practical and efficient." *SDARS II*, 78 FR at 23073; *see also Web II*, 72 FR at 24102 (Judges "should consider matters of feasibility and administrative efficiency"); *Web III*, 76 FR at 13042 ("we are obligated to 'adopt royalty payment and distribution terms that are practical and efficient'" (quoting *Web II*)); *SDARS I*, 73 FR at 4098.

SEPCL47. The Judges have also emphasized the importance of consistency of terms across statutory licenses. In adopting terms "the Judges seek, where possible, consistency across licenses to promote efficiency and minimize costs in administering the licenses." *SDARS II*, 78 FR at 23073-74; *see also SDARS I*, 73 FR at 4098-99 ("[W]e seek to maintain consistency across the licenses set forth in Sections 112 and 114. Consistency promotes efficiency thereby reducing the overall costs associated with the administration of the licenses."); *Web III*, 76 FR at 13042. Although terms across the statutory licenses may vary, the "burden is upon the parties to demonstrate the need for and the benefits of variance." *SDARS I*, 73 FR at 4099; *see also Web III*, 76 FR at 13042.

SEPFF2160. In the *Web IV* proceeding, the Judges undertook a major rewrite of the regulations embodying the webcasting rates and terms. SoundExchange adopted as the starting point for developing its proposed regulations in this proceeding the restructured and revised regulations adopted by the Judges in *Web IV*, and then incorporated various provisions specific to SDARS and PSS. Trial Ex. 29 at 33-34 (Bender WDT).

A. The SDARS And PSS Regulations Should Be Integrated And Harmonized.

SEPFF2161. To further the Judges' goals of promoting efficiency and minimizing the costs of administering the licenses, the Judges should integrate the SDARS and PSS regulations and harmonize them with each other and the webcasting regulations to the extent practicable.

SEPFF2162. In the *Web IV* proceeding, the Judges undertook a major rewrite of the regulations embodying the webcasting rates and terms. This revision was driven by the Judges' clearly-expressed desire both to (1) "reduc[e] the amount of repetition in the regulations" and (2) state the regulations in "plain language." *Web IV*, 81 FR at 26316 n.1. The Judges also sought to address various drafting issues in the old regulations. *E.g.*, *id.* at 26400 (addressing an "internal ambiguity" in the old regulations). Trial Ex. 48 at 2 (Bender WRT).

SEPFF2163. But the revised *Web IV* regulations presented something of a quandary for SoundExchange, as it contemplated its proposed terms and other regulatory language in this proceeding. On the one hand, SoundExchange has only targeted concerns with the terms and other regulatory language currently applicable to the SDARS and PSS. On the other hand, as SoundExchange's Chief Operating Officer Jonathan Bender testified, SoundExchange agrees that the "plain language" format ultimately adopted by the Judges is clearer in many respects than the predecessor regulations. *See* 81 FR 26316 & n.1.

SEPFF2164. The SDARS regulations, and to a significant extent the PSS regulations, have tended to track the webcasting regulations. Accordingly, SoundExchange used the restructured and revised regulations adopted by the Judges in *Web IV* as the model for the regulations it is proposing in this proceeding, and then incorporated various provisions specific to SDARS and PSS. Trial Ex. 29 at 33-34 (Bender WDT); Trial Ex. 48 at 1-2 (Bender WRT). Where SoundExchange's proposed language varies from the *Web IV* regulations in a material

respect, it includes in its proposed regulations drafting notes explaining the origins of various provisions and highlighting instances in which SoundExchange proposes addressing an issue in a way more like the current PSS or SDARS regulations or making other changes. Trial Ex. 29 at 34 (Bender WDT).

SEPFF2165. In contrast, Sirius XM and Music Choice have, between them, adopted a consistent approach to the terms and other regulatory language to be adopted in this proceeding, in that (1) each proposes that there should continue to be separate, repetitive subparts of 37 C.F.R. Part 382 addressing SDARS and PSS, and (2) the starting point for each of their proposals is the current regulations in its subpart. Sirius XM proposed various changes to the regulations for SDARS, some of them ones that the Judges adopted in *Web IV*. Music Choice, for its part, initially proposed to change only the royalty rate in 37 C.F.R. § 382.3(a). Trial Ex. 48 at 1 (Bender WRT). However, with its rebuttal case, Music Choice proposed additional changes to the audit provisions of the regulations. Music Choice Amended Rates and Terms at 3 (filed February 17, 2017). (At that time, Music Choice also proposed a change in the minimum fee provision for PSS. *See* Music Choice Amended Rates and Terms at 2 (filed February 17, 2017). That is addressed as a rate issue in Section XVI.C.)

SEPFF2166. As a result of these divergent approaches, as well as the specific issues addressed in the cases of the participants, there are numerous differences in the regulatory language proposed by SoundExchange on the one hand and Sirius XM and Music Choice on the other. In his Written Rebuttal Testimony, Mr. Bender described the material differences, both as to structure and as to the regulatory language addressing specific issues and explained why SoundExchange's positions are the preferable ones. *See* Trial Ex. 48 at 1-2 (Bender WRT).

SEPFF2167. SoundExchange believes that the Judges should complete the revision project they began in *Web IV* by adopting regulations in this proceeding that mirror the structure of the new webcasting regulations and incorporate the drafting improvements made in *Web IV*. Trial Ex. 48 at 2-3 (Bender WRT). Sirius XM and Music Choice are for the most part effectively opposing the Judges' rewrite of the regulations in *Web IV* by using the current SDARS and PSS regulations as the starting points for their proposals. Trial Ex. 48 at 25 (Bender WRT).

1. Consistency In The Regulations Promotes Accuracy And Efficient Administration.

SEPFF2168. As Mr. Bender testified, there are significant operational advantages for both SoundExchange and licensees in having provisions that are relatively consistent across rate categories, unless there is good reason for inconsistency. Trial Ex. 29 at 33-34 (Bender WDT); *see also SDARS II*, 78 FR at 23073-74 ("In general, the Judges seek, where possible, consistency across licenses to promote efficiency and minimize costs in administering the licenses.").

SEPFF2169. In its role as collective, SoundExchange is probably the heaviest user of the regulations setting forth statutory license rates and terms. Mr. Bender explained that SoundExchange often fields questions from licensees, copyright owners and artists about statutory license processes that must be answered with reference to the Judges' regulations. SoundExchange also has its own processes for collecting and distributing royalties and registering payees that must be carried out in accordance with the regulations. Minor differences in the regulations, even nonsubstantive ones, require extra work by SoundExchange staff, because even in the case of provisions that are similar across services (*e.g.*, those relating to statements of account, confidentiality and audits), SoundExchange needs to consider whether answers to questions and implications of the regulations for its processes vary among service

types, and in some cases may need to proceed differently depending on the type of service involved. Even a difference so nonsubstantive as having definitions at the beginning of the subparts of Part 382 and the end of Subpart A of Part 380 means that SoundExchange staff, and potentially licensee staff as well, will spend unnecessary time flipping through the regulations trying to find where the definitions relevant to a particular issue are located. Trial Ex. 48 at 3 (Bender WRT).

SEPFF2170. Consistency seems particularly useful for SDARS and PSS, because unlike most webcasters, the companies providing those types of services also provide business establishment services; in the case of Sirius XM, engage in webcasting pursuant to the rates in 37 C.F.R. Part 380 and operate a new subscription service delivered through cable and satellite television providers (what SoundExchange refers to as a CABSAT service); and in the case of Muzak, operate the legacy DMX business that is classified as a CABSAT service, *see SoundExchange, Inc. v. Muzak LLC*, 854 F.3d 713 (D.C. Cir. 2017). Trial Ex. 48 at 4 (Bender WRT).

SEPFF2171. Of course, some inconsistency may be necessary due to functional differences in services or differences in rate structures. And other inconsistency must be tolerated, at least for a time. For example, given the staggered schedule of proceedings before the Judges, no generally-applicable terms could ever change without there being some inconsistencies in the regulations for a time. Inconsistency is also less of a practical problem for provisions that are invoked only occasionally (like audit provisions) than for provisions that apply to broad categories of activity on an ongoing basis. Nonetheless, consistency provides important simplification and operational efficiency when practicable, and there should be inconsistency only when there are important reasons for it. Trial Ex. 48 at 4 (Bender WRT).

SEPFF2172. Sirius XM presented the testimony of Thomas Barry, its Controller, to support its proposed regulations. However, that testimony provides no rationale for starting with the *current* SDARS regulations. And it advocates a certain level of consistency across service types, by suggesting that various *Web IV* provisions be imported into the SDARS regulations to be "consistent with the Judges' decision in *Web IV*." Trial Ex. 6 at 3 (Barry WDT); *see also id.* at 5-6 (treatment of ephemeral recordings), *id.* at 6 (unclaimed funds). Rather than cherry-picking a few bits of *Web IV* regulatory language to import into Part 382, the assumption should be that regulatory language that works for the more than 2500 statutory licensees that webcast – including Sirius XM – should also apply to the three services subject to the rates and terms to be set in this proceeding, unless there is a good reason it should not. Trial Ex. 48 at 4-5 (Bender WRT).

SEPFF2173. In short, consistency in the regulations promotes accuracy and efficient regulation. As Mr. Bender put it at trial: "harmonization, simplification, clarity, consistency are articles of faith that lead to efficiency." 5/10/17 Tr. 3198:13-18 (Bender).

2. The *Web IV* Regulations Incorporate Desirable Improvements.

SEPFF2174. The Judges' revision of the regulations in *Web IV* – adopting a "plain language" format – is clearer in many respects than the predecessor regulations. Trial Ex. 29 at 33 (Bender WDT) (quoting 81 FR at 26316 n.1).

SEPFF2175. SoundExchange supports the Judges' goals of reducing repetition, using plain language, and cleaning up the drafting of the regulations. Mr. Bender testified that SoundExchange is on the front lines of working with these regulations every day, and thinks all the stakeholders in the statutory license system benefit from having regulations that are clear, concise and easy to work with. SoundExchange also believes that, in the end, the revised webcasting regulations adopted in the *Web IV* proceeding were mostly successful at achieving

those goals. Trial Ex. 48 at 2-3 (Bender WRT). Thus, where not otherwise addressed by SoundExchange, the Judges should adopt their *Web IV* changes here for the reasons they adopted them in *Web IV*. Trial Ex. 48 at 25 (Bender WRT).

SEPFF2176. One desirable change is particularly worth noting. In *Web IV*, the Judges expanded the required attestation in Section 380.3(a)(8) and added the certification requirement in Section 380.3(b). Corresponding provisions are included in SoundExchange's proposed regulations. SoundExchange Amended Proposed Rates and Terms at App. A at §§ 382.3(a)(8), 382.3(b) (filed June 14, 2017).

SEPFF2177. Those provisions may be even more important for SDARS (and the PSS, if the Judges do not adopt the per-subscriber rate structure proposed by SoundExchange) than they are for webcasters. Most webcasters pay only the minimum fee, and even when webcasters pay running royalties, accounting for performances is more straightforward than accounting for revenues (which has been the rate structure for both SDARS and PSS in the past, and SoundExchange proposes continuing as part of the rate structure for SDARS). These certifications help ensure that licensees will take their statutory license payment obligations seriously, and that goal is at least as important for SDARS and PSS as it is for webcasters. Moreover, these provisions apply to Sirius XM when it webcasts. The new attestation and certification should apply to Sirius XM's SDARS and to the PSS as well. Trial Ex. 48 at 25-26 (Bender WRT).

SEPFF2178. Music Choice opposes proposed Section 382.3(b), claiming that "requiring a chief financial officer to review the relevant records and sign such an attestation . . . impose[s] an unnecessary burden." Trial Ex. 57 at 62-63 (Del Beccaro WRT). SoundExchange's proposal tracks the regulations adopted by the Judges in *Web IV*. *Compare*

SoundExchange Amended Proposed Rates and Terms, App. A at § 382.3(b) (filed June 14, 2017), *with* 37 C.F.R. § 380.3(b). The Judges presumably deemed it appropriate to adopt this requirement in their *Web IV* regulations because the certification provides appropriate assurance of the veracity of statements under a statutory license that operates on the honor system. Providing such a certification annually hardly seems burdensome. If assuring that statements are correct is not too much of a burden for thousands of webcasters, then Music Choice should be expected to certify its statements too.

3. There Is No Basis For Music Choice's Opposition To The Editorial Changes Adopted By The Judges In *Web IV*.

SEPFF2179. Music Choice expresses strident opposition to various aspects of SoundExchange's proposed regulations that simply incorporate editorial changes that mirror those made by the Judges in *Web IV*. There is no basis for Music Choice's opposition to these editorial changes, which serve simply to reduce repetition and state the regulations in "plain language." *Web IV*, 81 FR at 26316 n.1.

SEPFF2180. The sole rationale that Music Choice provides for continuing the current regulations in most respects is that they have been "substantively unchanged, for many years," so the parties have experience operating under them without what he perceives as "problems sufficient to warrant any change." Trial Ex. 55 at 47 (Del Beccaro WDT). In his rebuttal testimony, Mr. Del Beccaro explains that "SoundExchange and the PSS have operated under the existing regulations for decades." Trial Ex. 57 at 36 (Del Beccaro WRT). Mr. Del Beccaro seems to suggest that the regulations adopted by the *PSS I* CARP have been unchanged for the past 20 years.

SEPFF2181. However, that suggestion is false. Precisely because Music Choice has resisted changes to the PSS regulations for almost 20 years, the PSS regulations have fallen

badly out of step with the incremental improvements made in the regulations applicable to other types of services. However, many other editorial changes and other improvements have been made over the years. Appendix A is a "redline" comparing the current PSS regulations with the regulations adopted by the Librarian of Congress at the conclusion of *PSS I*. *Compare* 37 C.F.R. §§ 382.1-.8 *with PSS I*, 63 FR at 25413-15. One need only glance at the appendix to see that the PSS regulations have been less immutable than Mr. Del Beccaro suggests.

SEPFF2182. Music Choice argues that proposals by SoundExchange to harmonize the PSS regulations with the webcasting regulations would cause it "extreme inconvenience." Trial Ex. 55 at 36 (Del Beccaro WDT); Trial Ex. 57 at 36 (Del Beccaro WRT). These claims should be viewed with skepticism. More than 2500 webcasters, many of them smaller and less sophisticated than Music Choice, have coped just fine with the gradual evolution of the regulations governing their activities, including the major rewrite of their regulations in *Web IV*. Mr. Bender testified that SoundExchange is regularly in communication with licensees, and after *Web IV*, SoundExchange experienced no flood of questions from licensees about what the Judges' new regulations mean, and heard no groundswell of protests from webcasters that they could not possibly internalize the many (mostly nonsubstantive) changes in the regulations. Music Choice also has experience with many of the improvements that have been made in the regulations over the decades through the business establishment service regulations in Part 384, which apply to a material part of its operations. Trial Ex. 48 at 5-6 (Bender WRT).

SEPFF2183. A music service of the scale of Music Choice should be able to adapt to clarifications and refinements of the regulations just like every other statutory service in the market, and just as Music Choice itself has as the PSS regulations have evolved over the last 20 years. Where there is no specific feature of PSS service or the PSS rate structure that motivates a

particular difference from the regulations applicable to other types of service, the PSS regulations should be conformed. Trial Ex. 48 at 6 (Bender WRT).

SEPFF2184. There is no merit to Music Choice's specific objections to a laundry list of editorial changes that the Judges made in *Web IV*. SoundExchange addresses those objections below.

SEPFF2185. *First*, Music Choice challenges SoundExchange's proposed definition of "Licensee." Trial Ex. 57 at 40-41 (Del Beccaro WRT). SoundExchange's definition of "Licensee," found in Section 382.7 of its proposed regulations, tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.7 (filed June 14, 2017) *with* 37 C.F.R. § 380.7. Music Choice provides no substantive objections to aligning the PSS definitions with those the Judges adopted in *Web IV*, arguing only in favor of the status quo. As explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason.

SEPFF2186. *Second*, Music Choice challenges SoundExchange's proposed regulatory language regarding ephemeral recordings. Trial Ex. 57 at 41-42 (Del Beccaro WRT). SoundExchange's proposal regarding ephemerals, found in Section 382.11(c) of its proposed regulations, tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.11(c) (filed June 14, 2017) *with* 37 C.F.R. § 380.10(d). Music Choice objects to the "necessary and commercially reasonable" language in SoundExchange's proposed regulations, arguing that it "is vague and could open the door to disputes amongst the parties." Trial Ex. 57 at 41-42 (Del Beccaro WRT). But the Judges

deemed it appropriate to enact this language in their *Web IV* regulations, 37 C.F.R. § 380.10(d), and it certainly seems appropriate that licensees not make unnecessary or unreasonable ephemeral recordings. As explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason.

SEPFF2187. *Third*, Music Choice objects to SoundExchange's proposed "scope" language. Trial Ex. 57 at 42-43 (Del Beccaro WRT). SoundExchange's proposal regarding scope, found in Section 382.1(a) of its proposed regulations, tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.1(a) (filed June 14, 2017) *with* 37 C.F.R. § 380.1(a). It does not seem different in substance from current 37 C.F.R. § 382.1(a). Music Choice provides vague and highly speculative objections to the "certain Licensees" language in the proposed regulations. Trial Ex. 57 at 43 (Del Beccaro WRT). But, again, the Judges deemed it appropriate to enact this very language in their *Web IV* regulations. 37 C.F.R. § 380.1(a). Presumably the more general language simply reflects the Judges' decision to consolidate in Subpart A the regulations of general application to all the services covered by a proceeding, and leave to subsequent subparts the details concerning subsets of that group. As explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason.

SEPFF2188. *Fourth*, Music Choice objects to SoundExchange's proposed locations for the minimum fee provisions. Trial Ex. 57 at 45 (Del Beccaro WRT). SoundExchange's

proposals for the location of the minimum fee provision, found in Sections 382.2(c) and 382.11 of its proposed regulations, track the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at §§ 382.2(c), 382.11(b) (filed June 14, 2017) *with* 37 C.F.R. § 380.2(c) and § 380.10(b). Music Choice argues that it is unclear whether the two provisions refer to the same issue. But the Judges deemed it appropriate to enact two different provisions in their *Web IV* regulations, 37 C.F.R. § 380.2(c) and § 380.10(b), and, as explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason.

SEPFF2189. *Fifth*, Music Choice objects to SoundExchange's proposed term regarding signatures on statements of account, complaining that "[t]his requirement would be burdensome for any licensee that is a partnership" and "effectively impossible for Music Choice, which is a partnership made up of corporate entities." Trial Ex. 57 at 61-62 (Del Beccaro WRT). Mr. Del Beccaro claims that "[t]here is no way that Music Choice can demand that its partners (which are separate companies) do anything" and those partners "would not have the knowledge necessary to attest to the statements." Trial Ex. 57 at 62 (Del Beccaro WRT).

SEPFF2190. That proposal, found in Section 382.3(a)(3) of SoundExchange's proposed regulations, tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.3(a)(3) (filed June 14, 2017) *with* 37 C.F.R. § 380.3(a)(3)(ii). SoundExchange's proposed regulation does not require that its statements of account be signed by a partner. The proposed regulation, like the corresponding *Web IV* regulation at 37 C.F.R. § 380.3(a)(3)(ii), permits a statement of account to

be signed by a "delegate" of a partnership. SoundExchange assumes that the Judges did not intend this provision to impose an insuperable burden on partnerships that webcast. Accordingly, SoundExchange reads that language as equivalent to the reference to an "officer or representative" in the current PSS regulation at Section 382.4(c)(3). Thus, the Music Choice partnership could simply delegate someone to sign statements of account on its behalf. In fact, it appears that the necessary authority has already been delegated to Mr. Del Beccaro himself under Music Choice's partnership agreement. Trial Ex. 505 at MC0003469. *See* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.3 (filed June 14, 2017).

SEPFF2191. *Sixth*, Music Choice objects to SoundExchange's proposed changes to the retention of records requirement. Trial Ex. 57 at 63 (Del Beccaro WRT). SoundExchange's proposal in this regard, found in Section 382.4(c) of its proposed regulations, tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.4(c) (filed June 14, 2017) *with* 37 C.F.R. § 380.4(c). SoundExchange understands this provision to be roughly equivalent to Section 382.4(e) of the current PSS regulations. Music Choice argues that this language "could lead to disagreement among the parties or uncertainty as to the interpretation of this regulation." Trial Ex. 57 at 63 (Del Beccaro WRT). This is a highly speculative concern. In addition, the Judges deemed it appropriate to enact this very language in their *Web IV* regulations, 37 C.F.R. § 380.4(c), and, as explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason.

SEPFF2192. *Seventh*, Music Choice objects to SoundExchange's proposed relocation of the definitions section. Trial Ex. 57 at 64 (Del Beccaro WRT). SoundExchange's proposal in this regard, found in Sections 382.7 and 382.10 of its proposed regulations, tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at §§ 382.7, 382.10 (filed June 14, 2017) *with* 37 C.F.R. §§ 380.7, 380.21. The idea is that definitions used in the provisions of general applicability (Subpart A) appear therein (at the end), while provisions used in the rate regulations specific to a particular type of service appear in its subpart. Music Choice argues that this organization "causes administrative and interpretive difficulty to readers who must pass through several sections containing defined terms before reaching the definition of those terms." Trial Ex. 57 at 64 (Del Beccaro WRT) (emphasis added). To the contrary, Mr. Bender testified that having the applicable definitions in different places for different license types would create unnecessary confusion by requiring SoundExchange staff, and potentially licensee staff as well, to spend time flipping through the regulations trying to find where the definitions relevant to a particular license type are located. Trial Ex. 48 at 3 (Bender WRT). In addition, the Judges deemed it appropriate to enact this structure in their *Web IV* regulations, 37 C.F.R. § 380.7, and, as explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason.

SEPFF2193. *Finally*, Music Choice objects to SoundExchange's proposed revisions regarding compliance. Trial Ex. 57 at 64-65 (Del Beccaro WRT). SoundExchange's proposal in this regard, found in Section 382.1(b) of its proposed regulations, tracks the regulations adopted

by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.1(b) (filed June 14, 2017) *with* 37 C.F.R. § 380.1(c). SoundExchange understands this provision to be equivalent to Section 382.1(b) of the current PSS regulations. Music Choice provides no substantive objections to aligning the compliance provisions with those the Judges adopted in *Web IV*, arguing only in favor of the status quo. As explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason.

B. Undistributable SDARS And PSS Royalties Should Continue To Be Applied To Reduce The Costs Of Administering The Statutory License.

SEPFF2194. The Judges have tasked SoundExchange with distributing statutory royalties "promptly." 37 C.F.R. §§ 382.4(d)(1), 382.13(f)(1). That is a mission which SoundExchange takes very seriously. Trial Ex. 48 at 17-18 (Bender WRT). After more than 15 years of registering artists and copyright owners for payment of statutory royalties, SoundExchange is able to pay artists and copyright owners on a current basis for the vast majority of usage reported to it. Trial Ex. 29 at 10 (Bender WDT). Indeed, SoundExchange is able to pay to artists and copyright owners "over 90 percent of the royalties" that SoundExchange receives from licensees "within 45 days of receiving payment." 5/10/17 Tr. 3167:18-24 (Bender).

SEPFF2195. Despite SoundExchange's experience and overall success in distributing royalties promptly to artists and copyright owners, some royalties collected from licensees cannot be distributed. Trial Ex. 29 at 10 (Bender WDT). This is the case, for example, if the artist or record company cannot be identified or located, or if they will not provide

SoundExchange with the information necessary for distribution of royalties. Trial Ex. 29 at 10 (Bender WDT).

SEPFF2196. SoundExchange handles such undistributable or "unclaimed" royalties in accordance with applicable regulations, such as 37 C.F.R. §§ 382.8 (PSS) and 382.17 (SDARS). Trial Ex. 29 at 10 (Bender WDT). Those regulations effectuate a fair, common-sense outcome in which the unclaimed funds inure to the benefit of all artists and copyright owners by defraying the costs they would otherwise bear to administer the statutory license. As Mr. Bender has explained, the current regulations allow SoundExchange to provide artists and copyright owners with "what amounts to an administrative fee refund." 5/10/17 Tr. 3199:16-18 (Bender). "We take the unclaimed funds [and] we apply them to our costs, which has the net effect of reducing our administration fee." 5/10/17 Tr. 3199:19-21 (Bender). "[B]y reducing our administration fee, it benefits all of our Copyright Owners and all of our artists to the point where on the statement it actually says administrative fee refund." 5/10/17 Tr. 3199:21-25 (Bender).

SEPFF2197. To be clear, SoundExchange is a nonprofit organization operated on a breakeven basis. Trial Ex. 29 at 35 (Bender WDT). It does not retain "profits" from its administration of statutory royalties, and it has no stockholders to which "profits" could be distributed. Trial Ex. 29 at 35 (Bender WDT). When unclaimed statutory royalties are applied to SoundExchange's administrative expenses, as current 37 C.F.R. § 382.8 and § 382.17 provide, that results in a pro-rata distribution to all artists and copyright owners who were paid royalties for the relevant year. Trial Ex. 29 at 35 (Bender WDT). SoundExchange does not simply "keep the money" that it cannot distribute. 5/10/17 Tr. 3200:1-3 (Bender). The reason is simple:

Undistributable royalties are "still artists' royalties." 5/10/17 Tr. 3199:10-14 (Bender). They are "still royalties that are due to Copyright Owners and artists." 5/10/17 Tr. 3199:14-16 (Bender).

SEPFF2198. The currently-applicable version of 37 C.F.R. § 382.8 and § 382.17 embodies an appropriate disposition of undistributable statutory royalties that does not need to be altered. Trial Ex. 29 at 35 (Bender WDT); Trial Ex. 48 at 19-20 (Bender WRT). Accordingly, SoundExchange's proposed regulations include an unclaimed funds provision that is based on current 37 C.F.R. § 382.8 and § 382.17 rather than the analogous provision of the webcasting regulations. Trial Ex. 29 at 34 (Bender WDT); *see* SoundExchange Amended Proposed Rates and Terms at App. A § 382.4(b) (filed June 14, 2017).

SEPFF2199. By contrast, Sirius XM has proposed conforming the unclaimed funds provision of Section 382.17 to the language adopted by the Judges in *Web IV*. Trial Ex. 48 at 18-19 (Bender WRT); *see* 37 C.F.R. § 380.4(b). In *Web IV*, the Judges adopted changes to the webcasting unclaimed funds provision "in abundance of caution," based on Pandora's suggestion that the terms of the federal statutory license must or should defer to state escheat law. 81 FR at 26400. The thrust of this change was to eliminate the clear direction to SoundExchange to apply unclaimed funds to offset deductible costs under 17 U.S.C. § 114(g)(3), and to replace those clear rules with a vague and less certain reference to other applicable law. Trial Ex. 48 at 19 (Bender WRT); Trial Ex. 48 at 19 (Bender WRT).

SEPFF2200. SoundExchange opposes Sirius XM's proposed change and believes that a departure from the *Web IV* language is warranted, for the following reasons. Trial Ex. 48 at 19 (Bender WRT).

SEPCL48. *First*, there is no reason to harbor doubts as to whether the Judges are empowered to adopt a uniform national rule for disposition of unclaimed statutory royalties.

Trial Ex. 29 at 34 (Bender WDT). In *PSS I*, the Register of Copyrights recommended, and the Librarian of Congress approved, a system whereby the Collective could (a) deduct its administrative costs from the royalties it distributes to copyright owners and artists and (b) use royalties that remain unclaimed after three years to offset these administrative costs that would otherwise be assessed against royalties. *PSS I*, 63 FR at 25413. This approach was ratified by a CARP or the Judges, and passed without objection by the Register, in every subsequent Section 114 proceeding until *Web IV*. Trial Ex. 29 at 34-35 (Bender WDT).

SEPCL49. The first component of the Register's approach – deduction of administrative costs from royalties – became a part of the Copyright Act itself in 2002 when Congress added 17 U.S.C. § 114(g)(3). *See* Small Webcaster Settlement Act of 2002, Pub. L. No. 107-321, § 5(b), 116 Stat. 2784. Through this amendment, Congress implicitly ratified the Register's recommended disposition of unclaimed funds (or, at a minimum, ratified the Register's view that the Copyright Act allowed disposition of funds collected pursuant to a statutory license under the Copyright Act without regard to other laws of general applicability).

SEPCL50. In Section 114(g)(3), Congress stated clearly that SoundExchange may apply royalties to offset deductible costs. 17 U.S.C. § 114(g)(3) provides that "[a] nonprofit agent designated to distribute receipts from the licensing of transmissions … may deduct from any of its receipts … the reasonable costs … incurred … in the administration of the collection, distribution, and calculation of the royalties." 17 U.S.C. § 114(g)(3). The existing regulations honor this statutory directive by providing that SoundExchange may apply unclaimed funds to offset its costs "notwithstanding the common law or statutes of any State." 37 C.F.R. §§ 382.8, 382.17; Trial Ex. 29 at 34 (Bender WDT).

SEPCL51. Moreover, federal regulations have the same preemptive effect as other federal law. *See Fid. Fed. Sav. & Loan Ass'n v. de la Cuesta*, 458 U.S. 141 (1982). That result does not "depend on express congressional authorization to displace state law." *City of New York v. FCC*, 486 U.S. 57, 64 (1988) (quoting *Fid. Fed. Sav. & Loan*, 458 U.S. at 154). Regulations issued by an agency acting within its rulemaking authority "have no less pre-emptive effect than federal statutes," and "[w]here Congress has directed an administrator to exercise his discretion, his judgments are subject to judicial review only to determine whether he has exceeded his statutory authority or acted arbitrarily." *Capital Cities Cable, Inc. v. Crisp*, 467 U.S. 691, 699 (1984) (quotation marks omitted). Thus, the question is simply whether the Judges have authority to direct the handling of unclaimed funds. Doubtless they do, as nearly two decades of practice confirms.

SEPCL52. Even setting those general principles aside, the particulars of the Copyright Act support preemption. Consistent with the Act's broad preemption framework (17 U.S.C. § 301), Section 114 directs the Judges to implement a comprehensive system of compensation for creators whose works are subject to the statutory license. *See* 17 U.S.C. §§ 114(f)(1), 801(b). This comprehensive system preempts the field and "displace[s] state law altogether." *Arizona v. United States*, 132 S. Ct. 2492, 2501 (2012). One need look no further than the very same provision of the Judges' regulations to see how essential federal preemptive effect is to the statutory license: The three-year royalty-retention period in the version of 37 C.F.R. § 380.4(b) adopted in *Web IV*, like the corresponding provisions in current 37 C.F.R. §§ 382.8 and .17, are meaningful only if they displace the obligations SoundExchange would otherwise be subject to under state law during those periods. If those are valid – as they

plainly are – then so too was the prior rule directing that, after the federal retention period, unclaimed funds be used to defray administrative expenses.

SEPCL53. State laws would be validly preempted by the Judges' regulations even on an ordinary conflict preemption rationale. Again, the preemptive force of those regulations "does not depend on express congressional authorization to displace state law." *Fid. Fed. Sav. & Loan*, 458 U.S. at 154; *see generally Hines v. Davidowitz*, 312 U.S. 52, 67 (1941) (holding preempted a state "law [that] stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress"). Thus, any "statutorily authorized regulations" issued by the Judges would "pre-empt any state or local law that conflicts with such regulations or frustrates the purposes thereof." *City of New York*, 486 U.S. at 64.

SEPFF2201. To the extent the Judges nonetheless have questions concerning their authority to prescribe a uniform national rule for disposition of unclaimed statutory royalties, the Judges should resolve those doubts by referring the issue to the Register as other questions concerning the Judges' authority have been referred in the past. Trial Ex. 29 at 34-35 (Bender WDT), Trial Ex. 48 at 20 (Bender WRT); *see, e.g.*, *In re Scope of the Copyright Royalty Judges Authority to Adopt Confidentiality Requirements upon Copyright Owners within a Voluntarily Negotiated License Agreement*, 78 FR 47421 (2013).

SEPFF2202. *Second*, the Judges have been tasked with setting rates and terms under the federal statutory license. There is no federal purpose under the statutory license to be served by any disposition of unclaimed funds that arguably might divert some of those funds to uses other than the federal statutory license system. The existing regulations carry out the Judges' federal mandate by prescribing a uniform federal disposition of statutory license royalties. Trial Ex. 48 at 20 (Bender WRT).

SEPFF2203. Potentially exposing unclaimed royalties collected under a federal statute to myriad state and common law regimes would inject uncertainty and administrative costs that would frustrate the purpose and objectives of Congress's uniform federal framework. The prior unclaimed funds provision, by contrast, works with Section 114(g)(3) to achieve the Copyright Act's objectives by ensuring that any unclaimed royalties efficiently benefit creators.

SEPFF2204. *Third*, the current regulations' provision for the disposition of unclaimed funds is fair. SoundExchange incurs administrative costs so that services like Sirius XM do not have to. SoundExchange was created at the urging of the services, who advocated for the creation of an entity to relieve them of the burden of paying artists and copyright owners directly. *See In re Notice and Recordkeeping for Digital Subscription Transmissions*, 63 FR 34289, 34293 (1998) ("the Services urged the Office to designate a single Collective," arguing that "the costs of direct service upon owners of the 10 million songs performed by each Service annually would cripple them"). As a result, artists and copyright owners – rather than the statutory licensees – bear the costs of distributing royalties to the proper payees. The Copyright Office wisely and fairly decided that these administrative costs should be mitigated through the use of unclaimed funds.

SEPFF2205. *Fourth*, the proposed change replaces clear direction with ambiguous language that may be susceptible to differing interpretations, opening up the possibility of unnecessary future disputes. Trial Ex. 48 at 19 (Bender WRT).

SEPFF2206. The only justification Sirius XM has provided for its proposal comes from Sirius XM's Controller, who testified that Sirius XM would like "to avoid a rule that might preempt state law." Trial Ex. 6 at 6 (Barry WDT); 5/17/17 Tr. 4420:21-4421:8 (Barry). As

noted above, this is not a real concern, given Congress's clear direction to the Judges and their power as a federal agency to preempt state law in carrying out their congressional mandate.

SEPFF2207. Sirius XM has no direct interest in the change it has proposed. As Mr. Barry acknowledged at trial, while artists and copyright owners stand to lose money from Sirius XM's proposal, "there would be no benefit to Sirius XM" from the change – not an additional dime of unclaimed funds would flow to any licensee. 5/17/17 Tr. 4421:25-4422:5 (Barry). Indeed, the Register has acknowledged that Sirius XM has no financial interest whatsoever in whether unclaimed funds are used to support the statutory license system or used to fund state budgets. *Web I*, 67 FR at 45267 (accepting CARP finding that "Services ha[ve] no real stake in deciding [distribution] issue[s] because their responsibilities and direct interest end with the payment of the royalty").

SEPFF2208. The only thing Sirius XM's proposal would accomplish is creating budget pressure on SoundExchange, diminishing its ability to represent effectively the interests of artists and copyright owners in audits, in enforcement litigation, and in proceedings like this one. Trial Ex. 48 at 19 (Bender WDT). While that might benefit licensees like Sirius XM, it is an improper justification for the proposed change.

C. Audit-Related Terms

SEPFF2209. SoundExchange's proposed regulations include audit-related terms. SoundExchange Amended Proposed Rates and Terms at App. A at § 382.6 (filed June 14, 2017). These audit provisions largely track the provisions adopted by the Judges in *Web IV*. *See* Trial Ex. 29 at 38 (Bender WDT); 37 C.F.R. § 380.6.

SEPFF2210. SoundExchange proposes that: (a) the 1.5% per month late fee should continue to apply, as it always has, to late payments and "underpayments" discovered during audits; (b) overpayments discovered during audits should be handled in the manner determined

in *Web IV*; (c) both SDARS and PSS should be required to pay audit costs in the event an audit reveals an underpayment in excess of 5%; and (d) the Judges cannot and should not attempt to modify the Copyright Act's statute of limitations.

SEPFF2211. In addition, SoundExchange proposes that: (e) auditors should not be required to be licensed in the jurisdiction in which an audit is conducted; (f) the Judges need not specifically incorporate the AICPA Code of Professional Conduct into the regulations; and (g) audit process improvements made over the last twenty years should apply to the PSS.

1. The 1.5% Late Fee Should Continue To Apply To Late Payments Discovered In Audits.

SEPFF2212. Section 382.13(d) of the current regulations requires an SDARS licensee to pay a late fee of 1.5% per month on any underpayment of statutory royalties. Trial Ex. 48 at 12 (Bender WRT). The provision states that "[a] Licensee shall pay a late fee of 1.5% per month, or the highest lawful rate, whichever is lower, each for any payment or statement of account, or either of them received by the Collective after the due date. Late fees shall accrue from the due date until payment and the statement of account are received by the Collective." 37 C.F.R. § 382.13(d).

SEPFF2213. Sirius XM acknowledges that this provision as currently written applies to "late" payments but contends that it does not apply to "under" payments. Trial Ex. 6 at 4 (Barry WDT). This is a distinction without a difference. As Sirius XM's Controller acknowledged at trial, if a company owed Sirius XM $1,000 and paid only $1, the remaining $999 would be "late" and "there would be a late fee based upon the late payment." 5/17/17 Tr. 4376:13-25 (Barry). When a company pays only part of what is owed (an "underpayment"), the rest is late and interest applies.

SEPFF2214. Sirius XM's Controller, Mr. Barry, has conceded that, as currently written, the regulations apply a 1.5% per month late fee to underpayments by Sirius XM. Mr. Barry was asked "[w]hat is the current interest rate that applies to Sirius XM's underpayments to SoundExchange?" He answered, "[t]he interest rate that is in the agreement is 1.5 percent a month." 5/17/17 Tr. 4364:13-23 (Barry). Indeed, Sirius XM's Controller acknowledged that this rate has informed Sirius XM's decisions to take (or not take) various exclusions from Gross Revenues. He acknowledged that, when Sirius XM has assessed the risk of taking various deductions from gross revenues, it has been "aware of the interest structure being at 18 percent [a year] as far as it's currently defined." 5/17/17 Tr. 4365:15-4366:13 (Barry).

SEPFF2215. Because Sirius XM claims that the regulations do not currently set forth a late fee for underpayments, it proposes adding a new term to address this issue. First Amended Proposed Rates and Terms of Sirius XM at § 382.15(h) (filed Feb. 17, 2017). Sirius XM's proposed Section 382.15(h) would provide for interest on over- or under-payments discovered during an audit, at "the post judgment interest rate specified in 28 U.S.C. 1961." First Amended Proposed Rates and Terms of Sirius XM at § 382.15(h) (filed Feb. 17, 2017).

SEPFF2216. As of February 10, 2017, the post-judgment interest rate set forth in 28 U.S.C. § 1961 was 0.81% per year. Trial Ex. 155.

SEPFF2217. The interest rate Sirius XM has proposed is extremely low. It is lower than the late payment rate proposed by the services and broadcasters in *Web IV*, which the Judges rejected. Trial Ex. 48 at 15 (Bender WRT). As Mr. Bender has testified, "I have never heard of an agreement in the music industry providing a special low late fee for underpayments discovered in audits, nor any late fee of under 1% per year. In my experience, late fees in music

industry agreements are most often 1.5% per month, with no special discount for underpayments discovered in audits." Trial Ex. 48 at 16 (Bender WRT).

SEPFF2218. Sirius XM has presented no evidentiary support whatsoever – not even a single contract – to justify this remarkably low rate. 5/17/17 Tr. 4383:24-4384:2 (Barry) ("Q. Your written testimony does not cite one single contract that incorporates an interest rate as low as 1 percent a year? A: That's correct.").

SEPFF2219. In addition, Sirius XM has been unable to come up with any reason why the rate in 28 U.S.C. § 1961 is the appropriate choice. In response to questioning from Judge Strickler, Sirius XM's Controller was unable to defend this selection relative to the other options that Sirius XM considered. 5/17/17 Tr. 4354:5-8 (Barry) (testifying merely that "we were looking through several different options at the ways to structure this. And so that's the – that's how we came up with it."); *see also* 5/17/17 Tr. 4352:24-4353:8 (Barry). Indeed, Mr. Barry conceded that a figure "in the generally 5 percent range" would be just as acceptable to Sirius XM as the post-judgment interest rate of roughly 1%. 5/17/17 Tr. 4354:11-20 (Barry).

SEPFF2220. Sirius XM's proposed change to the applicable interest rate on underpayments is unacceptable and should be rejected. The generally-applicable 1.5% late fee in Section 382.13(d) is meant to motivate licensees to submit timely payments and statements of account. Trial Ex. 6 at 4 (Barry WDT). It is for this reason – to provide a strong incentive to prompt payment – that this late fee is comparable to the rates applicable to credit card debt, rather than rates applicable to long-term corporate or government borrowing. Trial Ex. 48 at 16 n.8 (Bender WRT).

SEPFF2221. Sirius XM's proposed change would provide no incentive at all to pay statutory royalties on a timely basis. According to Mr. Barry, the proposed low interest rate

should apply *regardless* of whether an underpayment was an "inadvertent calculation error" by Sirius XM – and, indeed, would apply even if the underpayment was made in "bad faith." 5/17/17 Tr. 4384:19-4385:1 (Barry). That is to say, *even if* Sirius XM willfully delayed all or a portion of its royalty payments, the same roughly 1% a year interest rate would apply. 5/17/17 Tr. 4384:19-4385:1 (Barry).

SEPFF2222. Sirius XM's proposed late fee is a needless invitation to bad behavior. As Mr. Bender described in his written testimony, Sirius XM has already shown no signs of fear when it comes to taking deductions from its royalty payments. Trial Ex. 48 at 13-14 (Bender WRT). Sirius XM has made a long series of deliberate choices to, among other things, [ ]. Trial Ex. 48 at 13-14 (Bender WRT). Furthermore, as illustrated by the parties' so-called "underpayment" dispute (recently addressed by the Judges in the reopened *SDARS I* proceeding), even once an underpayment is discovered, SoundExchange still may not receive a payment for years. Trial Ex. 48 at 13 (Bender WRT).

SEPFF2223. Indeed, Sirius XM's controller acknowledged yet *another* underpayment of royalties in the course of his cross-examination. He acknowledged that, for the entirety of the *SDARS II* period, Sirius XM excluded *all* its bad debt and *all* its credit card expenses from gross revenues – even those associated with equipment revenue. 5/17/17 Tr. 4393:24-4394:6, 4395:13-4396:21 (Barry). He acknowledged that there is no reason Sirius XM should have been able to take these exclusions. 5/17/17 Tr. 4394:10-14, 4395:13-18 (Barry). He acknowledged that "[w]e had an error in that calculation." 5/17/17 Tr. 4395:13-18 (Barry). He acknowledged that he had known about this error since before his deposition in March 2017.

5/17/17 Tr. 4396:18-21 (Barry). He acknowledged that this error had not been uncovered in any SoundExchange audit (as no audit of the *SDARS II* period has been conducted). 5/17/17 Tr. 4395:22-4396:5 (Barry). When asked if Sirius XM was planning to pay SoundExchange the royalties it has withheld as a result of this (and one other) exclusion, Mr. Barry stated, "It is our intention to, to clear that up, yes." 5/17/17 Tr. 4396:6-10 (Barry).

SEPFF2224. To date, Sirius XM has not repaid SoundExchange for the improperly withheld royalties that Mr. Barry acknowledged at trial. That is so notwithstanding the fact that Sirius XM could minimize its late fee exposure on this claim by simply paying what is owed. *See* Trial Ex. 48 at 14-15 (Bender WRT).

SEPFF2225. Sirius XM's Controller agrees that it is reasonable for late fees to have some correlation to the work that a business needs to put in to collecting what it is owed. 5/17/17 Tr. 4383:15-19 (Barry). An 18% per year interest rate is more than justified by the difficulty and expense that SoundExchange incurs in attempting to collect underpayments from Sirius XM.

SEPFF2226. In seeking to reduce the interest rate applicable to underpayments, Sirius XM effectively seeks permission to continue withholding royalties from SoundExchange without material consequences – and indeed to dramatically *lower* any such consequences by removing any real deterrent. Trial Ex. 48 at 13-14 (Bender WRT). Notably, a 1% per year interest rate would constitute the lowest available cost of borrowing for Sirius XM. According to Sirius XM's recent securities filings, its recent borrowing history is as follows:

2016 Senior Notes at 5.375%
2015 Senior Notes at 5.375%.
2014 Senior Notes at 6.00%.
2013 Senior Notes at 5.875%, 5.75%, 4.625% and 4.25% (with varying due dates).

Trial Ex. 357 at F-21.

SEPFF2227. Given the rates that Sirius XM can obtain in the bond market, paying SoundExchange late would be a lower cost of funds than Sirius XM could otherwise obtain – a fact that Sirius XM's Controller openly acknowledged at trial. 5/17/17 Tr. 4384:3-9 (Barry). Indeed, Mr. Barry admitted that there is *nothing* about Sirius XM's proposal that would prevent Sirius XM from paying SoundExchange late in order to borrow money at the lowest possible rate. 5/17/17 Tr. 4384:10-18 (Barry).

SEPFF2228. Because Sirius XM's proposal would provide Sirius XM a source of funding much less expensive than its ordinary-course financing, it would be entirely rational for Sirius XM to in effect "borrow" money from artists and copyright owners by underpaying them or paying them late – at a much lower interest rate than applicable to its other debt. Trial Ex. 48 at 13, 15-16 (Bender WRT).

SEPFF2229. The only check on Sirius XM conducting itself in this manner would be SoundExchange's ability to detect underpayments. But, as Mr. Bender has explained, this is not a meaningful deterrent. Trial Ex. 48 at 15-16 (Bender WRT). SoundExchange has almost no visibility into Sirius XM's calculations until an audit is completed. Trial Ex. 48 at 15-16 (Bender WRT). As Mr. Bender explained, SoundExchange receives payments that are accompanied by only the most minimal rate calculations on licensees' statements of account. Trial Ex. 48 at 13 (Bender WRT). Sirius XM in particular has been unwilling to provide more detailed accountings, despite requests from SoundExchange. Trial Ex. 48 at 13 (Bender WRT). SoundExchange lacks visibility into Sirius XM's use of recordings in their services, the extent of their reliance on the statutory license, and the revenues to be included in a percentage royalty base. Trial Ex. 48 at 13 (Bender WRT).

SEPFF2230. As a result of these factors, underpayments are not typically apparent to SoundExchange until it conducts an audit, at its own expense, and sometimes with a fair bit of resistance from the licensee. Trial Ex. 48 at 13 (Bender WRT). And even then, SoundExchange often encounters licensee resistance at every phase of an audit, from objections to its choice of an auditor, to difficulties scheduling field work, to licensees' refusal to grant access to necessary information in the field, to licensees' failures or delays in providing follow-up information. Trial Ex. 48 at 14 (Bender WRT). Even when an auditor finds possible issues, it frequently takes multiple rounds of inquiry, response and evaluation for the auditor to understand the issues and the licensee's position concerning them. Trial Ex. 48 at 14 (Bender WRT). These are among the factors that can cause audits to drag on for longer than SoundExchange would like, delaying the moment when SoundExchange actually learns from the auditors about an underpayment or partial payment. Trial Ex. 48 at 14 (Bender WRT).

SEPFF2231. Sirius XM claims that "[t]he 1.5% rate is so far in excess of any alternative investments that it actually incentivizes SoundExchange to delay audits and their resolution." Trial Ex. 13 at ¶ 40 (Barry WRT). At trial, however, Mr. Barry conceded that he had no evidence to support the accusation that SoundExchange has delayed its audit findings to rack up late fees against Sirius XM – "I have no facts for that, no." 5/17/17 Tr. 4378:18-24 (Barry). And his testimony makes clear that such a practice would make no business sense. He noted that, even though Sirius XM has entered into several contracts with a 1.5% a month late fee, it never has and never would delay an audit finding just to accrue these penalties. 5/17/17 4377:17-4378:1 (Barry).

SEPFF2232. SoundExchange has proposed regulatory language concerning audit results that is substantively the same as the language the Judges adopted in *Web IV*. *See* 37

C.F.R. § 380.6(g). That language affirms that the generally-applicable 1.5% a month late fee has applied and continues to apply to underpayments discovered in the course of an audit. Trial Ex. 48 at 12-13 (Bender WRT); *see* SoundExchange Amended Proposed Rates and Terms at App. A at § 382.2 (filed June 14, 2017).

SEPFF2233. Unlike Sirius XM, SoundExchange has presented a multitude of contracts – many of them signed by Sirius XM itself – in support of its proposal. These agreements set forth a 1.5% per month interest rate for late payments and underpayments. These contracts demonstrate that such an interest rate is fair, that it is commonplace in the market, and that Sirius XM has already agreed it is reasonable in the course of executing agreements. Sirius XM cannot credibly contest this point, given its insistence that its contracts with nonmusic providers demonstrate what willing market participants would agree to absent regulatory overhang. *See supra* Section IX.C.2.

SEPFF2234. Consider Sirius XM's contract with nonmusic content provider [[redacted]], which Sirius XM's Controller personally reviewed and signed. 5/17/17 Tr. 4367:10-4368:1, 4424:9-12 (Barry). This contract states that, if an audit of Sirius XM uncovers an underpayment, Sirius XM must make good on that underpayment and must pay interest on the underpayment at a rate of 1.5% a month. 5/17/17 Tr. 4368:2-16 (Barry). Specifically, the contract includes the following language: "If, as a result of an audit, [[redacted]] reasonably determines that Sirius XM has failed to accurately calculate [[redacted]]'s share of the Net Advertising Revenues and as a result has underpaid [[redacted]], then Sirius XM shall promptly pay [[redacted]] the underpayment with interest at the rate of one and one half percent (1.5%) per month, compounded on a monthly basis, or the legal limit, whichever is lower." Trial Ex. 331 at § 4.01(b). At trial, Mr. Barry was unable to recall attempting to withhold his sign-off on this

contract, or telling any of his colleagues that this interest rate would be confiscatory, unreasonable, or unfair. 5/17/17 Tr. 4368:17-4369:4 (Barry).

SEPFF2235. Like Sirius XM's contract with [redacted], Sirius XM's contract with [redacted] went through the company's standard "Contract Approval Form" process, during which various executives including Mr. Barry provided their input and sign-off. 5/17/17 Tr. 4370:1-7, 4424:9-12 (Barry). The [redacted] contract includes the following similar language: "If, as a result of an audit, [redacted] reasonably determines that Sirius has failed to accurately calculate [redacted]'s share of the Net Advertising Revenues and as a result has underpaid [redacted], then Sirius shall promptly pay [redacted] the underpayment with interest at the rate of one and one half percent (1.5%) per month, compounded on a monthly basis, or the legal limit, whichever is lower." Trial Ex. 332 at § 4.02(b). As Mr. Barry acknowledged at trial, there is nothing about this contract that prevents the interest owed from exceeding the principal, which would happen after four years. 5/17/17 Tr. 4370:20-4371:10 (Barry).

SEPFF2236. Sirius XM's amendment to its contract with automobile manufacturer [redacted] is a mere three pages long. 5/17/17 Tr. 4371:25-4372:2 (Barry); Trial Ex. 330. Mr. Barry acknowledged not only that he would have signed off on this amendment, but that he would have read the whole thing before doing so. 5/17/17 Tr. 4371:21-24, 4372:3-6 (Barry). This amendment added the following language to the [redacted] contract: "Any overdue payments shall accrue late fees at a rate of 1.5% per month, compounded on a monthly basis, or the maximum amount allowed by law, whichever is less." Trial Ex. 330 at § 4(b) (adding a new § 4.05 to the agreement); 5/17/17 Tr. 4372:7-18 (Barry). Mr. Barry acknowledged that both Sirius XM and [redacted] found this rate to be acceptable, as evidenced by the fact that they signed this amendment. 5/17/17 Tr. 4372:16-18 (Barry).

SEPFF2237. Like its contract with [ ], Sirius XM's contract with [ ] includes a 1.5% per month interest rate, and provides that Sirius XM can charge this rate if [ ] does not pay the full amount owed on time. 5/17/17 Tr. 4374:14-4376:1 (Barry); Trial Ex. 329. The contract states that: "Any overdue payments shall accrue late fees at a rate of 1.5% per month, compounded on a monthly basis, or the maximum amount allowed by law, whichever is less." Trial Ex. 329 at § 4.04(b). Sirius XM has the right to charge this rate regardless of whether [ ] late payment is inadvertent or intentional. 5/17/17 Tr. 4375:22-4376:1 (Barry).

SEPFF2238. In the course of negotiating a direct license with [ ], Sirius XM proposed a late-fee provision, [ ]. *See* Trial Ex. 333 at SXM_DIR_00066266, SXM_DIR_00066268 (email from George White to [ ] representative stating, [ ]); 5/17/17 Tr. 4324:9-4325:5 (White). This provision was agreed to by both parties and states that: "Licensee shall pay a late fee of 1.5% per month for any royalty payment made more than thirty (30) days after the due date (the 'Late Fee Date'). During the Term, late fees shall accrue from the Late Fee Date until received by the Label." Trial Ex. 642 at SXM_DIR_00001798, at § 6(a) (native file); 5/17/17 Tr. 4381:1-10 (Barry). Mr. Barry and other senior Sirius XM executives signed off on this provision as part of the company's Contract Approval Form process. 5/17/17 Tr. 4380:10-4381:7 (Barry).

SEPFF2239. Sirius XM has no grounds on which to distinguish the 1.5% a month interest rate incorporated in these various contracts that it signed. The 1.5% a month interest rate does not reflect any heightened risk of default, as the counterparties to these contracts are plainly creditworthy. *See* 5/17/17 Tr. 4372:12-22 (Barry) (acknowledging that [ ] is

creditworthy). Nor does the 1.5% a month rate reflect Sirius XM's lack of track record with its counterparties, given that many of these relationships are both longstanding and important to the company. *See* 5/17/17 Tr. 4374:5-13 (Barry). Moreover, the positive deterrent effect of this rate is clear. In response to a question from Judge Barnett, Mr. Barry acknowledged that [ ] 5/17/17 Tr. 4431:18-23 (Barry).

SEPFF2240. Notwithstanding the fact that it has repeatedly agreed to an 18% a year interest rate for late payments, Sirius XM claims in this proceeding that such a rate would be "punitive," "ridiculous," and "confiscatory." Trial Ex. 6 at 4-5 (Barry WDT). This is remarkable given that Sirius XM charges an *even higher* late fee to its own subscribers, a fact acknowledged by its own Controller. 5/17/17 Tr. 4383:1-4 (Barry) ("It is a higher interest rate, yes."). Sirius XM's customer agreement states that, "[i]f we do not receive your payment by the billing due date, we may charge you a late fee," which is "currently the lesser of (a) $5.00 or (b) the maximum amount permitted under applicable law per month or partial month until the delinquent amount is paid in full." Trial Ex. 327 at § F.8; *see* 5/17/17 Tr. 4381:11-4382:3 (Barry). At trial, Mr. Barry acknowledged that, depending on the size of the delinquent payment, this late fee could amount to a 50% interest rate. 5/17/17 Tr. 4382:4-25 (Barry) (noting that a subscriber to the Mostly Music package who pays $1 of his $10.99 subscription fee would be assessed a $5 penalty, resulting in a 50% interest rate). Nor is Sirius XM shy about collecting this fee from its customers. Mr. Barry acknowledged that [ ]. 5/17/17 Tr. 4423:3-6 (Barry).

SEPFF2241. Even if the 1.5% a month late-fee provisions in Sirius XM's own contracts could be distinguished (which they cannot), and even if Sirius XM did not charge its

customers an even higher interest rate for underpayments (which it does), it remains the case that a 1.5% a month interest rate is standard throughout the industry. Indeed, over a dozen agreements between major labels and music services confirm that this rate is commonplace, whether for late, partial, or "under" payments discovered through an audit.

SEPFF2242. [Redacted] agreement with [Redacted] includes the following provision: "In the event that an Audit reveals an underpayment by Licensee hereunder, Licensee shall, without limitation of [Redacted] other rights and remedies, promptly pay to [Redacted] such underpayment, together with interest thereon as calculated in accordance with this Agreement." Trial Ex. 127 at § 7(k) (SoundX_000026326) (native file). Elsewhere, the agreement states: "Any amounts past due will bear interest daily (beginning as of the date that is one week after the payment was first due under the Agreement until paid) at a rate of interest equal to the lesser of: (A) 1.5% per month; or (B) the maximum rate of interest allowed by applicable Law." Trial Ex. 127 at § 7(h) (SoundX_000026327) (native file).

SEPFF2243. [Redacted] agreement with [Redacted] includes the following provision: "[Redacted] shall pay the cost of such audit, unless it reveals an underpayment of five (5) percent or more of applicable payment obligations during the audited period … in which case Provider shall, without limitation of other rights and remedies, promptly pay such underpayment, together with specified interest thereon, and reimburse [Redacted] for all reasonable costs of the audit, including without limitation, accountants' fees and attorneys' fees in accordance with Section 6(j)." Trial Ex. 127 at § 6(k) (SoundX_000025496) (native file). Section 6(j) goes on to state: "Any amounts past due (including any failure to provide accurate reports …) will bear interest daily until paid at a rate of interest equal to the lesser of: (A) 1 .5% per month; or (B) the

maximum rate of interest allowed by applicable Law." Trial Ex. 127 at § 6(j)(iii) (SoundX_000025496) (native file).

SEPFF2244. [] agreement with [] includes the following provision: "[] shall pay the cost of such audit, unless it reveals an underpayment of five percent (5%) or more of any payment obligations during the audited period … in which case Provider shall, without limitation of other rights and remedies, promptly pay such underpayment, together with specified interest thereon, and reimburse [] for all reasonable costs of the audit, including without limitation, accountants' fees and attorneys' fees in accordance with Section 6(g)." Trial Ex. 127 (SoundX_000021070), at § 6(h) (native file). Section 6(g) goes on to specify "a rate of interest equal to the lesser of: (A) one and one-half percent (1.5%) per month; or (B) the maximum rate of interest allowed by applicable Law." Trial Ex. 127 at § 6(g) (SoundX_000021070) (native file).

SEPFF2245. [] agreement with [] includes the following provision: "If any examination reveals that, in connection with the period being audited, Company has underpaid [] by an amount greater than five percent (5%) of the payments due, then Company shall pay interest on such shortfall and also bear the reasonable expenses and costs of such audit." Trial Ex. 125 at § 12(2) (SoundX_000064543) (native file). Elsewhere, the agreement states: "Company shall pay interest at the rate of one and one-half percent (1.5%) per month, or the maximum rate permitted by law, whichever is less, from the date such interest is contractually due to be paid hereunder, on any required payment that is not made on or before its due date, without prejudice to any other rights [] may have in connection with such late payments." Trial Ex. 125 at § 11(6) (SoundX_000064543) (native file).

SEPFF2246. [redacted] agreement with [redacted] includes the following provision: "Any underpayment discovered pursuant to an audit, that is not disputed by [redacted], shall be paid within 30 days of invoice together with interest at the rates in Section 6(f)." Trial Ex. 126 at § 14(b) (SoundX_000012221) (native file). The corresponding section of the agreement states: "Upon Company's request, [redacted] shall pay interest at the rate of one and one half percent (1.5%) per month, or the maximum allowable by law, whichever is less, on any late payment of Fees, which shall mean Fees that are not paid within ten days after the end of each Accounting Period during the term, and expiration of a ten day cure period following written notice by Company." Trial Ex. 126 at § 6(g) (SoundX_000012214) (native file).

SEPFF2247. Both [redacted] and [redacted] agreements with [redacted] include the following provision: "Upon Company's request, [redacted] shall pay interest at the rate of one and one half percent (1.5%) per month, or the maximum allowable by law, whichever is less, on any late payment of Fees, which shall mean Fees that are not paid within ten days after the end of each Accounting Period during the term, and expiration of a ten day cure period following written notice by Company." Trial Ex. 127 at § 6(i) (SoundX_000020995) (native file) ([redacted] agreement); Trial Ex. 125 at § 6(f) (SoundX_000035996) ([redacted] agreement).

SEPFF2248. The following additional agreements also specify a 1.5% per month interest rate for amounts past due:

[redacted] contract. Trial Ex. 114 at § 3(j) (SoundX_000107214).

[redacted] contract. Trial Ex. 125 at § 7.01(h) (SoundX_000010591).

[redacted] contract. Trial Ex. 125 at ¶ 6.04(f) (SoundX_000039011).

[redacted] contract. Trial Ex. 125 at ¶ 6.04(d) (SoundX_000008161).

[redacted] contract. Trial Ex. 125 at § 2(e) (SoundX_000030312).

[redacted] contract. Trial Ex. 126, Ex. A at § 5(b) (SoundX_000027848).

[redacted] contract. Trial Ex. 126, Ex. A at § 7(b) (SoundX_000017188).

2. Overpayments Discovered In Audits Should Be Handled As Determined In *Web IV*.

SEPFF2249. Sirius XM proposes that SoundExchange pay interest at a 1.5% a month rate on any overpayments discovered in audits. Trial Ex. 48 at 12 (Bender WRT). While this proposal has the facial appeal of creating consistency, it is premised on an imaginary issue and raises substantial administrability and fairness concerns. Trial Ex. 48 at 12-13 (Bender WRT).

SEPFF2250. As part of the audit settlement process, SoundExchange credits any overpayments that it discovers towards underpayments that are outstanding. Trial Ex. 48 at 17 (Bender WRT). SoundExchange has never encountered a situation where a licensee's total overpayments *exceed* its total underpayments – the situation contemplated by Sirius XM's proposal. Trial Ex. 48 at 17 (Bender WRT). Indeed, both Mr. Bender and Mr. Barry testified that no SoundExchange audit of Sirius XM has ever uncovered a net overpayment by Sirius XM. 5/10/17 Tr. 3202:6-9 (Bender) ("We have never yet encountered a net overpayment through any audit."); 5/17/17 Tr. 4362:15-21 (Barry).

SEPFF2251. This is not surprising. As Mr. Bender explained, discovering any overpayment by a licensee is rare. Trial Ex. 48 at 17 (Bender WRT). Calculating statutory royalties is generally a straightforward process; licensees are well motivated to calculate their royalty payments carefully; and licensees have proven far more likely to adopt policies that systematically reduce their royalty payments inappropriately than to make mistakes that result in overpayments. Trial Ex. 48 at 17 (Bender WRT).

SEPFF2252. Holding aside the fact that Sirius XM's proposal is addressed to a non-issue, the proposal is problematic conceptually. Unlike Sirius XM, which can use its cash flow for general corporate purposes (including paying refunds if it wishes), the royalties that SoundExchange receives are designated for distribution to the artists and copyright owners whose recordings were used in a particular month (as indicated by the licensee's reports of use).

SEPFF2253. The Judges have tasked SoundExchange with distributing statutory royalties "promptly." 37 C.F.R. §§ 382.4(d)(1), 382.13(f)(1). That is a mission which SoundExchange takes very seriously. Trial Ex. 48 at 17 (Bender WRT). Accordingly, rather than holding royalties in reserve, against the theoretical possibility of refunding them to licensees, SoundExchange works hard to distribute royalties quickly. Trial Ex. 48 at 17 (Bender WRT). Indeed, "within 45 days of receiving payment from – from licensees, over 90 percent of the royalties are paid out the door" to artists and copyright owners. 5/10/17 Tr. 3167:18-24 (Bender); *see also*, Trial Ex. 48 at 17-18 (Bender WRT). In other words, within a short time after SoundExchange receives a licensee's payment, the vast majority of that money is gone. Trial Ex. 48 at 18 (Bender WRT).

SEPFF2254. SoundExchange's power to claw back royalties that have already been distributed to artists and copyright owners is limited, and doing so is administratively difficult when possible. Trial Ex. 48 at 18 (Bender WRT). In some cases – where a payee does not receive a steady stream of royalties, or repertoire has been transferred to a new owner – this may simply be impossible. Trial Ex. 48 at 18 (Bender WRT).

SEPFF2255. Sirius XM suggests that SoundExchange could solve this problem by "credit[ing]" a licensee for the interest, "reduc[ing] its payment in the next reporting period by the amount of the credit." Trial Ex. 13 at ¶ 39 (Barry WRT). While this raises fewer

administrability concerns, it presents insurmountable fairness concerns. Consider a situation in which Artist A was effectively overpaid by Sirius XM on June 1, 2018, and the overpayment was discovered on December 1, 2019. If Artist A did not earn any royalties in that latter time period, then SoundExchange's "credit" would effectively be coming out of the pockets of all the artists who did earn royalties in the latter time period. In other words, Artist A's overpayment would be "solved" by underpaying everyone else.

SEPFF2256. Given all these administrative and fairness concerns, it is unsurprising that the Judges rejected a similar gambit in *Web IV*. There, SoundExchange objected to new language in the regulations that would give licensees a credit, with interest, for overpayments that are revealed in an audit. The Judges agreed with SoundExchange, reasoning that "[t]he burden of accurate reporting and payment is on the Licensee." *Web IV*, 81 FR at 26402. Thus, the relevant *Web IV* regulations provide that if an audit reveals an overpayment, "the verifying entity shall not be required to remit the amount of any overpayment to the payor or distributor, and the payor or distributor shall not seek by any means to recoup, offset, or take a credit for the overpayment." 37 C.F.R. § 380.6(g).

SEPFF2257. As the Judges determined in *Web IV*, there is no reason for the regulations to tee up either the administrability or the fairness concerns attendant to Sirius XM's proposal. Because there is and never has been a net "overpayment" by a licensee to SoundExchange, there is no "principal" on which the proposed interest rate could even be applied.

3. Both SDARS And PSS Should Be Required To Pay Audit Costs In The Event An Audit Reveals An Underpayment In Excess Of 5%.

SEPFF2258. As noted, the audit provisions in Section 382.6 of SoundExchange's proposed regulations largely track the provisions adopted by the Judges in *Web IV*. *See* 37

C.F.R. § 380.6. One material difference that SoundExchange proposes concerns the audit fee shifting provision of 37 C.F.R. § 380.6(h). That provision provides for audit fee shifting only in the case of a 10% underpayment by a licensee. Currently, a 5% threshold applies to PSS under 37 C.F.R. § 382.6(f) and a 10% threshold applies to SDARS under 37 C.F.R. § 382.15(g).

SEPFF2259. Sirius XM's Controller acknowledges that selecting a fee-shifting threshold requires deciding at what percentage an underpayment "becomes unreasonable enough to penalize the licensee." Trial Ex. 13 at ¶ 42 (Barry WRT). SoundExchange agrees.

SEPFF2260. A 10% threshold for SDARS is too high given the amount of payments involved. Trial Ex. 29 at 38-39 (Bender WDT). Likewise, the PSS pay royalties at a level higher than the vast majority of webcasters (who pay only the minimum fee, and for whom payment of audit fees may be high relative to an underpayment of a few thousand dollars). Trial Ex. 29 at 39 (Bender WDT).

SEPFF2261. SoundExchange conducts audits for three-year periods, as contemplated by the regulations. Trial Ex. 29 at 38-39 (Bender WDT); *see, e.g.*, 37 C.F.R. § 382.15(b). In 2015, Sirius XM paid SoundExchange [[redacted]] in statutory royalties. Simply by way of illustration, multiplying Sirius XM's 2015 payment by three yields royalty payments totaling close to [[redacted]] over the course of an audit period. Trial Ex. 29 at 38-39 (Bender WDT). Given these numbers, there can be no excuse for a 5% underpayment of statutory royalties, which would amount to [[redacted]]. Trial Ex. 29 at 39 (Bender WDT). The Judges should not signal that an underpayment of this size is to be expected in the ordinary course – let alone a 10% underpayment of [[redacted]]. Trial Ex. 29 at 39 (Bender WDT).

SEPFF2262. Relative to the magnitude of a 5% underpayment (let alone a 10% underpayment), the costs of SoundExchange's audit fees are comparatively modest. Trial Ex. 29

at 39 (Bender WDT). The recently-concluded audit of Sirius XM cost SoundExchange audit fees of [[redacted]]. Trial Ex. 29 at 39 (Bender WDT) (citing Trial Ex. 101, at 12). If Sirius XM were to underpay by $50 million or so, Sirius XM (rather than artists and copyright owners) should pay the modest costs necessary to discover an underpayment of that magnitude. Trial Ex. 29 at 39 (Bender WDT).

SEPFF2263. Sirius XM claims that "SoundExchange has provided no evidence to support" the fee-shifting level being set at 5%. Trial Ex. 13 at ¶ 42 (Barry WRT). That is false. As evidenced below, a 5% fee-shifting threshold is justified by marketplace agreements – including many entered into by Sirius XM.

SEPFF2264. Consider Sirius XM's contract with nonmusic content provider [[redacted]], which Sirius XM's Controller personally reviewed and signed. 5/17/17 Tr. 4367:10-4368:1 (Barry). This contract states that, "[i]f the audit demonstrates that Sirius XM underpaid [[redacted]] by more than five percent (5%), then Sirius XM shall also reimburse [[redacted]] for the actual cost of the audit." Trial Ex. 331 at § 4.01(b) (SXM_DIR_00116861); *see* 5/17/17 Tr. 4369:5-16 (Barry).

SEPFF2265. Like Sirius XM's contract with [[redacted]], Sirius XM's contract with [[redacted]] went through the company's standard "Contract Approval Form" process, during which various executives including Mr. Barry provided their input and sign-off. 5/17/17 Tr. 4370:1-7 (Barry). The [[redacted]] contract includes identical language: "If the audit demonstrates that Sirius underpaid [[redacted]] by more than five percent (5%), then Sirius shall also reimburse [[redacted]] for the actual cost of the audit. Trial Ex. 332 at § 4.02(b) (SXM_DIR_00022080).

SEPFF2266. Sirius XM's contract with [ ] also specifies a 5% fee-shifting threshold. The contrast states: "To the extent that any audit reveals a discrepancy in amounts underpaid by Sirius XM in excess of five percent (5%), Sirius XM will reimburse [ ] for any expenses arising from or relating to such audit, including any fees paid to a third party auditor; provided that in no event shall any expenses to be reimbursed exceed the amount of the discrepancy." Trial Ex. 328 at § 4.08 (SXM_DIR_00095317) (emphasis in original). Mr. Barry admitted that, contractually, there is no reason that [ ] could not enforce this clause. 5/17/17 Tr. 4379:15-23 (Barry).

SEPFF2267. At trial, Mr. Barry admitted that the 5% threshold set out in the Sirius XM-[ ] contract was a standard term carried forward from prior contracts. 5/17/17 Tr. 4379:24-4380:7 (Barry). He also and acknowledged that other contracts between Sirius XM and auto manufacturers likewise specify a 5% fee-shifting threshold. 5/17/17 Tr. 4379:24-4380:7 (Barry).

SEPFF2268. Even if the 5% fee-shifting threshold in Sirius XM's own contracts could be distinguished (which they cannot), at least a dozen agreements between major labels and music services confirm that this threshold is standard throughout the industry.

SEPFF2269. [ ] agreement with [ ] includes the following provision: "[ ] shall pay the cost of such audit, unless it reveals an underpayment of five percent (5%) or more of any payment obligations during the audited period, in which case Provider shall … reimburse [ ] for the reasonable amounts paid to [ ] auditor for conducting the audit." Trial Ex. 114, App. B at § 6(g) (SoundX_000107152) (native file).

SEPFF2270. [ ] agreement with [ ] includes the following provision: "Company shall bear all costs relating to any audits under this Section 14(a), except that if any

such audit [reveals that] [▇▇▇▇] has underpaid Company by an amount greater than five percent of the payments due, then, without limiting any of Company's rights or remedies, including payment of the applicable Fees that have been underpaid, [▇▇▇▇] shall reimburse Company for its reasonable out-of-pocket auditors fees and costs relating to such audit." Trial Ex. 125 at § 14(a) (SoundX_000036004) (native file).

SEPFF2271. [▇▇▇▇] agreement with [▇▇▇▇] includes the following provision: "Expenses incurred by [▇▇▇▇] for any examination conducted by [▇▇▇▇] under this Section 8(c) will be paid by [▇▇▇▇], unless such examination results in a determination that (i) Service Provider's actual payments for the period examined were more than five percent (5%) below the payments as required under the Agreement, or (ii) that Service Provider was not otherwise in substantial compliance with the financial requirements of the Agreement, in which case Service Provider will pay for the costs of the audit." Trial Ex. 126 Ex. A § 8(c) (SoundX_000017188) (native file).

SEPFF2272. The following additional agreements also state that the costs of an audit shift to the service upon an underpayment of 5% or greater:

[▇▇▇▇] contract. Trial Ex. 125 at § 12(2) (SoundX_000064543).

[▇▇▇▇] contract. Trial Ex. 125 at § 3(a) (SoundX_000036992).

[▇▇▇▇] contract. Trial Ex. 126 at § 14(b) (SoundX_000012221).

[▇▇▇▇] contract. Trial Ex. 126, Sch. A at § 10(ix)(d) (SoundX_000014731).

[▇▇▇▇] contract. Trial Ex. 127 at § 14(a) (SoundX_000021005).

[▇▇▇▇] contract. Trial Ex. 127 at § 6(h) (SoundX_000021070).

[▇▇▇▇] contract. Trial Ex. 127 at § 6(k) (SoundX_000025496).

[▇▇▇▇] contract. Trial Ex. 127 at § 7(k) (SoundX_000026326).

[▇▇▇▇] contract. Trial Ex. 127 at § 6(p) (SoundX_000065437).

4. The Judges Cannot And Should Not Adopt A Limitation Of Actions Provision.

SEPFF2273. SiriusXM proposes adding a subsection (i) to Section 382.15, providing that if Sirius XM and SoundExchange "are unable to reach resolution on disputed items identified in the course of an audit, Licensee's calculation of the disputed items shall be considered final on the date two years after delivery of the auditor's written report to Licensee, unless the Collective has initiated a legal action to compel payment of the disputed amounts." Sirius XM First Amended Proposed Rates and Terms at 7 (filed February 17, 2017); *see also* 5/17/17 Tr. 4385:4-9 (Barry).

SEPFF2274. The Judges cannot and should not adopt this proposal, which would cut off SoundExchange's right to sue for audit disputes after *two years* and effectively override the *three-year* statute of limitations set out in the Copyright Act, 17 U.S.C. § 507(b).

SEPCL54. It is black letter law that the Judges lack the authority to issue regulations that would conflict with the statutory law enacted by Congress. The Register has recognized that "courts have consistently held that agencies cannot adopt regulations that are contrary to law." *In re Review of Copyright Royalty Judges Determination*, 74 FR 4537, 4540 (2009) ("The power of an administrative officer or board to administer a federal statute and to prescribe rules and regulations to that end is not the power to make law . . . but the power to adopt regulations to carry into effect [by] the will of Congress as expressed by the statute. A regulation which does not do this, but operates to create a rule out of harmony with the statute, is a mere nullity." (quoting *Vasquez-Lopez v. Ashcroft*, 343 F.3d 961, 965 (9th Cir. 2003))).

SEPFF2275. Mr. Barry testified that "the only purpose of" this proposed regulation "was to try to get the audit periods closed down." 5/17/17 Tr. 4385:10-23 (Barry). But disputes

relating to these "audit periods" are subject to the three-year limitations period prescribed by Congress and cannot be "closed down" by regulation.

5. Auditors Should Not Be Required To Be Licensed In The Jurisdiction In Which An Audit Is Conducted.

SEPFF2276. In *Web IV*, the Judges added a requirement suggested by certain broadcasters that a CPA conducting a royalty audit be licensed in the jurisdiction in which the audit is to take place. Trial Ex. 29 at 40 (Bender WDT). The decision to impose this requirement was apparently based on a desire to ensure that CPAs performing royalty audits are subject to the jurisdiction of the local state authorities. *Web IV*, 81 FR at 26404. SoundExchange believes that this addition is based on a misunderstanding of applicable state law regulating the field of public accounting. Trial Ex. 29 at 40 (Bender WDT); Trial Ex. 48 at 24 n.11 (Bender WRT).

SEPFF2277. According to the American Institution of CPAs (AICPA), every American state except Hawaii has adopted "CPA mobility" legislation. Trial Ex. 29 at 40 (Bender WDT). This legislation generally allows CPAs in good standing in one state to practice outside their home state, without getting an additional license in that second state. Trial Ex. 29 at 40 (Bender WDT). This arrangement allows public accounting clients to hire "the CPA best suited to the job, regardless of location, without the hindrances of unnecessary filings, forms, and increased costs." Trial Ex. 29 at 40 (Bender WDT) (quoting "History of CPA Mobility" section of AICPA website). Notwithstanding the lack of any additional licensure requirement, CPAs availing themselves of the CPA mobility privilege are subject to the jurisdiction of the local state authorities. Trial Ex. 29 at 40 (Bender WDT) (citing Uniform Accountancy Act, § 23(a)(3) (7th ed. 2014)).

SEPFF2278. No participant in this proceeding has proposed that a CPA performing an audit be licensed in the particular jurisdiction involved. Trial Ex. 48 at 24 n.11 (Bender WRT). That is sensible. The concerns expressed by the Judges in *Web IV* have already been addressed by the states. Trial Ex. 29 at 40 (Bender WDT). CPAs that practice outside their home state are already subject to the jurisdiction of local state authorities. Trial Ex. 29 at 40 (Bender WDT).

SEPFF2279. The Judges should allow the states to regulate CPAs as they see fit, and not burden the statutory royalty audit process with CPA licensing requirements that the states themselves have chosen to eliminate. Trial Ex. 29 at 40 (Bender WDT).

6. The Judges Should Not Incorporate The AICPA Code Of Professional Conduct Into The Regulations.

SEPFF2280. The *SDARS II* regulations permit SoundExchange to verify royalty payments by the SDARS and PSS using the services of an "independent and Qualified Auditor." 37 C.F.R. §§ 382.6(f); 382.15(c). The regulations define the term "Qualified Auditor" to mean "a Certified Public Accountant." 37 C.F.R. §§ 382.3, 382.11. Consistent with editorial changes made by the Judges in the *Web IV* regulations, SoundExchange has proposed moving the word "independent" from the operative provision to the definition of "Qualified Auditor." SoundExchange Amended Proposed Rates and Terms at App. A at § 382.7 (filed June 14, 2017); Trial Ex. 48 at 23 (Bender WRT); Trial Ex. 29 at 39 (Bender WDT).

SEPFF2281. Sirius XM has proposed modifying the term "Qualified Auditor" in a manner that is unnecessary and conceptually problematic. Trial Ex. 48 at 23 (Bender WRT). Sirius XM proposes that "Qualified Auditor" be redefined to mean "a Certified Public Accountant who is independent of the Licensee and the Collective within the meaning of the

AICPA Code of Professional Conduct." First Amended Proposed Rates and Terms of Sirius XM at § 382.11 (filed Feb. 17, 2017).

SEPFF2282. As Sirius XM's controller essentially conceded at trial, Sirius XM's proposed change is unnecessary. Mr. Barry testified that the regulations as written already require an auditor to be independent and already require an auditor to be a CPA. 5/17/17 Tr. 4418:3-8 (Barry). He further testified that CPAs must abide by the AICPA Code of Professional Conduct – a fact that he knew because he himself is a CPA. 5/17/17 Tr. 4418:9-11, 19-20 (Barry). And he testified that the AICPA Code of Professional Conduct requires CPAs to be objective, impartial, intellectually honest, and free of conflicts of interest. 5/17/17 Tr. 4418:12-18 (Barry). When asked whether Sirius XM's proposed change to the definition of "Qualified Auditor" actually added any new requirements to the regulations, Mr. Barry acknowledged that it did not. 5/17/17 Tr. 4418:22-4419:2 (Barry).

SEPFF2283. While one might conclude from the foregoing that there is no harm in adopting Sirius XM's proposal, SoundExchange believes that the proposed change is conceptually problematic.

SEPFF2284. *First*, while Sirius XM's proposal apparently refers to the "Independence Rule" in Section 1.200 of the AICPA Code of Professional Conduct, some aspects of that rule are obviously irrelevant here. Trial Ex. 48 at 23-24 (Bender WRT); *see* Trial Ex. 156. For example, royalty verifications do not involve initial public offerings or representation in Tax Court and nobody owns a stake in SoundExchange because it is a nonprofit organization. Trial Ex. 156 at §§ 1.200.010.13, 1.200.010.16.

SEPFF2285. *Second*, Sirius XM's proposal would selectively incorporate into the federal regulations bits and pieces of state law concerning the regulation of CPAs. Trial Ex. 48

at 24 (Bender WRT). That risks creating a layer of federal regulation that is, or could become, inconsistent with state regulation of CPAs – for no additional benefit beyond what the regulations already specify. Trial Ex. 48 at 24 (Bender WRT).

SEPFF2286. SoundExchange's Chief Operating Officer, Jonathan Bender, has explained that public accountancy is a profession regulated by the states, and that state regulation of CPAs is complex and dynamic. Trial Ex. 48 at 24 (Bender WRT). When federal regulations attempt to incorporate piecemeal certain aspects of this body of state regulation, it can generate inconsistencies that reduce clarity in the audit process. For example, as discussed above, the Judges in *Web IV* imposed a local licensure requirement that is inconsistent with states' decision to abandon that same requirement in favor of CPA mobility legislation. Trial Ex. 48 at 24 (Bender WRT). Having inconsistent bodies of federal and state regulation of CPAs involved in royalty audits risks unnecessarily complicating those audits. Trial Ex. 48 at 24 (Bender WRT).

SEPFF2287. The Judges have already decided that royalty verifications should be conducted by CPAs, and redundantly specified that those CPAs must be independent. Trial Ex. 48 at 24 (Bender WRT). In so doing, the Judges effectively incorporated by reference the whole body of state law concerning the regulation of public accountancy. Trial Ex. 48 at 24 (Bender WRT). Having done that, the Judges should leave regulation of CPAs to the AICPA and state regulators with expertise in that field. Trial Ex. 48 at 24 (Bender WRT). Given that Sirius XM's proposed change does not add anything to the existing requirements (as admitted by Sirius XM's Controller), there is no reason for the Judges to graft select portions of state law into the regulations. 5/17/17 Tr. 4418:22-4419:2 (Barry); Trial Ex. 48 at 24 (Bender WRT).

7. Audit Process Improvements Made Over The Last 20 Years Should Apply To The PSS.

SEPFF2288. In *Web IV*, the Judges made various changes in the provisions concerning audit results. *See* 37 C.F.R. § 380.6(g). All aspects of this provision should apply to any audit of Sirius XM's SDARS and to the PSS just as it applies to an audit of Sirius XM's webcasting, because nothing in the nature of the various services provides any reason to believe that the results of auditing them should be treated differently. Trial Ex. 48 at 26 (Bender WRT).

SEPFF2289. There are other differences between the current PSS and webcasting audit regulations that are not justified by anything unique about the PSS and should therefore be harmonized. Many of these differences arise from the Judges' revision of the royalty verification procedures in *Web IV*. These include specifying that overpayments are within the scope of an audit, contemplating the possibility of settlement, and addressing the consequences of overpayments. *See* 37 C.F.R. § 380.6(g). Other differences are ones that have arisen from the gradual evolution of the SDARS and webcasting audit provisions over time, while the PSS audit provisions have changed less from the form in which they were originally adopted in 1998 (although they too have been subject to various changes, as shown in Appendix A). These include (1) specifying that audits may cover three-year periods (37 C.F.R. § 380.6(b)), while in the case of PSS, that is only implied by the three-year record retention requirement in Section 382.4(e); (2) specifying that the party under audit must endeavor to provide access to records concerning its activities that are maintained by third parties such as its contractors (37 C.F.R. § 380.6(e)); and (3) creating a process for the party under audit to provide input to the audit report (37 C.F.R. § 380.6(f)). In the aggregate, and as to most of these differences individually, it is not clear that these differences favor one party over the other. But collectively they represent a 20 year effort by the Judges and their predecessors to refine and clarify the audit

process. There is nothing unique about PSS that suggests that the audit process for those services should forever lag. Trial Ex. 48 at 29-30 (Bender WRT).

SEPFF2290. There is one PSS audit provision that SoundExchange proposes retaining, while Music Choice proposes moving to the analogous *Web IV* provision. Since 1998, the PSS provision has provided for shifting of audit fees upon a 5% underpayment. 37 C.F.R. § 382.6(f). Music Choice did not propose any change in this arrangement as part of its direct case. However, the webcasting provision shifts the audit fees only upon a 10% underpayment. 37 C.F.R. § 380.6(h). While Music Choice vigorously opposes other changes in the PSS terms, in its rebuttal case, Music Choice's rebuttal case included a proposal to adopt the 10% fee-shifting threshold for PSS. Music Choice Amended Rates and Terms at 3 (filed February 17, 2017).

SEPFF2291. As described in Section XIV.C.1 above, the 10% threshold can perhaps be justified as saving generally low-paying webcasters from the risk of having to reimburse audit fees that may be high relative to an underpayment of a few thousand dollars. However, the PSS (as well as Sirius XM) are among the services paying the highest levels of statutory royalties. Thus, even a 5% underpayment by these services is a significant amount of money. It is also a commonplace contractual provision, as described in Section XIV.C.1 above. The 5% threshold currently applicable to PSS should continue to apply (and also apply to SDARS). Trial Ex. 48 at 30 (Bender WRT).

SEPFF2292. Otherwise, SoundExchange proposes conforming the royalty verification provisions that would apply to the PSS to those adopted in *Web IV* in all material respects. None of Music Choice's objections to this proposed conforming have merit.

SEPFF2293. Music Choice argues that the proposal by SoundExchange to add a provision concerning access to third party records would be "incredibly burdensome, with a

serious potential to adversely impact Music Choice[].” Trial Ex. 57 at 56 (Del Beccaro WRT). This hyperbolic claim should be viewed with skepticism. SoundExchange’s proposal regarding the third party documents relating to the audit, found in Section 382.6(e) of its proposed regulations, tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.6(e) (filed June 14, 2017) *with* 37 C.F.R. § 380.6(e). Indeed, *all* of the Judges’ audit regulations, *except* those pertaining to the PSS, currently have such a third-party document provision. *See* 37 C.F.R. §§ 380.6(e), 380.25(d), 380.35(d); 382.15(d); 384.6(d). Music Choice *itself* is already subject to the third-party records provision for its business establishment service. 37 C.F.R. § 384.6(d). There is no reason to think that extending this provision to its PSS offering would be any more problematic.

SEPFF2294. Provisions to a similar effect are included in various agreements in the record of this proceeding. *E.g.*:

[ ] contract. Trial Ex. 114 at § 4(c) (SoundX_000107216) ([ ])

[ ] contract. Trial Ex. 125 at § 7.02 (SoundX_000010591) ([ ]).

[ ] contract. Trial Ex. 126 at Ex. A § 7 (SoundX_000027848-49) ([ ])

SEPFF2295. Indeed, this is a very important provision as to some services. In a number of audits of services other than Music Choice, Mr. Bender testified that SoundExchange has had significant disputes with licensees who have consciously chosen to leave most evidence of their use of recordings under the statutory license in the hands of their contractors, and refused

to do anything to try to provide access to such records to enable verification of their royalty payments. It is not surprising that Music Choice is keen to retain a structure in which it has the option to hide its business records in the files of contractors and no obligation to even try to provide access to an auditor. Trial Ex. 48 at 29 n.13 (Bender WRT). But the Judges should reject this ploy and align the PSS audit regulations regarding third party records with those for all other services.

SEPFF2296. Music Choice objects to SoundExchange's adoption of the Judge's decision in *Web IV* to condense the current provisions governing audits of licensees and of SoundExchange into a single section addressing all audit activity. Trial Ex. 57 at 51-52 (Del Beccaro WRT). Except for the fee-shifting issue addressed above, SoundExchange's proposal, found in Section 382.6 of its proposed regulations, tracks the regulations adopted by the Judges in *Web IV* in all material respects. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.6 (filed June 14, 2017) *with* 37 C.F.R. § 380.6. Music Choice claims that "[t]he proposed changes to the audit provisions would be prejudicial to Music Choice," and argues that "[t]he proposed language contains . . . vague terminology." Trial Ex. 57 at 52 (Del Beccaro WRT). But this is the language the Judges adopted in their *Web IV* regulations, 37 C.F.R. § 380.6, and, as explained above, consistency in the regulations across rate categories promotes accuracy and efficient administration and the Judges should conform the PSS regulations with the *Web IV* regulations, unless there are valid reasons not to do so. Music Choice has presented no such reason. In fact, in condensing the current audit provisions into one section reduces redundancy and increases efficiency.

SEPFF2297. Music Choice also objects to SoundExchange's proposed changes regarding notices of intent to audit. Trial Ex. 57 at 52-53 (Del Beccaro WRT). The current PSS

regulations provide that the notification of intent to audit "shall also be delivered at the same time [as the submission of a notice of intent to the Judges] to the party to be audited." 37 C.F.R. § 382.6(c). SoundExchange proposes adopting the language adopted by the Judges in *Web IV*, except for changing the word "deliver" in that language to "send," "because the timing of delivery is in the control of the courier, not the sender." *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.6(c) (filed June 14, 2017) *with* 37 C.F.R. § 380.6(c).

SEPFF2298. SoundExchange's proposed one-word departure from the *Web IV* regulations was "intended to approximate the concept of 'serve' in the current SDARS audit regulations at 37 C.F.R. § 382.15(c) and 382.16(c)." SoundExchange Amended Proposed Rates and Terms, App. A at § 382.6(c) (filed June 14, 2017). Music Choice argues that "the requirement of actual delivery is in fact a material element of the current regulations that provides protection to the PSS." Trial Ex. 57 at 53 (Del Beccaro WRT). That is likely not the case. Subsequent to SoundExchange's formulating its proposal, in their recent procedural regulations regarding the filing and delivery of documents, the Judges explained that they "use 'delivery' in its sense of 'giving forth' or 'dispatching'" and "do not intend to imply that a party is obliged to guaranty receipt of the document." *In re Procedural Regulations for the Copyright Royalty Board: Organization, General Administrative Provisions*, 82 FR 18563, 18569-70 (2017). SoundExchange does not have concerns with use of the word deliver if it is understood in that way. Its proposal was simply intended to implement what the Judges have now suggested is their interpretation of the current rules.

SEPFF2299. Music Choice further challenges SoundExchange's proposed Section 382.6(d), which it says limits Music Choice's ability to conduct "defensive audits" in lieu of audits performed by SoundExchange. Trial Ex. 57 at 53-56 (Del Beccaro WRT). But again,

SoundExchange's proposal on this point merely tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.6(d) (filed June 14, 2017) *with* 37 C.F.R. § 380.6(d).

SEPFF2300. Specifically, Music Choice objects to "a new qualifier to the use of defensive audits, limiting their sufficiency to satisfy a requested audit 'to the information that is within the scope of the audit.'" Trial Ex. 57 at 53-54 (Del Beccaro WRT) (quoting SoundExchange Proposed Rates and Terms, App. A at § 382.6(d) (filed October 19, 2016)). This language is part of the current SDARS audit provision at 37 C.F.R. § 381.15(e). Apparently Music Choice's position is that it uniquely should be able to conduct a "defensive audit" of whatever scope it chooses, and no matter how cramped that scope might be, Music Choice's audit should preclude an audit of broader scope by SoundExchange.

SEPFF2301. Music Choice argues that the defensive audit right was added by the *PSS I* CARP. Trial Ex. 57 at 54 (Del Beccaro WRT). At the time the CARP created the defensive audit right, SoundExchange did not exist as such, and all copyright owners were treated as "interested parties" with a right to audit. In that context, it was reasonable to give licensees an opportunity to conduct a single defensive audit to fend off potentially dozens of audits from "interested party" record companies. Now, however, consistent with the audit regulations for other license types, SoundExchange has proposed eliminating the ability of individual copyright owners to audit a PSS. Instead, only SoundExchange would have the right to audit, mitigating the potential audit burden on licensees in that way.

SEPFF2302. In addition, twenty years has passed since the original *PSS I* CARP decision. During that time, it has become clear that there are frequent and significant underpayments by many licensees. *E.g.*, Trial Ex. 29 at 14, 22, 26 (Bender WDT); Trial Ex. 48

at 13-15 (Bender WRT). Given a statutory license that operates on the "honor system," Trial Ex. 48 at 13 (Bender WRT), the kinds of "defensive audits" Music Choice describes are plainly insufficient to deal with these issues. The Judges have concluded that in order to be reasonable, terms must be "methodologically transparent." *SDARS II*, 78 FR at 23073; *see also* Underpayment Decision, No. 2006-1 CRB DSTRA, at 12-13. Defensive audits simply do not fit the bill.

SEPFF2303. Moreover, it appears that Music Choice may contemplate cutting off SoundExchange's audit right with an annual financial statement audit. That is a different process from what is reasonably required to confirm a licensee's royalty payments. A financial statement audit is a very specific kind of engagement in which a CPA is asked to obtain assurance that a company's "financial statements as a whole are free from material misstatement" and express a professional opinion that "the financial statements are presented fairly, in all material respects, in accordance with an applicable financial reporting framework." Trial Ex. 48 at 23 n.10 (Bender WRT) (quoting AICPA Codification of Statements on Auditing Standards (AU-C) § 200.12(a)). Such an audit is something that Music Choice might obtain to give its partners confidence that its financial statements fairly represent its overall financial condition. Trial Ex. 48 at 23 n.10 (Bender WRT). However, such an audit is not designed to determine whether a statutory licensee has calculated its statutory royalty payments in accordance with the applicable regulations, or to quantify any unpaid balance. Trial Ex. 48 at 23 n.10 (Bender WRT). Such an audit also provides no assurance that any underpayment that may be discovered will actually be paid. For this reason, the Judges in *Web IV* concluded that "A Service's recent financial audit need not preclude a business audit that focuses on the Service's royalty policies and procedures." *Web IV*, 81 FR at 26401-02.

SEPFF2304. The sound recording license agreements in the record of this proceeding routinely include audit provisions, and do not routinely permit licensees to avoid such audits by conducting an audit of arbitrary scope on their own. Simply by way of example, agreements with audit provisions, and no "defensive audit" provisions, include the following: Trial Ex. 114 -018A at § 4(c) (SoundX_000107216); Trial Ex. 125-30D at § 7.02 (SoundX_000010591-92); Trial Ex. 126 at Ex. A § 7 (SoundX_000027848-49).

SEPFF2305. Finally, Music Choice argues that "[t]he language of [SoundExchange's] proposed subsection § 382.6(g) denies the PSS licensees the ability to dispute the findings of an audit." Trial Ex. 57 at 57 (Del Beccaro WRT). SoundExchange's proposal regarding audit results tracks the regulations adopted by the Judges in *Web IV*. *Compare* SoundExchange Amended Proposed Rates and Terms, App. A at § 382.6(g) (filed June 14, 2017) *with* 37 C.F.R. § 380.6(g). This provision says nothing about – and does not preclude – PSS disputing the findings of an audit. When the Judges adopted this provision, they specifically explained that "the subject of any audit should be permitted to contest audit results." *Web IV*, 81 FR at 26401. By proposing the same language adopted in *Web IV*, SoundExchange does not intend a different result.

D. Confidentiality Terms

SEPFF2306. For historical reasons, the PSS confidentiality provisions are different from the *Web IV* confidentiality provisions in certain respects. However, there is insufficient reason to maintain these differences. SoundExchange's proposed confidentiality provisions that track the provisions adopted by the Judges in *Web IV* (37 C.F.R. § 380.5) in all material respects. SoundExchange Amended Proposed Rates and Terms at App. A § 382.5 (filed June 14, 2017); Trial Ex. 29 at 38 (Bender WDT).

1. Outside Counsel Should Not Need To Sign A Nondisclosure Agreement To See A Statement Of Account.

SEPFF2307. The one substantive change SoundExchange proposes regarding confidentiality is intended to correct an apparent drafting error with respect to an issue that the Judges addressed late in *Web IV*, but only partially – disclosure to outside counsel. There, the Judges recognized that attorneys are subject to professional obligations of confidentiality, and so deleted them from the list of parties required to sign nondisclosure agreements. They then added them to the provision allowing disclosure of confidential information to qualified auditors, who are under similar ethical obligations. *Web IV*, 81 FR at 26400-01; *see also* 5/10/17 Tr. 3221:3-20 (Bender). However, that provision (37 C.F.R. § 380.5(c)(2)) permits disclosure to qualified auditors and outside counsel only for purposes of audits. That is an appropriate limitation for auditors. However, outside counsel perform different roles than auditors, and thus require access to confidential information for different purposes, such as for providing advice concerning compliance issues generally. Accordingly, SoundExchange has proposed as Section 385.5(c)(3) an additional provision permitting disclosure to outside counsel for other purposes relating to the collection and distribution of royalties. Trial Ex. 29 at 38 (Bender WDT).

SEPFF2308. Music Choice argues that it will "be significantly prejudiced by the sharing of its confidential information with outside attorneys not subject to confidentiality agreements," hypothesizing that "SoundExchange's attorney might feel that its fiduciary duty to SoundExchange required it to use Music Choice's confidential information to SoundExchange's benefit in the absence of any binding contractual duty of confidentiality to Music Choice." Trial Ex. 57 at 49-50 (Del Beccaro WRT). This claim is far-fetched.

SEPFF2309. First, SoundExchange's proposed regulation contains a limitation on SoundExchange's use of PSS confidential information. SoundExchange Amended Proposed

Rates and Terms at App. A, at § 382.5(b) (filed June 14, 2017). Current Section 382.5(b)(1) contains a similar limitation on disclosure, but not use. SoundExchange's counsel's duties to SoundExchange would require adherence to this use limitation (rather than inducing it to violate that limitation).

SEPFF2310. Second, one should recognize that the statements of account covered by the confidentiality provision contain very little information other than the royalty calculation. *See* 37 C.F.R. § 382.4(c). Mr. Del Beccaro agreed that Music Choice's top-line revenue is the only confidential information that SoundExchange currently receives through the royalty reporting. 5/18/17 Tr. 4655:13-4656:13 (Del Beccaro). With or without a confidentiality agreement, it is not apparent how, as a practical matter, SoundExchange's counsel could use that information to SoundExchange's benefit in any way that SoundExchange could not itself.

SEPFF2311. In addition, as noted above, the Judges in *Web IV* clearly did not think this was a problem, because they explicitly deleted outside counsel from the list of individuals required to sign nondisclosure agreements. They should likewise do so here.

2. There Is No Basis For Music Choice's Opposition To Editorial Changes Adopted By The Judges In *Web IV.*

SEPFF2312. As noted above, for historical reasons, the PSS confidentiality provisions are different from the *Web IV* confidentiality provisions in certain respects. Trial Ex. 48 at 27 (Bender WRT). Besides a fallback argument that this is how things have always been, Music Choice has presented no viable opposition to the editorial changes adopted by the Judges in *Web IV*. There are insufficient reasons to maintain these differences.

SEPFF2313. *First*, Section 382.5(a), in contrast to Section 380.5(a) (and SoundExchange's proposed Section 382.5(a)), includes in the definition of confidential information not only statements of account and certain information pertaining thereto, but also

certain information designated as confidential in a separate confidentiality agreement. That is unnecessary, and confusing to the extent that it might suggest a different scope of use of such information than the parties may have agreed in a confidentiality agreement. If the parties enter into a confidentiality agreement, that agreement should apply in accordance with its terms. Contemplating the possibility of such an agreement in the regulations adds nothing to what might be in the agreement. Trial Ex. 48 at 27 (Bender WRT). Mr. Del Beccaro testified that Music Choice's top-line revenue is the only confidential information that SoundExchange receives from Music Choice. 5/18/17 Tr. 4655:13-4656:13 (Del Beccaro).

SEPFF2314. *Second*, as noted above, Section 380.5(b) (and SoundExchange's proposed Section 382.5(b)) specifies a limitation on SoundExchange's use of confidential information that is not clearly contained in Section 382.5. While it is somewhat against SoundExchange's interest, SoundExchange has proposed adding this provision for the sake of consistency. Trial Ex. 48 at 27 (Bender WRT).

SEPFF2315. *Third*, Section 382.5(b) uses somewhat different language than Section 380.5(c) (and SoundExchange's proposed Section 382.5(c)) to identify the persons that may be provided access to confidential information. Trial Ex. 48 at 27 (Bender WRT). These differences are unnecessary. For example, Section 382.5(b)(1) contains language addressing the possibility of SoundExchange employees, agents, consultants and contractors that are simultaneously employed by an artist or record company. Trial Ex. 48 at 27 (Bender WRT). However, the only confidential information that is provided to SoundExchange pursuant to this provision are statements of account, and disclosure of PSS statements of account to record companies and artists is permitted by Section 382.5(b)(3). Trial Ex. 48 at 27 (Bender WRT). Trying to keep statements of account away from record companies and artists in 382.5(b)(1)

when they can be provided under 382.5(b)(3) is just the kind of pointless complexity the Judges tried to avoid in their *Web IV* revision of the regulations. Trial Ex. 48 at 27 (Bender WRT). Likewise, Section 382.5(b)(2) goes out of its way to say that statements of account cannot be provided to an auditor who is an employee of a record company or artist. Trial Ex. 48 at 27 (Bender WRT). But an employee of a record company or artist would not seem to be an independent auditor, and auditor independence is separately required by the regulations. It is SoundExchange's practice to engage independent outside audit firms to conduct its royalty verifications. Trial Ex. 48 at 28 (Bender WRT).

E. Distribution Of SDARS Royalties

SEPFF2316. The Judges have repeatedly expressed a preference that statutory royalty payments "relate . . . to the value of the sound recording performance rights that give rise to the royalty obligation." *E.g.*, *SDARS I*, 78 FR at 23073. The principle that listening by a large audience is worth more than listening by a small audience applies to distribution of royalties by SoundExchange as well as to payments to SoundExchange. Trial Ex. 29 at 27 (Bender WDT). That is why most services, including SDARS, are required to report performances to individual listeners – or as an alternative, Aggregate Tuning Hours (ATH) and other information that allows SoundExchange to weight distributions by listenership at the channel level. 37 C.F.R. § 370.4(d)(2)(vii).

SEPFF2317. SoundExchange's proposed regulations confirm that, when Sirius XM becomes capable of obtaining reliable data concerning actual performances, ATH, or other relative listenership, it will be required to report that information to SoundExchange in its reports of use. *See* SoundExchange Amended Proposed Rates and Terms at App. A § 382.22(a) (filed June 14, 2017); Trial Ex. 29 at 36 (Bender WDT). SoundExchange will then use that data in its

royalty distributions, as has always been contemplated by the Judges' regulations. Trial Ex. 29 at 28 (Bender WDT).

SEPFF2318. As discussed in detail in Section XII.C.1, Sirius XM has reported that its new generation of radios – known as "360L" – will enable collection of data concerning the actual relative listenership of channels or sound recordings on Sirius XM's satellite service. Trial Ex. 29 at 27 (Bender WDT). As Sirius XM's CEO testified at trial, "[ ]." 5/15/17 Tr. 3784:23-25, 3785:8-14 (Meyer). [.] 5/15/17 Tr. 3785:15-3786:1, 3788:22-3789:5 (Meyer); 5/10/17 Tr. 3185:12-19 (Bender). In other words, this will allow Sirius XM to deliver the information that has been required by 37 C.F.R. § 370.4(d)(2)(vii); Trial Ex. 29 at 27 (Bender WDT).

SEPFF2319. Sirius XM's CEO testified that, during the coming rate period, [ ]

SEPFF2320. Even if the rollout of 360L winds up being less expeditious than currently planned, SoundExchange's Chief Operating Officer made clear at trial that far less than 100 percent penetration is required "in order to get an accurate picture of audience usage." 5/10/17 Tr. 3186:10-20 (Bender). "Sampling in the music industry is – is well established. It

has been done for years. Broadcast radio depends on sampling," and "Nielsen and Arbitron is all based on sampling." 5/10/17 Tr. 3186:21-3187:3 (Bender). Indeed, an accurate sampling methodology "could be in the tens of thousands." 5/10/17 Tr. 3187:6-15 (Bender). In short, based on the sample that is required, and the expected size and speed of the rollout as described by Sirius XM's CEO, there is every reason to expect that Sirius XM will have a sufficient set of data concerning actual satellite listenership to share with SoundExchange during the coming rate period.

SEPFF2321. Sirius XM does not currently provide SoundExchange with relative listenership data that reliably covers all of its channels at the channel level (and it has said that such data cannot be collected given its current technology). Trial Ex. 48 at 9 (Bender WRT); Trial Ex. 29 at 27 (Bender WDT). Accordingly, SoundExchange currently distributes based on satellite plays, consistent with 37 C.F.R. § 382.13(f)(1), and may not have much choice other than to continue doing the same until actual satellite usage data becomes available. Trial Ex. 48 at 9 (Bender WRT).

SEPFF2322. The only Sirius XM usage data currently available to SoundExchange consists of Internet performances on reference channels. Trial Ex. 29 at 28 n.15 (Bender WDT). This is an imperfect proxy for actual satellite listenership. Internet performances on reference channels are a good enough proxy for satellite listenership to use them in determining the overall amount of the pre-1972 and direct license exclusions across Sirius XM's entire service in the absence of better usage data. Trial Ex. 29 at 28 n.15 (Bender WDT). However, that data alone probably could not be relied on for the more granular purpose of royalty distribution to individual artists and record companies. Trial Ex. 29 at 28 n.15 (Bender WDT).

SEPFF2323. Until such time as actual satellite listenership data becomes available, SoundExchange's Board should be granted the flexibility to consider utilizing whatever usage data may be available. But this should not be a regulatory requirement given the imperfect nature of the usage data that currently is available. Trial Ex. 29 at 28 n.15 (Bender WDT). SoundExchange should also be given the flexibility to consider other usage data that Sirius XM may choose to start collecting during the coming rate period. *See* 5/10/17 Tr. 3197:16-25 (Bender) (noting that "we can't anticipate … what data Sirius XM may or may not start to – to collect and use … if Sirius XM begins to collect other sources of data, which reflect measurement, audience measurement, we should have the flexibility to use that as well").

SEPFF2324. This proposal is reflected in Section 382.22(b) of SoundExchange's proposed regulations. Trial Ex. 29 at 28 (Bender WDT); Trial Ex. 48 at 9 (Bender WRT); SoundExchange Amended Proposed Rates and Terms at App. A at § 382.22(b) (filed June 14, 2017).

F. Copyright Office Records And Directories Of Copyright Owners Should Not Be Required References.

SEPFF2325. SoundExchange proposes royalty distribution provisions that generally track the analogous webcasting provisions in 37 C.F.R. § 380.4. Trial Ex. 29 at 36 (Bender WDT). For example, the current webcasting regulations require SoundExchange to "use its best efforts to identify and locate copyright owners and featured artists." 37 C.F.R. § 380.4(a)(2); Trial Ex. 29 at 36 (Bender WDT). SoundExchange does not propose any change to this requirement.

SEPFF2326. SoundExchange does, however, propose modifying the requirement that its "efforts must include, but not be limited to, searches in Copyright Office public records and published directories of sound recording copyright owners." 37 C.F.R. § 380.4(a)(2).

SoundExchange proposes that the regulations clarify that its consulting these sources is only required when that is likely to be helpful. SoundExchange Amended Proposed Rates and Terms at App. A § 382.4(a)(2) (filed June 14, 2017); Trial Ex. 29 at 36 (Bender WDT).

SEPFF2327. As described above, SoundExchange has always made extensive efforts in identifying and locating artists and copyright owners. Trial Ex. 29 at 36 (Bender WDT). SoundExchange's experience has been that finding contact information is not usually all that difficult. Trial Ex. 29 at 36 (Bender WDT); 5/10/17 Tr. 3168:23-25 (Bender). SoundExchange devotes much more effort to actually making contact with busy professionals who are frequently on the road and to convincing them to provide the tax and payment information necessary to pay them. Trial Ex. 29 at 36 (Bender WDT).

SEPFF2328. When SoundExchange does need to search for contact information, it has found the most useful resources for finding current contact information to be search engines, websites, social media, phone books, industry contacts, and partner organizations. Trial Ex. 29 at 36 (Bender WDT). If the Judges believe there is a reason to mention the Office's registration records as a possible source of contact information, SoundExchange is not opposed to doing so. Trial Ex. 29 at 37 (Bender WDT). However, the regulations should not suggest that they be a resource of first resort, because they are rarely authoritative sources of necessary information and almost never the most useful resource available to SoundExchange. Trial Ex. 29 at 37 (Bender WDT); *see* 5/10/17 Tr. 3169:7-11 (Bender) ("Q: Do you find that the Copyright Office's registration records are a good way to locate artists and Copyright Owners? A: It has not been that helpful in my experience.").

SEPFF2329. As the Copyright Office has recently explained, the Office did not start regularly providing contact information for copyright owners in its registration records until

2007. *In re Removal of Personally Identifiable Information from Registration Records*, 81 FR 63440 (2016); Trial Ex. 29 at 36-37 (Bender WDT). When copyright owner contact information is included in registration records, that information is as of the time of registration, and so is frequently out of date. Trial Ex. 29 at 36 (Bender WDT). Moreover, it is typically more difficult to locate artists than record companies, and when the artist and copyright owner are different, contact information for the artist is not provided in the Office's registration records. Trial Ex. 29 at 36-37 (Bender WDT). Finally, the Office is now proposing to remove copyright owner contact information from the Office's online records on request. 81 FR 63440; Trial Ex. 29 at 36-37 (Bender WDT).

SEPFF2330. By way of example, the Office's online registration record for Alicia Keys' 2015 single "28 Thousand Days" shows an address for Sony Music Entertainment at 550 Madison Avenue in New York. Trial Ex. 102; Trial Ex. 29 at 36 n.18 (Bender WDT). Sony is obviously well known to SoundExchange, and it moved offices early in 2016. Trial Ex. 29 at 36 n.18 (Bender WDT). If Sony was not known to SoundExchange, consulting this registration record would lead it to the wrong address. Trial Ex. 29 at 36 n.18 (Bender WDT); *see also* 5/10/17 Tr. 3169:16-3170:14 (Bender). The registration record does not show an address for Ms. Keys. Trial Ex. 102.

SEPFF2331. The webcasting regulations also refer to "published directories of sound recording copyright owners," which SoundExchange assumes means books like *Just The Facts: North American Record Company Directory*, a paperback listing of 97 record companies published in 2013. Trial Ex. 29 at 37 (Bender WDT) (citing Amazon link to this book). Publications like this would almost never be helpful to SoundExchange, because record companies are typically easy to locate through an Internet search; printed publications go out of

date quickly; SoundExchange already has approximately 41,000 rights owner members (over 400 times as many as are included in this book); and SoundExchange has already registered many other non-member rights owners. Trial Ex. 29 at 37 (Bender WDT); *see also* 5/10/17 Tr. 3169:1-6 (Bender) (noting that public record company directories are "not particularly" helpful because "[t]he key element is keeping these up-to-date, and written published books get out of date really quickly"). For instance, like the Office's registration records, this book reflects the former address for Sony Music Entertainment and its affiliated labels. Trial Ex. 29 at 37 n.20 (Bender WDT).

SEPFF2332. SoundExchange would be eager to hear from the Judges about better resources for finding copyright owners, if the Judges are aware of such resources. Trial Ex. 29 at 37 (Bender WDT). However, the regulations should not suggest that books like this one be SoundExchange's resource of first resort, as they seem unlikely to provide useful information. Trial Ex. 29 at 37 (Bender WDT).

XV. Designation Of A Collective: SoundExchange Should Be The Sole Collective

SEPFF2333. SoundExchange should be designated as the sole collective for collecting and distributing the royalties at issue in this proceeding. As the Judges previously concluded in *SDARS I* and in *SDARS II*, SoundExchange possesses a unique combination of technical capacity, skills, and buy-in from artists and copyright owners that allows it to efficiently and accurately distribute statutory royalties. *See SDARS II*, 78 FR at 23074; *SDARS I*, 73 FR at 4099.

SEPFF2334. SoundExchange has served effectively as the Collective for many years for many statutory licenses, including the SDARS and PSS licenses. No party in this proceeding has opposed the designation of SoundExchange or has proposed an alternative.

SEPFF2335. SoundExchange's accumulated experience during the *SDARS I* and *SDARS II* ratemaking periods has given it deep experience in distributing royalties to very large numbers of both artists and copyright owners. As discussed in further detail below, SoundExchange has developed sophisticated systems that assist it in tracking and allocating royalty payments and distributing them in a timely manner. SoundExchange also employs a substantial staff devoted exclusively to industry outreach—in particular, to finding artists and copyright owners who have not registered with SoundExchange and ensuring that they receive the royalty payments to which they are entitled. SoundExchange is devoted to representing artists and copyright owners equally, and its Board of Directors is equally divided between artists and copyright owner representatives. Accordingly, copyright owners and artists alike support the designation of SoundExchange as the sole collective for collection of SDARS and PSS royalties.

A. SoundExchange Represents Both Copyright Owners And Recording Artists In Large Numbers

SEPFF2336. SoundExchange consistently represents extremely large numbers of both copyright owners and artists, and has done so consistently for years. Trial Ex. 29 at 3 (Bender WDT). SoundExchange refers to the artists and copyright owners that have authorized it to collect royalties on their behalf as "members." Trial Ex. 29 at 3 (Bender WDT). SoundExchange has approximately 79,000 artist members and approximately 41,000 rights owner members (including both record companies and artists who own the copyrights in their own recordings). Trial Ex. 29 at 3 (Bender WDT). Additionally, SoundExchange distributes statutory royalties to nonmember artists and copyright owners as if they were members. Trial Ex. 29 at 3 (Bender WDT). In total, SoundExchange maintains approximately 125,000 payee accounts for recording artists and copyright owners. Trial Ex. 29 at 3 (Bender WDT).

SEPFF2337. SoundExchange's Board of Directors reflects its commitment to representing both artists and copyright owners. Sound Exchange's 18-member Board of Directors is made up of equal numbers of artist representatives and sound recording copyright owner representatives. Trial Ex. 29 at 2 (Bender WDT). Copyright owners are represented by board members associated with the major record companies (four), independent record companies (two), the Recording Industry Association of America (two), and the American Association of Independent Music (one). Trial Ex. 29 at 2 (Bender WDT). Artists are represented by one representative each from the AFM and SAG-AFTRA. Trial Ex. 29 at 2 (Bender WDT). There are also seven at-large artist seats which are currently held by two recording artists and five artist representatives. Trial Ex. 29 at 2-3 (Bender WDT).

SEPFF2338. As Ray Hair, the president of the AFM has explained, this structure ensures that "the very constituencies that are served by SoundExchange are also in control of its

policies and operations. SoundExchange's officers and staff are answerable to the demands of copyright owners and performers for honest, fair and efficient distributions, and for vigorous efforts to achieve fair rates that recognize the value of our music." Trial Ex. 31 at 6 (Hair WDT). Mr. Hair further testified that "the level of control that performer representatives have over SoundExchange has ensured that SoundExchange is committed to serving our interests as well as the interests of copyright owners." Trial Ex. 31 at 6 (Hair WDT).

B. SoundExchange Has Experience Administering The Statutory Licenses And Is Able To Do So With Unparalleled Efficiency

SEPFF2339. SoundExchange has unparalleled experience in administering the statutory licenses. Since its founding, SoundExchange has paid out about $4 billion in statutory royalties (plus additional royalties from foreign performing rights organizations and under direct licenses administered by SoundExchange). Trial Ex. 29 at 3 (Bender WDT). In 2015 alone, SoundExchange distributed over $800 million in royalties from services subject to statutory licensing. Trial Ex. 29 at 3 (Bender WDT).

SEPFF2340. As a result of its extensive experience in distributing royalties, SoundExchange is able to pay artists and copyright owners on a current basis for the vast majority of usage reported to SoundExchange. Trial Ex. 29 at 10 (Bender WDT). SoundExchange pays out approximately 90% of its royalties to artists and copyright owners within 45 days of receiving payment from licensees. 5/10/17 Tr. 3167:18-24 (Bender).

SEPFF2341. SoundExchange is also able to deliver royalty payments with high efficiency and with a minimum of administrative costs. In 2015, SoundExchange's administrative rate was 4.6%. For comparison purposes, the American Society of Composers, Authors and Publishers ("ASCAP") reported an operating expense ratio of 12.3% for 2015. Trial Ex. 29 at 3-4 (Bender WDT). SoundExchange is a non-profit organization operated on a

breakeven basis; it does not retain any profits from its administration of statutory royalties. Trial Ex. 29 at 35 (Bender WDT).

SEPFF2342. In addition to its core royalty collection and distribution process, SoundExchange also protects the interest of artists and copyright owners under the statutory licenses through compliance and enforcement measures, such as educating licensees concerning their obligations under the statutory licenses, following up with licensees that do not make payments or provide required reports on a timely basis, conducting audits of licensees, and occasionally seeking to enforce compliance in court when necessary. Trial Ex. 29 at 12 (Bender WDT).

C. SoundExchange Has Systems And Processes Adapted To Administration Of The Statutory Licenses

SEPFF2343. SoundExchange has developed advanced systems and processes to administer its statutory licenses. As Mr. Bender testified, SoundExchange possesses "sophisticated systems, extensive databases and business processes uniquely suited to the challenging task of distributing statutory royalties" and it is "always working on improvements to [its] systems, databases and business processes." Trial Ex. 29 at 4 (Bender WDT).

SEPFF2344. In just the last few years, SoundExchange has embarked on several major technology initiatives, including a client portal known as "SoundExchange Direct," a licensee portal known as "Licensee Direct," a public website that allows searching of International Standard Recording Codes ("ISRCs") (https://isrc.soundexchange.com/#!/search), and a next generation information technology platform known as "Next Gen." Trial Ex. 29 at 4

(Bender WDT).[158] Next Gen was purpose-built to carry out SoundExchange's mandate, using the latest technology, and consists of a set of six interoperating expert systems supporting the various stages of the royalty collection and distribution process. Trial Ex. 29 at 4 (Bender WDT).

SEPFF2345. SoundExchange's royalty collection and distribution function consists of several steps, detailed below:

SEPFF2346. The royalty collection and distribution process begins with the receipt of royalty payments and, in general, when licensees submit two kinds of reports: (1) statements of account that reflect the licensee's calculation of the payments for the reporting period; and (2) reports of use that log performances of sound recordings. Trial Ex. 29 at 4-5 (Bender WDT). Historically, these were mostly sent to SoundExchange by postal mail, and in the case of the reports, electronic mail. Trial Ex. 29 at 5 (Bender WDT). Today, they are mostly delivered through Licensee Direct, a service that SoundExchange provides to facilitate licensees' compliance with their payment and reporting obligations. Trial Ex. 29 at 5 (Bender WDT). That portal calculates royalty payments, and allows licensees to make their royalty payments by credit card, directly upload statements of account and reports of use, and view their account history. Trial Ex. 29 at 5 (Bender WDT). Licensees paying through Licensee Direct can view and print confirmations of their payments, and the account history available through Licensee Direct reflects previous payments and reports received by SoundExchange (whether through Licensee Direct or not). Trial Ex. 29 at 5 (Bender WDT). Licensees also can view their past reports of use, see the lines of data therein that SoundExchange has identified as not complying with the

[158] SoundExchange is also working on plans to provide access to ISRC information through an application program interface ("API"), which will allow licensees to obtain the ISRCs for the recordings they use in bulk. Trial Ex. 29 at 4 (Bender WDT).

Judges' reporting regulations, and download ISRCs for their lines of reported usage data that SoundExchange has been able to match to its Repertoire Database (described below). Trial Ex. 29 at 5 (Bender WDT).[159]

SEPFF2347. Once payments are received, the seven staff members in SoundExchange's License Management Department ensure that the payments, statements and reports are logged into the License Management module of Next Gen and linked to each other. Trial Ex. 29 at 5 (Bender WDT). If the licensee operates multiple types of services covered by different statutory rate categories (as do Sirius XM, Music Choice, and Muzak), the royalty payments are allocated to the applicable rate categories based on the statements of account. Trial Ex. 29 at 5 (Bender WDT). Next Gen then performs various quality assurance checks and flags issues for follow-up by SoundExchange's License Management staff. Trial Ex. 29 at 5 (Bender WDT).

SEPFF2348. If a licensee does not provide a payment or report of use that SoundExchange is expecting, SoundExchange's License Management staff will try to obtain it from the licensee. Trial Ex. 29 at 5 (Bender WDT). If a provided report does not conform to the required format and delivery specifications, they will identify the kinds of corrections that need to be made, and work with the licensee to obtain a corrected report, or in the case of Sirius XM (as described below) and some other licensees, reformat the data themselves, so the report can be loaded for use in the distribution process. Trial Ex. 29 at 5-6 (Bender WDT).

SEPFF2349. The next step in royalty distribution is matching reported usage to repertoire and payment information. Trial Ex. 29 at 6 (Bender WDT). Under the statutory

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[159] Music Choice and Muzak also use Licensee Direct to provide their reports of use to SoundExchange. Trial Ex. 29 at 5 n.5 (Bender WDT).

license structure, data matching is at the heart of SoundExchange's role as the collective, because the payment process requires matching the recordings reported in licensee reports of use with information in SoundExchange's databases of known recordings and their copyright owners and performers. Trial Ex. 29 at 6 (Bender WDT). This matching presents a complicated data processing challenge, because licensees describe the recordings they use in many varying ways, and frequently do so incompletely, erroneously, or ambiguously. The Usage Data Management module of Next Gen is a sophisticated system designed to make sense of the usage data reported to SoundExchange to the maximum extent practicable. Trial Ex. 29 at 6 (Bender WDT).

SEPFF2350. In the first instance, the Usage Data Management module seeks automatically to match reports of use against SoundExchange's Repertoire Database, another module of Next Gen. Trial Ex. 29 at 6 (Bender WDT). The Repertoire Database is an authoritative repository of information identifying sound recordings. Trial Ex. 29 at 6 (Bender WDT). It currently contains identifying information for approximately 20 million unique recordings, which was sourced directly from the copyright owners of the recordings, and includes ISRCs for all of those recordings. Trial Ex. 29 at 6 (Bender WDT). SoundExchange receives electronic data feeds from over 30 larger record companies and distributors to populate this database in real time with information about new releases. Trial Ex. 29 at 6 (Bender WDT). This real-time data covers almost all commercially-significant U.S. recordings, and a large number of foreign-origin recordings as well. Trial Ex. 29 at 6 (Bender WDT). SoundExchange has also received repertoire information in other forms from thousands of other rights owners. Trial Ex. 29 at 6 (Bender WDT). Three staff members in SoundExchange's Repertoire Management Department are devoted to gathering repertoire information and managing this database. Trial Ex. 29 at 6 (Bender WDT).

SEPFF2351. It is frequently not possible to match reported usage to a recording in SoundExchange's Repertoire Database automatically. Trial Ex. 29 at 7 (Bender WDT). This is overwhelmingly the result of a licensee providing incomplete, erroneous or ambiguous information in its report of use, although licensees occasionally do report use of obscure (mostly foreign) repertoire that was not previously known to us. Trial Ex. 29 at 7 (Bender WDT). In such cases, the Usage Data Management module of Next Gen will try to match the use against SoundExchange's records of usage previously reported by licensees. Trial Ex. 29 at 7 (Bender WDT). In many cases SoundExchange will have manually reviewed a similar report (from the same licensee or another) at some point in the past and made a judgment as to what recording was probably used. Trial Ex. 29 at 7 (Bender WDT). In other cases, the 17 staff members in SoundExchange's Data Management Department will manually review and if necessary research the reported use. Trial Ex. 29 at 7 (Bender WDT). In such a cases, the results of that research will inform the automatic matching of similar reports in the future. Trial Ex. 29 at 7 (Bender WDT).

SEPFF2352. Once usage is matched, the Royalty Processing module of Next Gen allocates a licensee's royalty payment for a given period to the sound recordings used by the licensee based on the amount of usage reported, after deduction of SoundExchange's costs under Section 114(g)(3) (sometimes referred to as SoundExchange's "administrative fee"). Trial Ex. 29 at 7 (Bender WDT). In the case of the SDARS and PSS, this allocation is made on the basis of "spins"—that is, plays to the audience on a channel of the service. This is in contrast to webcasting royalties, which SoundExchange distributes on the basis of "performances" to listeners.[160] Trial Ex. 29 at 7-8 (Bender WDT).

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[160] In the case of the PSS, this is what the Judges' regulations clearly require, because the PSS are only expected to report the playlists of their channels, and not any information about actual listenership. 37 C.F.R. § 370.3(d).

SEPFF2353. SoundExchange allocates royalties first to "earning entities" – meaning the artist, artist heir, or copyright owner who has earned the royalties from a tax standpoint – then to payees (which may be the artist, heir or copyright owner, or a management company, production company or producer whom SoundExchange has been directed to pay on behalf of the earning entity). Trial Ex. 29 at 8 (Bender WDT).

SEPFF2354. The right to be paid based on use of recordings frequently changes, as record company catalogs are bought and sold, exclusive licenses and distribution arrangements are entered into or end, artists change managers or sometimes pass away, and foreign artists and record companies change their performance rights organization affiliations. Trial Ex. 29 at 8-9 (Bender WDT). Nine staff members in SoundExchange's Rights Management Department are devoted to ensuring that SoundExchange's Rights Management Database is always populated with the most current information about who is entitled to be paid for use of recordings in SoundExchange's Repertoire Database, and handling situations where there are overlapping claims as to who should be paid for the use of a particular recording. Trial Ex. 29 at 9 (Bender WDT).

SEPFF2355. Through SoundExchange Direct, artists and record companies can register with SoundExchange and manage their own SoundExchange account and payment information. Trial Ex. 29 at 9 (Bender WDT). In addition, the 32 staff members in SoundExchange's Account Services Department work to register additional artists and record companies, assist with managing account and payment changes, answer questions, and log all

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Historically at least it was understood that the architectures of these services did not enable them to collect actual listenership information. Trial Ex. 29 at 8 (Bender WDT).

such interactions in the Client Relationship Management module of Next Gen. Trial Ex. 29 at 9 (Bender WDT).

SEPFF2356. The actual royalty distribution process is carried out by the 12 staff members in SoundExchange's Distribution Services Department. Trial Ex. 29 at 9 (Bender WDT). For payees who have registered for electronic payment, SoundExchange presently makes monthly distributions of statutory royalties for payees who have royalties due in excess of $100 and quarterly distributions for payees who have royalties due in excess of $10. Trial Ex. 29 at 9 (Bender WDT). For payees who have not registered for electronic payment, SoundExchange issues paper checks quarterly to payees who have royalties due in excess of $100. Trial Ex. 29 at 9 (Bender WDT). After taking into account any necessary payment adjustments, and withholding taxes where necessary, SoundExchange's banking partner either transfers the royalty payment electronically or mails a check. Trial Ex. 29 at 9-10 (Bender WDT).

SEPFF2357. Artists, copyright owners, and other payees have access to both summary and detailed statements documenting their royalty payments. Trial Ex. 29 at 10 (Bender WDT). The detailed statements provide complete information about the usage involved, including the licensee, type of service, and amount of usage, by reporting period. Trial Ex. 29 at 10 (Bender WDT). Through SoundExchange Direct, artists and record companies can view their complete payment history and download statements in spreadsheet form. Trial Ex. 29 at 10 (Bender WDT).

SEPFF2358. Royalty payments that cannot be distributed because the artist or record company cannot be identified or located, or who have not provided the information

necessary for distribution of royalties, are handled in accordance with applicable regulations, such as 37 C.F.R. §§ 382.8 (PSS) and 382.17 (SDARS). Trial Ex. 29 at 10 (Bender WDT).

SEPFF2359. Copyright owners and artists both have expressed satisfaction that SoundExchange's systems efficiently and accurately distribute royalties. As Mr. Gallien, Senior Vice President at UMG, testified: "Through years of experience, SoundExchange has demonstrated an ability to carry out its responsibilities efficiently and fairly. SoundExchange has developed systems to keep pace with the rapid growth of data that it must process, and has served the interests of copyright owners and artists well." Trial Ex. 30 at 16 (Gallien WDT). Similarly, Mr. Hair, president of AFM, testified that "SoundExchange has . . . invested in the systems that are needed, and has developed the experience and expertise in all the complicated aspects of reviewing reports of billions of digital performances, connecting them to the proper performer and copyright owner recipients, and paying them out." Trial Ex. 31 at 8 (Hair WDT).

D. SoundExchange Engages In Significant Outreach To Artists And Copyright Owners

SEPFF2360. Given its years of experience distributing royalties, SoundExchange is able to pay artists and copyright owners on a current basis for the vast majority of reported usage. Trial Ex. 29 at 10 (Bender WDT). However, in order to ensure that all artists and copyright owners are paid the performance royalties they have earned, SoundExchange employs 12 staff members in its Industry Relations Department to locate and contact artists and copyright owners who are owed royalties and, just as importantly, to educate them about SoundExchange and convince them that they should register with SoundExchange.[161] Trial Ex. 29 at 10 (Bender

[161] Before SoundExchange can pay an artist or copyright owner, it needs to receive certain information from the artist or copyright owner, such as verification of identity, identification of payees (including payee shares for artist groups), payment information (including direct deposit information for payees that wish to be paid electronically), and tax information required by the I.R.S. *See, e.g.*, 37 C.F.R. 382.13(f). The process of providing this information

WDT). SoundExchange's Industry Relations staff includes several senior professionals with deep roots in the music industry who are specifically assigned to cover the music communities in New York, Los Angeles, and Nashville, and who regularly travel throughout the country, to build personal relationships with artists, managers, artist lawyers, and small labels. Trial Ex. 29 at 10-11 (Bender WDT). SoundExchange attempts to connect with artists and copyright owners in numerous ways:

SEPFF2361. *Direct Outreach.* SoundExchange's Industry Relations Department contacts artists and record companies directly to tell them that SoundExchange has money for them. Trial Ex. 29 at 11 (Bender WDT). SoundExchange uses postal mail, email, phone calls, social media, and agent/management contacts to attempt to reach specific artists who are unregistered, and whose money is waiting for them. Trial Ex. 29 at 11 (Bender WDT).

SEPFF2362. *Marketing and Online Outreach.* Artists and copyright owners contacted by SoundExchange often respond that SoundExchange royalties sound too good to be true and are concerned that it is a scam. Trial Ex. 29 at 11 (Bender WDT). To help overcome such resistance, SoundExchange undertakes marketing campaigns to educate the industry about what it does. Trial Ex. 29 at 11 (Bender WDT). The efforts include advertising on music sites and music industry publications, social media outreach, and placing news articles concerning unclaimed funds to help raise awareness and register artists and record companies who have not yet claimed their royalties. Trial Ex. 29 at 11 (Bender WDT).

SEPFF2363. *Conference & Event Outreach.* SoundExchange makes efforts to reach artists and copyright owners in person as well. Trial Ex. 29 at 11 (Bender WDT).

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is referred to as "registering" with SoundExchange. Trial Ex. 29 at 9 n.7 (Bender WDT); *see also* 5/10/17 Tr. 3168:13-22 (Bender).

SoundExchange personnel attend dozens of conferences and music festivals each year to educate, build relationships and register artists and copyright owners one-on-one. Trial Ex. 29 at 11 (Bender WDT). SoundExchange employees regularly compare SoundExchange's unregistered artist list with event attendance and performance lists to locate specific artists at events. Trial Ex. 29 at 11 (Bender WDT). On occasion, members of SoundExchange's Industry Relations staff have even waited in artists' lounges to find unregistered artists when they are scheduled to perform. Trial Ex. 29 at 11 (Bender WDT).

SEPFF2364. *Industry Partner Outreach.* SoundExchange references its lists of unregistered artists and copyright owners against the contact lists of more than 150 other organizations, including ASCAP, BandPage, CDBaby, MySpace, and ReverbNation, and will jointly reach out using postal mail or email to artists and copyright owners on those lists who have not previously registered with SoundExchange. Trial Ex. 29 at 12 (Bender WDT).

E. Artists And Copyright Owners Support SoundExchange As The Sole Collective

SEPFF2365. Both artists and copyright owners support the designation of SoundExchange as the sole collective to collect and distribute SDARS and PSS royalties.

SEPFF2366. Mr. Gallien testified that "the work that SoundExchange does to collect and distribute royalties has become more important than ever," and that "UMG supports designating SoundExchange as the sole collective once again in this proceeding." Trial Ex. 30 at 16 (Gallien WDT).

SEPFF2367. Likewise, Mr. Hair testified that "AFM renews its support for SoundExchange to serve as the sole designated Collective for the statutory license fees at issue in this proceeding." Trial Ex. 31 at 6 (Hair WDT). Mr. Hair has also made clear that he believes a *single* collective continues to be the best system for efficient distribution of royalties. Trial Ex.

31 at 8 (Hair WDT). Mr. Hair's view aligns with the view of the Court, which in *SDARS I* explained that "designation of a single Collective 'represents the most economically and administratively efficient system for collecting royalties under the blanket license framework created by the statutory licenses.'" *SDARS I*, 73 FR at 4099 (quoting *In re Digital Performance Right in Sound Recordings and Ephemeral Recordings* (*Web II*), 72 FR 24084, 24104 (May 1, 2007)).

SEPFF2368. In view of this uncontroverted testimony, SoundExchange's long history of serving as the collective for distribution of SDARS and PSS royalties, and the immense investment that SoundExchange has made in the efficient distribution and collection of statutory royalties, SoundExchange should once again be designated as the sole collective.

XVI. Section 112 Royalty And Minimum Fee For Ephemeral Copies

A. The Parties All Agree As To How To Allocate Ephemeral Royalties

SEPFF2369. The record in this proceeding unanimously supports SoundExchange's proposal of a bundled rate for both the Section 112(e) and 114 rights, 5% of which shall be allocated as the Section 112(e) royalty for the making of ephemeral copies, and the remaining 95% of which shall be allocated as the Section 114 performance royalty. The parties agree in substance concerning this matter.

SEPFF2370. SoundExchange's rate proposal for PSS allocates royalty payments between the Section 112(e) and the Section 114 license through the following regulatory language:

> (c) Ephemeral recordings royalty fees. The fee for all Ephemeral Recordings is part of the total fee payable under this section and constitutes 5% of it. All Ephemeral Recordings that a Licensee makes which are necessary and commercially reasonable for making noninteractive Digital Audio Transmission as a Preexisting Subscription Service are included in the 5%.

SoundExchange Amended Proposed Rates and Terms, App. A at § 382.11(c) (filed June 14, 2017). Equivalent language is provided for SDARS. SoundExchange Amended Proposed Rates and Terms, App. A at § 382.21(c) (filed June 14, 2017).

SEPFF2371. The Services agree in substance with SoundExchange's proposal. *See* Trial Ex. 48 at 2 n.1 (Bender WRT). Sirius XM has proposed language that is virtually identical to that proposed by SoundExchange, because both patterned their proposals after the ephemerals language adopted by the Judges in *Web IV*. Sirius XM First Amended Proposed Rates and Terms at § 382.12(b) (filed February 17, 2017); 37 C.F.R. § 380.10(d).

SEPFF2372. Music Choice "proposes that the Section 112 ephemeral license fee be included within the performance royalty rate." Music Choice Amended Rates and Terms at 2 (filed February 17, 2017). It does not propose specific regulatory language, but it does suggest

that the existing regulations should be amended only as specified. Music Choice Amended Rates and Terms at 2 (filed February 17, 2017). Existing Section 382.3(c) states as follows:

> (c) The royalty payable under 17 U.S.C. 112(e) for the making of phonorecords used by the Licensee solely to facilitate transmissions for which it pays royalties as and when provided in this subpart shall be included within, and constitute 5% of, the total royalties payable under 17 U.S.C. 112(e) and 114.

SEPFF2373. 37 C.F.R. § 382.3(c).Music Choice's characterization of its proposal is slightly different from current Section 382.3(c): The former refers to the Section 112(e) royalty's being included in the Section 114 royalty, while the latter refers to both the Section 112(e) and Section 114 royalties as components of the overall royalty payment. The latter is more accurate, and in the absence of a proposal from Music Choice for changes to Section 382.3(c), it is probably what was intended. Either way, it appears that both SoundExchange and Music Choice agree that the Judges should set some kind of an overall royalty and allocate it 95% / 5%.

SEPFF2374. Evidence in the record supports SoundExchange's proposal. As an initial matter, PSS and SDARS "must have both the ephemeral copy right as well as the performance right in order to operate their services." Trial Ex. 51 at 10 (Des. WDT of Ford, *Web III*). Accordingly, Professor Ford concluded in his testimony that is designated in this proceeding that "ephemeral copies have economic value to services that publicly perform sound recordings because these services cannot as a practical matter properly function without those copies." Trial Ex. 51 at 9 (Des. WDT of Ford, *Web III*).

SEPFF2375. Historically, in the marketplace agreements between record companies and music services for non-statutory forms of licenses, "it is typical for ephemeral copy rights to be expressly included among the grant of rights provided" to the services. Trial Ex. 51 at 10 (Des. WDT of Ford, *Web III*). "Most of these agreements do not set a distinct rate for those ephemeral copies, incorporating them instead into the overall rate that the [music services] pay[]

for the combined ephemeral copy rights and performance rights." Trial Ex. 51 at 10-11 (Des. WDT of Ford, *Web III*).

SEPFF2376. Professor Ford observed that "marketplace benchmarks show that the royalty rate for ephemeral copies, if directly established, is almost always expressed as a percentage of the overall royalty rate for combined activities under Sections 112 and 114." Trial Ex. 51 at 9-10 (Des. WDT of Ford, *Web III*).

SEPFF2377. There are numerous voluntary agreements for sound recording licensing in which the rate for the ephemeral reproduction license is a percentage of the overall royalty pool. Professor Ford described one specific example as an "agreement between a major record label and a webcaster that covers ad-supported internet radio service, subscription radio service, and on-demand streaming and recites the parties' agreement that 10% of the royalty payments made under the agreement shall be designated as payment for ephemeral copies." Trial Ex. 51 at 11 (Des. WDT of Ford, *Web III*).

SEPFF2378. Because allocation of the overall royalty pool between Section 112(e) and Section 114 has no effect on the Services, the "best indication of the proper allocation of royalties" is an "agreement between the record companies and the artists." Trial Ex. 51 at 14 (Des. WDT of Ford, *Web III*). The evidence shows that "recording artists and the record companies have reached an agreement that five percent (5%) of the payments for activities under Section 112(e) and 114 should be allocated to Section 112(e) activities." Trial Ex. 51 at 15 (Des. WDT of Ford, *Web III*). This is what formed the basis of the stipulation in *SDARS II*, which the Judges adopted.

SEPFF2379. As a result, SoundExchange's proposal "credibly represents the result that would in fact obtain in a hypothetical marketplace negotiation between a willing buyer and

the interested willing sellers under the relevant constraints." Trial Ex. 51 at 15 (Des. WDT of Ford, *Web III*).

SEPFF2380. As discussed above, this is 95% / 5% split was the agreement that the participants reached – and the Judges approved – in *SDARS II*. *See SDARS II*, 78 FR at 23055-56. Likewise, in *Web IV*, the "Judges accept[ed] SoundExchange's proposal to continue the current bundling of the Section 112 and 114 rates." *Web IV*, 81 FR at 26398. The record in this proceeding provides every reason to follow that same approach here and no reason to deviate from it.

B. SoundExchange And Sirius XM Agree In Substance Regarding The SDARS Minimum Fee Provision

SEPFF2381. SoundExchange proposes that minimum fees for both SDARS and the PSS should be governed by the following regulatory language:

> "(b) Minimum fee. Each Licensee must pay the Collective a minimum fee of $100,000 each year. The Collective must apply the fee to the Licensee's account as credit towards any royalties under 17 U.S.C. § 112(e) that the Licensee may incur in the same year. The minimum fee is nonrefundable, and any unused portion of an annual minimum fee payment for a given year shall not carry over into a subsequent year."

SoundExchange Amended Proposed Rates and Terms, App. A at § 382.11 & § 382.21(b) (filed June 14, 2017). The foregoing incorporates the relevant part of the *Web IV* provision at 37 C.F.R. § 380.10(b), but consistent with current 37 C.F.R. § 382.3(b) and § 382.12(c), the fee is a flat $100,000 rather than being channel-based, and is creditable only toward ephemeral royalties. As in the Judges' *Web IV* regulations, SoundExchange's proposed Section 382.2(c) addresses the timing of minimum fee payments (11 days later than under current 37 C.F.R. § 382.3(b) and § 382.12(c)). SoundExchange Amended Proposed Rates and Terms, App. A at § 382.2(c) (filed June 14, 2017).

SEPFF2382. Sirius XM's proposed minimum fee provision does not meaningfully differ in substance from SoundExchange's. *See* Trial Ex. 48 at 2 n.1 (Bender WRT).

SEPFF2383. Sirius XM would carry forward unchanged the current SDARS minimum fee provision, which provides for an advance payment of $100,000 per year "as an advance of the Ephemeral Recordings royalties due and payable for a given year." Sirius XM Proposed Rates and Terms at § 382.12(c) (filed October 19, 2016).

SEPFF2384. Although SoundExchange's and Sirius XM's proposals do not meaningfully differ, the Judges should adopt SoundExchange's proposed text, which incorporates the drafting improvements the Judges made in *Web IV*. *See* Trial Ex. 29 at 31 (Bender WDT).

C. The Judges Should Adopt SoundExchange's Proposal Regarding The PSS Minimum Fee Provision

SEPFF2385. As to the minimum fee provision for the PSS, there is a substantive difference in the proposals by SoundExchange and Music Choice.

SEPFF2386. SoundExchange proposes no substantive changes to the current PSS regulation regarding minimum fees, which provide a $100,000 minimum creditable toward ephemeral royalties. *See* Trial Ex. 29 at 31 (Bender WDT). As described above, its specific regulatory language incorporates the relevant part of the *Web IV* provision at 37 C.F.R. § 380.10(b), but consistent with current 37 C.F.R. § 382.3(b) and § 382.12(c), the fee is a flat $100,000 rather than being channel-based. *See* Trial Ex. 29 at 31 (Bender WDT).

SEPFF2387. Music Choice, in contrast, proposes a change in current Section 382.3(b) making the $100,000 minimum fee creditable against *both* ephemeral royalties under Section 112(e) *and* sound recording royalties under Section 114. Music Choice Amended Rates and Terms at 2 (filed February 17, 2017).

SEPFF2388. The substance of the current regulations – with minimum fees creditable to only ephemeral royalties – has a basis in the Copyright Act. Section 112(e) requires the ephemeral rates to "include a minimum fee for each type of service offered by transmitting organizations." 17 U.S.C. § 112(e)(3), (4); *SDARS II*, 78 FR at 23055. Section 114 has no analogous requirement for PSS. *See* 17 U.S.C. § 114(f)(1). Section 114 *does*, however, require a minimum fee for eligible nonsubscription transmission services and new subscription services. 17 U.S.C. § 114(f)(2). In adopting current Section 382.3(b), the Judges presumably intended to impose a minimum fee only where required.

Respectfully submitted,

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June 19, 2017

Appendix A

Appendix A
Comparison of 1998 PSS Regulations (63 FR at 25413)
and Current PSS Regulations (37 C.F.R. §§ 382.1-.8)
with Current SDARS provisions omitted

PART ~~260--USE~~ 382—RATES AND TERMS FOR DIGITAL TRANSMISSIONS OF SOUND RECORDINGS ~~IN A~~ AND THE REPRODUCTION OF EPHEMERAL RECORDINGS BY PREEXISTING SUBSCRIPTION SERVICES AND PREEXISTING SATELLITE DIGITAL ~~PERFORMANCE~~AUDIO RADIO SERVICES

Subpart A—Preexisting Subscription Services

Sec.

~~260.1~~ 382.1 General.

382.2 Definitions.

~~260.2~~ 382.3 Royalty fees for the digital performance of sound recordings and the making of ephemeral recordings by preexisting subscription services.

~~260.3~~ 382.4 Terms for making payment of royalty fees~~.260.4 Confidential information~~ and statements of account.

382.5 Confidential information.

~~260.5~~ 382.6 Verification of statements of account.

~~260.6~~ 382.7 Verification of royalty payments.

~~260.7 Unknown copyright owners.~~

382.8 Unclaimed funds.

Authority: 17 U.S.C. 112(e), 114, and 801(b)(1).

Subpart A—Preexisting Subscription Services

§ ~~260.1~~382.1 General.

(a) This ~~part 260~~ subpart establishes rates and terms ~~and rates~~ of royalty payments for the public performance of sound recordings by nonexempt preexisting subscription ~~digital transmission~~ services in accordance with the provisions of 17 U.S.C. 114~~ and 801(b)(1~~, and the making of Ephemeral Recordings in connection with the public performance of sound recordings by nonexempt preexisting subscription services in accordance with the provisions of 17 U.S.C. 112(e).

(b) Upon compliance with 17 U.S.C. 114 and the terms and rates of this ~~part~~subpart, ~~a~~ nonexempt preexisting subscription ~~digital transmission service~~ services may engage in the activities set forth in 17 U.S.C. 114~~.~~(d)(2).

(c) Upon compliance with 17 U.S.C. 112(e) and the terms and rates of this subpart, nonexempt preexisting subscription services may engage in the activities set forth in 17 U.S.C. 112(e) without limit to the number of Ephemeral Recordings made.

[72 FR 71796, Dec. 19, 2007, as amended at 78 FR 23096, Apr. 17, 2013]

Sec. 382.2 Definitions.

For purposes of this subpart, the following definitions shall apply:

Collective is the collection and distribution organization that is designated by the Copyright Royalty Judges. For the 2013-2017 license term, the Collective is SoundExchange, Inc.

Copyright Owners are sound recording copyright owners who are entitled to royalty payments made under this subpart pursuant to the statutory licenses under 17 U.S.C. 112(e) and 114.

Ephemeral Recording is a phonorecord created for the purpose of facilitating a transmission of a public performance of a sound recording under a statutory license in accordance with 17 U.S.C. 114 and subject to the limitations specified in 17 U.S.C. 112(e).

GAAP shall mean generally accepted accounting principles in effect from time to time in the United States.

~~**§ 260.2 Royalty fees for the digital performance of sound recordings.**~~

~~(a) Commencing June 1, 1998, the royalty fee for the digital performance of sound recordings by nonexempt subscription digital services shall be 6.5% of gross revenues resulting from residential services in the United States.~~

~~(b) A nonexempt subscription digital transmission service (the "Licensee") shall pay a late fee of 1.5% per month, or the highest lawful rate, whichever is lower, for any payment received after the due date. Late fees shall accrue from the due date until payment is received.~~

~~(c)~~ Gross Revenues. (1) ~~For purposes of this section, gross revenues~~ Gross Revenues shall mean all monies derived from the operation of the programming service of the Licensee and shall be comprised of the following:

(i) Monies received by Licensee from Licensee's carriers and directly from residential U.S. subscribers for Licensee's programming service;

(ii) Licensee's advertising revenues (as billed), or other monies received from sponsors, if any, less advertising agency commissions not to exceed 15% of those fees incurred to a recognized advertising agency not owned or controlled by Licensee;

(iii) Monies received for the provision of time on the ~~Programming Service~~ programming service to any third party;

(iv) Monies received from the sale of time to providers of paid programming such as infomercials;

(v) Where merchandise~~-~~, service, or anything ~~or service~~ of value is received by ~~licensee~~ Licensee in lieu of cash consideration for the use of Licensee's programming service, the fair market value thereof or Licensee's prevailing published rate, whichever is less;

(vi) Monies or other consideration received by Licensee from Licensee's carriers, but not including monies received by Licensee's carriers from others and not accounted for by Licensee's carriers to Licensee, for the provision of hardware by anyone and used in connection with the ~~Programming Service~~programming service;

(vii) Monies or other consideration received for any references to or inclusion of any product or service on the programming service; and

(viii) Bad debts recovered regarding paragraphs (~~c)(~~1) (i) through (vii) of this ~~section.~~definition.

(~~2)Gross revenues~~ 2) Gross Revenues shall include such payments as ~~are~~ set forth in paragraphs (~~c)(~~1) (i) through (viii) of this ~~section~~ definition to which Licensee is entitled but which are paid to a parent, subsidiary, division, or affiliate of Licensee, in lieu of payment to Licensee but not including payments to Licensee's carriers for the programming service. Licensee shall be allowed a deduction from "~~gross revenues~~Gross Revenues" as defined in paragraph ~~(c)~~(1) of this ~~section~~ definition for affiliate revenue returned during the reporting period and for bad debts actually written off during reporting period.

~~(d) During any given payment period, the value of each performance of each digital sound recording shall be the same.~~

Licensee means any preexisting subscription service as defined in 17 U.S.C. 114(j)(11).

Performers means the independent administrators identified in 17 U.S.C. 114(g)(2)(B) and (C), and the parties identified in 17 U.S.C. 114(g)(2)(D).

Qualified Auditor is a Certified Public Accountant.

[78 FR 23096, Apr. 17, 2013]

§ 382.3 Royalty fees for the digital performance of sound recordings and the making of ephemeral recordings by preexisting subscription services.

(a) Commencing January 1, 2013, and continuing through December 31, 2017, the monthly royalty fee to be paid by a Licensee for the public performance of sound recordings pursuant to 17 U.S.C. 114 and the making of any number of Ephemeral Recordings to facilitate such performances pursuant to 17 U.S.C. 112(e) shall be a percentage of monthly Gross Revenues

resulting from residential services in the United States as follows: for 2013, 8%; and for 2014 through 2017, 8.5%.

(b) Each Licensee making digital performances of sound recordings pursuant to 17 U.S.C. 114 and Ephemeral Recordings pursuant to 17 U.S.C. 112(e) shall make an advance payment to the Collective of $100,000 per year, payable no later than January 20th of each year. The annual advance payment shall be nonrefundable, but it may be counted as an advance of the section 112 royalties due and payable for a given year or any month therein under paragraph (a) of this section; Provided, however, that any unused portion of an annual advance payment for a given year shall not carry over into a subsequent year.

(c) The royalty payable under 17 U.S.C. 112(e) for the making of phonorecords used by the Licensee solely to facilitate transmissions for which it pays royalties as and when provided in this subpart shall be included within, and constitute 5% of, the total royalties payable under 17 U.S.C. 112(e) and 114.

(d) A Licensee shall pay a late fee of 1.5% per month, or the highest lawful rate, whichever is lower, for each payment or statement of account, or either of them, received by the Collective after the due date. Late fees shall accrue from the due date until payment and the statement of account are received.

[78 FR 23096, Apr. 17, 2013]

§ ~~260.3~~ 382.4 Terms for making payment of royalty fees and statements of account.

~~(a) All royalty payments shall be made to a designated agent(s), to be determined by the parties through voluntary license agreements or by a duly appointed Copyright Arbitration Royalty Panel pursuant to the procedures set forth in subchapter B of 37 CFR, part 251.~~

(a) Payment to the Collective. A Licensee shall make the royalty payments due under Sec. 382.3 to the Collective.

(b) ~~Payment shall be made on the twentieth~~ Timing of payment. A Licensee shall make any payments due under Sec. 382.3 on a monthly basis on or before the 45th day after the end of each month for that month~~, commencing with the month succeeding the month in which the royalty fees are set~~.

~~(c) The agent designated to receive the royalty payments and the statements of account shall have the responsibility of making further distribution of these fees to those parties entitled to receive such payment according to the provisions set forth at 17 U.S.C. 114(g).~~

~~(d) The designated agent may deduct reasonable costs incurred in the administration of the distribution of the royalties, so long as the reasonable costs do not exceed the actual costs incurred by the collecting entity.~~

~~(e) Commencing June 1, 1998, and until such time as a new designation is made, the Recording Industry Association of America, Inc. shall be the agent receiving royalty payments and statements of accounts.~~

(c) Statements of Account. Licensees shall submit monthly statements of account on a form provided by the Collective. A statement of account shall contain the following information:

(1) Such information as is necessary to calculate the accompanying royalty payments;

(2) The name, address, business title, telephone number, facsimile (if any), electronic mail address and other contact information of the person to be contacted for information or questions concerning the content of the statement of account;

(3) The signature of a duly authorized officer or representative of the Licensee;

(4) The printed or typewritten name of the person signing the statement of account;

(5) The date of signature;

(6) The title or official position held in relation to the Licensee by the person signing the statement of account;

(7) A certification of the capacity of the person signing; and

(8) A statement to the following effect:

I, the undersigned officer or representative of the Licensee, have examined this statement of account and hereby state that it is true, accurate, and complete to my knowledge after reasonable due diligence.

(d) Distribution of royalties. (1) The Collective shall promptly distribute royalties received from Licensees to Copyright Owners and Performers, or their designated agents, that are entitled to such royalties. The Collective shall be responsible only for making distributions to those Copyright Owners, Performers, or their designated agents who provide the Collective with such information as is necessary to identify the correct recipient. The Collective shall distribute royalties on a basis that values all performances by a Licensee equally based upon the information provided under the reports of use requirements for Licensees contained in Sec. 370.3 of this chapter.

(2) If the Collective is unable to locate a Copyright Owner or Performer entitled to a distribution of royalties under paragraph (d)(1) of this section within 3 years from the date of payment by a Licensee, such royalties shall be handled in accordance with Sec. 382.8.

(e) Retention of records. Both Licensees and the Collective shall maintain books and records relating to the payment of the license fees in accordance with generally accepted accounting principles for a period of three years after the end of the period for which the payment is made. These records shall include, but are not limited to, the statements of account, records documenting an interested party's share of the royalty fees, and the records pertaining to the administration of the collection process and the further distribution of the royalty fees to those interested parties entitled to receive such fees.

[78 FR 23097, Apr. 17, 2013]

§ ~~260.4~~ 382.5 Confidential information ~~and statements of account~~.

(a) For purposes of this ~~part~~subpart, confidential information shall include statements of account and any information pertaining to the statements of account designated as confidential by the nonexempt preexisting subscription ~~digital transmission~~ service filing the statement. Confidential information shall also include any information so designated in a confidentiality agreement ~~which has been~~ duly executed between a nonexempt preexisting subscription ~~digital transmission~~ service and an interested party, or between one or more interested parties; Provided that all such information shall be made available, for the verification proceedings provided for in §§ ~~260.5~~ Sec. 382.6 and ~~260.6 of this part~~382.7.

~~(b) Nonexempt subscription digital transmission services shall submit monthly statements of account on a form provided by the agent designated to collect such forms and the monthly royalty payments.~~

~~(c) A statement of account shall include only such information as is necessary to verify the accompanying royalty payment. Additional information beyond that which is sufficient to verify the calculation of the royalty fees shall not be included on the statement of account.~~

~~(d~~(b) Access to the confidential information pertaining to the royalty payments shall be subject to an appropriate confidentiality agreement and limited to:

(1) Those employees ~~of the designated agent~~, agents, consultants and independent contractors of the Collective who are engaged in the collection and distribution of royalty payments hereunder and activities directly related hereto, who are not also employees or officers of a sound recording ~~copyright owner or performing artist~~Copyright Owner or Performer, and who, for the purpose of performing ~~their assigned~~ such duties during the ordinary course of ~~business~~employment, require access to the records; and

(2) An independent and ~~qualified auditor~~ Qualified Auditor who is not an employee or officer of a sound recording ~~copyright owner or performing artist~~Copyright Owner or Performer, but is authorized to act on behalf of the interested ~~copyright owners~~ Copyright Owners with respect to the verification of the royalty payments~~.~~; and

(3) Copyright Owners and Performers whose works have been used under the statutory licenses set forth in 17 U.S.C. 112(e) and 114 by the Licensee whose Confidential Information is being supplied, or agents thereof provided that the only confidential information that may be shared pursuant to this paragraph (b)(3) are the monthly statements of account that accompany royalty payments.

~~(e) The designated agent~~ (c) The Collective or any person identified in paragraph (b) of this section shall implement procedures to safeguard all confidential financial and business information, including~~-~~, but not limited to royalty payments, submitted as part of the statements of account~~. Confidential information shall be maintained in locked files.~~, using a reasonable standard of care, but no less than the same degree of security used to protect confidential financial and business information or similarly sensitive information belonging to the Collective or such person.

[72 FR 71796, Dec. 19, 2007. Redesignated at 78 FR 23096, Apr. 17, 2013 and amended at 78 FR 23097, Apr. 17, 2013]

~~(f) Books and records relating to the payment of the license fees shall be kept in accordance with generally accepted accounting principles for a period of three years. These records shall include, but are not limited to, the statements of account, records documenting an interested party's share of the royalty fees, and the records pertaining to the administration of the collection process and the further distribution of the royalty fees to those interested parties entitled to receive such fees.~~

§ ~~260.5~~ 382.6 Verification of statements of account.

(a) General. This section prescribes general rules pertaining to the verification of the statements of account by interested parties according to terms promulgated by ~~a duly appointed copyright arbitration royalty panel, under its authority to set reasonable terms and rates pursuant to 17 U.S.C. 114 and 801(b)(1), and the Librarian of Congress under his authority pursuant to 17 U.S.C. 802(f)~~the Copyright Royalty Board.

(b) Frequency of verification. Interested parties may conduct a single audit of a nonexempt preexisting subscription ~~digital transmission~~ service during any given calendar year.

(c) Notice of intent to audit. Interested parties must submit a notice of intent to audit a particular service ~~with~~ to the Copyright ~~Office~~Royalty Board, which shall publish in the Federal Register a notice announcing the receipt of the notice of intent to audit within 30 days of the filing of the interested ~~parties'~~ party's notice. Such notification of intent to audit shall also be ~~served~~ delivered at the same time ~~on~~ to the party to be audited.

(d) Retention of records. The party requesting the verification procedure shall retain the report of the verification for a period of three years from the date of completion of the verification process.

(e) Acceptable verification procedure. An audit, including underlying paperwork, which was performed in the ordinary course of business according to generally accepted auditing standards by an independent ~~auditor~~and Qualified Auditor, shall serve as an acceptable verification procedure for all parties.

(f) Costs of the verification procedure. The interested party or parties requesting the verification procedure shall pay ~~for the cost~~ all costs of the verification procedure, unless an independent ~~auditor~~ and Qualified Auditor concludes that ~~there was an underpayment~~ during the period audited, the Licensee underpaid royalties by an amount of five (5) percent or more; in which case, the service ~~which~~ that made the underpayment shall bear the costs of the verification procedure.

(g) Interested parties. For purposes of this section, interested parties are those ~~copyright owners~~ Copyright Owners who are entitled to receive royalty fees pursuant to 17 U.S.C. 114(g), their designated agents, or the ~~entity designated by the copyright arbitration royalty panel in 37 CFR 260.3 to receive and to distribute the royalty fees.~~Collective.

[72 FR 71796, Dec. 19, 2007. Redesignated at 78 FR 23096, Apr. 17, 2013 and amended at 78 FR 23097, Apr. 17, 2013]

§ ~~260.6~~ 382.7 Verification of royalty payments.

(a) General. This section prescribes general rules pertaining to the verification of the payment of royalty fees to those parties entitled to receive such fees, according to terms promulgated by ~~a duly appointed copyright arbitration royalty panel, under its authority to set reasonable terms and rates pursuant to 17 U.S.C. 114 and 801(b)(1), and the Librarian of Congress under his authority pursuant to 17 U.S.C. 802(f)~~the Copyright Royalty Board.

(b) Frequency of verification. Interested parties may conduct a single audit of the ~~entity making the royalty payment~~ Collective during any given calendar year.

(c) Notice of intent to audit. Interested parties must submit a notice of intent to audit the entity making the royalty payment ~~with~~ to the Copyright ~~Office~~Royalty Board, which shall publish in the Federal Register a notice announcing the receipt of the notice of intent to audit within 30 days of the filing of the interested ~~parties'~~ party's notice. Such notification of ~~interest~~ intent shall also be ~~served~~ delivered at the same time ~~on~~ to the party to be audited.

(d) Retention of records. The interested party requesting the verification procedure shall retain the report of the verification for a period of three years after completion of the verification process.

(e) Acceptable verification procedure. An audit, including underlying paperwork, which was performed in the ordinary course of business according to generally accepted auditing standards by an independent ~~auditor~~and Qualified Auditor, shall serve as an acceptable verification procedure for all interested parties.

(f) Costs of the verification procedure. The interested party or parties requesting the verification procedure shall pay for ~~the cost of~~ all costs associated with the verification procedure, unless an independent ~~auditor~~ and Qualified Auditor concludes that ~~there was an underpayment~~ , during the period audited, the Licensee underpaid royalties in the amount of five (5) percent or more~~;~~ , in which case, the entity ~~which~~ that made the underpayment shall bear the costs of the verification procedure.

(g) Interested parties. For purposes of this section, interested parties are those ~~copyright owners~~ who are entitled to receive royalty ~~fees~~ payments pursuant to 17 U.S.C. 114(g)(2), or their designated agents.

[72 FR 71796, Dec. 19, 2007. Redesignated at 78 FR 23096, Apr. 17, 2013 and amended at 78 FR 23098, Apr. 17, 2013]

~~§ 260.7 Unknown copyright owners.~~

§ 382.8 Unclaimed funds.

~~If the designated collecting agent~~ If the Collective is unable to identify or locate a ~~copyright owner~~ Copyright Owner or Performer who is entitled to receive a royalty ~~payment~~ distribution under this ~~part~~subpart, the ~~collecting agent~~ Collective shall retain the required payment in a segregated trust account for a period of ~~three~~ 3 years from the date of ~~payment~~the last distribution from the royalty fund at issue. No claim to such ~~payment~~ distribution shall be valid after the expiration of the ~~three~~ 3-year period. After ~~the~~ expiration of ~~this~~ the three-year claim period, the ~~collecting agent~~ Collective may ~~use~~ apply the unclaimed funds to offset ~~the cost of the administration of~~ any costs deductible under 17 U.S.C. 114(g)(3). The foregoing shall apply notwithstanding the common law or statutes of any State.

[72 FR 71796, Dec. 19, 2007. Redesignated at 78 FR 23096, Apr. 17, 2013 and amended at 78 FR 23098, Apr. 17, 2013]

that generate the highest revenue per user, and need to generate an appropriate level of revenue from each of them.").

SEPFF319. A loss of interactive service subscribers would reduce the revenues of interactive services and, thus, the record companies' revenues. Trial Ex. 32 at ¶ 34 (Harrison WDT); Trial Ex. 39 at ¶ 34 (Blackburn WRT). UMG, for example, is keenly aware that its best hope of increasing its revenues lies with subscription on-demand services because [ ]. Trial Ex. 32 at ¶ 34 (Harrison WDT). The record companies recognize that their success now turns on streaming and need subscription interactive services to grow their subscriber base. Trial Ex. 32 at ¶ 34 (Harrison WDT).

SEPFF320. Record companies also recognize that seeking higher royalty rates from interactive services can squeeze the services' margins and that tight margins could be problematic because the services need a path to profitability. Trial Ex. 32 at ¶ 34 (Harrison WDT). Absent any path to profitability, it is possible that interactive services will lose their investors or abandon their interactive service tiers in favor of their lower priced subscription or ad-supported services. Trial Ex. 32 at ¶ 34 (Harrison WDT). These are risks that record companies take very seriously. As Aaron Harrison testified, [ ] 5/16/17 Tr. 3981:14-18 (Harrison).

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SEPFF321. Both risks – that the fully interactive services will lose investors or elect to abandon their on-demand service tiers – would materially impact record company revenues. Trial Ex. 32 at ¶ 34 (Harrison WDT). And in any way impeding the ability of

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
Washington, D.C.

In the Matter of: Determination of Royalty Rates and Terms for Transmission of Sound Recordings by Satellite Radio and "Preexisting" Subscription Services (SDARS III)	Docket No. 16-CRB-0001 SR/PSSR (2018-2022)

[PROPOSED] ORDER GRANTING SOUNDEXCHANGE'S MOTION FOR LEAVE TO CORRECTED RESTRICTED AND PUBLIC VERSIONS OF PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

On July 10, 2017, SoundExchange, Inc., *et al*. (collectively, "SoundExchange") filed a motion with the Copyright Royalty Judges ("Judges") for leave to submit a corrected restricted and public version of SoundExchange's Proposed Findings of Fact and Conclusions of Law that SoundExchange filed initially on June 19, 2017. The proposed corrected findings were attached to the Motion. SoundExchange has informed the Judges that the Services have indicated, through their counsel, that they do not oppose this motion.

SoundExchange states that the proposed correction is "non-substantive" and simply adds redactions for restricted content found in a single paragraph. SoundExchange further states that the correction was indicated to counsel for Sirius XM and Music Choice via email correspondence on July 7, 2017.

The Judges find that (1) the request to correct this testimony is reasonable, and (2) no party is prejudiced by the Judges' order. Therefore, the Judges **GRANT** the Motion.

SO ORDERED.

_____
Suzanne M. Barnett
Chief Copyright Royalty Judge

Dated: _____, 2017

CERTIFICATE OF SERVICE

I, Jared O. Freedman, do hereby certify that, on July 10, 2017, copies of the foregoing are being filed via eCRB and sent via electronic mail to all parties at the email addresses listed below.

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Dated: July 10, 2017

/s/ Jared O. Freedman_____
Jared O. Freedman

Certificate of Service

I hereby certify that on Monday, July 10, 2017 I provided a true and correct copy of the SoundExchange's Unopposed Motion for Leave to File Corrected Versions of Restricted and Public Versions of Proposed Findings of Fact and Conclusions of Law (Public) to the following:

Music Choice, represented by Paul M Fakler served via Electronic Service at paul.fakler@arentfox.com

Sirius XM, represented by Bruce Rich served via Electronic Service at bruce.rich@weil.com

Johnson, George, represented by Johnson, George served via Overnight Service

Signed: /s/ Jared O. Freedman