UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress

In re **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)**

[PUBLIC]
INITIAL DETERMINATION

I. Introduction

The purpose of the Copyright Royalty Judges (Judges) in the present proceeding is to determine the royalty rates and terms applicable to Preexisting Subscription Services (PSS) and Satellite Digital Audio Radio Services (SDARS) for licenses established by the Copyright Act (Act) to utilize copyrighted sound recordings. *See* 17 U.S.C. §§ 112, 114. The Act requires the Judges to determine applicable rates and terms every five years. *See* 17 U.S.C. §§ 801(b)(1), 804(b)(3)(B). The rates and terms set in this proceeding apply to the period January 1, 2018, to December 31, 2022.

In determining the PSS rates, the Judges considered proposals from both Music Choice and SoundExchange as guideposts rather than as benchmarks and determined a rate based upon the current statutory rate as adjusted to meet statutory requirements. In determining the SDARS rates, the Judges relied most heavily on the opportunity cost approach proffered by SoundExchange, but the Judges utilized opportunity cost survey data that they found more appropriate than the data relied on by SoundExchange. Based upon the totality of the record, and in accordance with the following reasoning and analysis, the Judges determine that the applicable rates and terms for the period 2018 to 2022, inclusive, shall be:

For PSS: 7.5% of Gross Revenues, as that term is defined for PSS.

For SDARS: 15.5% of Gross Revenues, as that term is defined for SDARS.

II. Background

A. Statutory Licenses

In 1995, Congress granted to sound recording copyright owners the exclusive right "to perform the copyrighted [sound recording] publicly by means of a digital audio transmission." [1] 17 U.S.C. § 106(6). Concurrently, Congress limited that exclusive right by creating two statutory licenses that would enable certain users, including SDARS and PSS, to transmit digitally sound

[1] *See* Digital Performance Right in Sound Recording Act of 1995, Pub. L. No. 104-39, 109 Stat. 336 (1995).

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recordings without obtaining a voluntary license from each copyright owner. *See* 17 U.S.C. §§ 112(e), 114(d). The section 112 license (ephemeral license) allows an entity that transmits a sound recording digitally to make ephemeral phonorecords of the sound recording to facilitate the transmission. Section 112(e) describes conditions under which an entity may license the ephemeral sound recording.[2] Section 114 describes limits that apply to the digital transmission license.[3]

B. The Standards for Determining Royalty Rates

Section 801(b)(1) of the Act provides that the Judges shall "make determinations and adjustments of reasonable terms and rates of royalty payments" for the statutory licenses set forth in, *inter alia,* § 114(f)(1) ("digital performance license").[4] The digital performance license requires that the Judges set rates and terms that are "reasonable." *Id.* In addition, section 801(b)(1) provides that these "reasonable" rates shall be calculated to achieve four specific objectives:

> (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.
>
> (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).

In *SDARS 1,* the Judges detailed the historical treatment of these section 801(b)(1) standards. *See* Determination of Rates and Terms … 73 Fed. Reg. 4080, 4082-84 (Jan. 24, 2008) (*SDARS I*). There, the Judges noted that the section 801(b)(1) factors originated in the protracted legislative process that ultimately produced the Copyright Act of 1976. The *SDARS I* Judges examined the legislative history of the 1976 Act and noted that the motivation for adopting the four itemized § 801(b)(1) factors arose from an exchange between two law professors, Professor Ernest Gellhorn, on behalf of certain copyright users, and Professor Louis H. Pollack, on behalf of certain copyright owners. The issue between the professors was the constitutionality of the Copyright Royalty Tribunal (CRT), a predecessor of the Copyright Royalty Board. As recounted in *SDARS I*: "Professor Gellhorn had recommended that, in order to bolster the constitutionality

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[2] Section 112 provides that a sound recording transmitter may make no more than one ephemeral phonorecord, "unless the terms and conditions of the statutory license allow for more." 17 U.S.C. § 112(e)(1).

[3] Specifically, section 114 excludes from the statutory license transmissions by interactive services. *See* 17 U.S.C. § 114(d)(2)(A)(i).

[4] Sirius XM and SoundExchange agree in substance that the Judges should conform the SDARS regulations regarding ephemeral licenses to the language adopted by the Judges in *Web IV*. *See* SEPFF ¶ 2371; SXMPFF ¶ 492. The Judges approve this agreement and adopt it in the regulations for the forthcoming rate period. *See infra,* section III.

of the Tribunal, the Congress should, *inter alia*, adopt statutory standards beyond the vague criterion of 'reasonableness.'" *SDARS I*, 73 Fed. Reg. at 4082 (citing *Hearings on H.R. 2223 before the Subcomm. on Courts, Civil Liberties, and the Administration of Justice of the House Comm. on the Judiciary*, 94th Cong., 1922 (1975).[5] After consideration of alternative potential statutory language, Congress adopted the four-part itemized factors included in § 801(b)(1) to supplement the "reasonable" rate requirement. *Id.*

There is additional legislative history regarding the itemized four factors in § 801(b)(1) that aids in understanding how those factors should be applied and informs economic analysis under these statutory provisions. This legislative history is highlighted by dueling positions taken in Congressional testimony in 1967 by the licensors, through the National Music Publishers Association (NMPA) and its economic witness, Robert R. Nathan, and by the licensees, the Recording Industry Association of America (RIAA), through their counsel, Thurman Arnold, Esq., a well-known advocate of strong antitrust enforcement. *See* Hearing on S. 597, Subcomm. on Patents, Trademarks and Copyrights of the S. Committee on the Judiciary, (Mar. 20-21, 1967) (Senate Hearing).

Mr. Nathan criticized any proposed legislation that would subject the songwriting industry to a statutory mechanical licensing scheme. *Id.* at 382. He did not agree that licenses in the music industry should be treated differently than how "we generally function under competitive marketplace bargaining arrangements whereby most entities in our economy bargain for that which goes into the creation of goods and services and also bargain the price for which those goods and services are sold." *Id.* He further noted that the statutory mechanical royalty rate was in part a reaction to an early 20th century concern regarding a Supreme Court decision allowing a player-piano manufacturer to play songs through the use of perforated paper rolls fed into the new devices (player pianos), without a license and without a duty to pay royalties to the songwriters and publishers. *White-Smith Music Publishing Company v. Apollo Company*, 209 U.S. 1 (1908). As Mr. Nathan explained: "[T]he Aeolian Co.[,] had gained control of some 80 percent of the musical compositions and Congress … fear[ed] the threat of monopoly in the mechanical reproduction of music." Senate Hearing at 382-83. The Copyright Act of 1909 superseded the effect of *White-Smith* by creating a statutory license and imposing a fixed statutory rate for mechanical reproduction of musical compositions.

In his 1967 testimony, Mr. Nathan advocated that Congress eliminate the compulsory license and the statutory rate, and he specifically urged Congress to resist replacing the fixed statutory fee with a regulatory standard to be implemented by a quasi-adjudicatory body. As to the latter point he explained to Congress: "[O]ne might ask … whether the music publishing industry has any characteristics of a public utility? I submit … that there is nothing in the music publishing industry which gives [it] the characteristics or the elements of a public utility …." *Id.* at 383. Mr. Nathan noted what he felt was a key distinction: Unlike traditional public utilities such as "railroad systems" or "streetcar lines," the songwriting and publishing industry is "a creative and nonstandardized area," and "[m]onopoly and public utility aspects are just not prevalent in this industry." *Id.*

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[5] The *SDARS I* Judges also noted that, in like fashion, the Register of Copyrights concluded that it would be "wise to establish, in the statute, certain criteria beyond 'reasonableness' that each Panel is to apply to its decision-making." *Id.* (citing *Second Supplementary Report of the Register of Copyrights on the General Revision of the U.S. Copyright Law*, Chapter XV, at 31 (1975)).

The licensees' opposing position, expressed by Mr. Arnold on behalf of the RIAA, contained the seeds of the standard ultimately adopted in section 801(b)(1). As Mr. Arnold testified, the statute should include, *inter alia*, "accepted standards of statutory ratemaking," including a rate "that insures the party against whom it is imposed a reasonable return on … investment" and "that divides the rewards for the respective creative contributions of the record producers [the licensees] and the copyright owners … equitably between them." *Id.* at 469.

Mr. Nathan criticized this approach on two fronts. First, he argued that the "personal service" nature of the songwriting and publishing industry precluded application of a "reasonable rate of return" requirement for establishing the compulsory royalty rate. Second, with regard to the division of the "rewards" proposal, Mr. Nathan stated that "I have never in all my experience encountered this novel concept of dividing rewards for creative contributions as a meaningful and relevant standard of ratemaking." *Id.* at 1093-94.[6]

Resolution of this 1967 dispute languished until 1976, when Professor Gellhorn successfully convinced Congress to adopt an itemized standard in the final statute. See F. Greenman & A. Deutsch, *The Copyright Royalty Tribunal and the Statutory Mechanical Royalty: History and Prospect*, 1 Cardozo Arts & Ent. L.J. 1, 53, 59 (1982). In so doing, Congress did not explicitly address the economic dispute between Mr. Arnold and Mr. Nathan regarding the relative merits of a market-based rate *versus* a rate established in some other manner.

Under the itemized section 801(b)(1) standard, the Judges have the discretion to choose a market rate, a market-based rate, or a rate unrelated to market evidence. *Music Choice v. Copyright Royalty Bd.*, 774 F.3d 1000, 1010 (D.C. Cir. 2014) (and citations therein). Any such rate would be legally appropriate provided it was not "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law, or if the facts relied upon by the [Judges] have no basis in the record." *Id.* at 1007. Indeed, in *Music Choice*, the D.C. Circuit reaffirmed that "the Copyright Act gives the Judges of the Copyright Royalty Board *broad discretion* to set rates and terms for compulsory licenses of the digital performance of sound recordings." *Id.* at 1016 (emphasis added).

C. Prior Proceedings

This proceeding is not the first in which the Judges or their predecessors have applied the section 801(b) factors to determine royalty rates.[7] In *SDARS I*, the Judges detailed the historical treatment of these factors by their predecessors, the Copyright Royalty Tribunal and the Librarian in his administration of the Copyright Arbitration Royalty Panel (CARP) system. *See* Determination of Rates and Terms …, 73 Fed. Reg. 4080, 4082-84 (Jan. 24, 2008) (*SDARS I*). In *SDARS I*, the Judges chose to "begin with a consideration and analysis of the [market]

[6] As the present record (and the record in *Phonorecords III*) demonstrates, subsequent to Mr. Nathan's 1967 testimony, the economic concept of "dividing rewards for creative contributions as a meaningful and relevant standard of ratemaking" has blossomed, with the application of Opportunity Cost/Efficient Component Pricing approaches, Nash Bargaining Solutions, and Shapley Value analyses.

[7] The Copyright Royalty Tribunal (CRT) applied the 801(b) factors in a section 116 (Jukebox) rate adjustment and a section 115 (Phonorecords) rate adjustment. The Librarian of Congress, as administrator of a Copyright Arbitration Royalty Panel (CARP) issued a determination for the section 114 satellite radio license (SDARS I). In 2017, the Judges presided over a contested Phonorecords rate hearing, the determination of which will issue after the present determination and will involve application of the 801(b) policy factors to the Phonorecords license.

benchmarks and testimony submitted by the parties, and then measure the rate or rates yielded by that process against the [section 801(b)] statutory objectives" to reach a decision. *Id.* at 4084.

The precedent guiding the present panel of Judges signals an analysis in which the Judges may weigh the evidence presented to support the rate proposals, including marketplace benchmarks, apply the section 801(b) policy factors to assure the final rates are consonant with those factors and, if the evidence permits, also establish a zone of reasonableness within which the rate shall be set.[8]

D. The Present Proceeding

The Judges commenced the present proceeding with publication of notice seeking petitions to participate. *See* 81 Fed. Reg. 255 (Jan. 5, 2016). Seven entities filed petitions to participate.[9] The Judges dismissed the petitions of Music Reports, Inc. and David Powell. Muzak LLC withdrew its petition to participate. The parties participating in the hearing were George Johnson d/b/a GEO Music Group (GEO), Music Choice, Sirius XM Radio, Inc. (Sirius XM), and SoundExchange, Inc. (SoundExchange).

The Judges presided over an evidentiary hearing that commenced on April 12, 2017, and ended on May 18, 2017. Parties to the hearing presented oral closing argument on July 18. The parties called 35 witnesses,[10] including 15 experts.[11] Of the 856 exhibits marked for identification for the hearing (not including illustrative presentations by various witnesses) the Judges admitted 511 (including those admitted for limited purpose) into evidence during the hearing[12]. On June 14, the parties filed their respective Proposed Findings of Fact (PFF) and Proposed Conclusions of Law (PCL). Parties filed Reply PFF and PCL on June 29.

III. The Section 112 Ephemeral License

The ephemeral license rates that the Judges are to determine in this proceeding shall "most clearly represent the fees that would have been negotiated in the marketplace between a willing buyer and a willing seller." 17 U.S.C. § 112(e)(4). All parties to the present proceeding agree

[8] The U.S. Court of Appeals for the D.C. Circuit has also concluded that the Judges may apply the "[section 801(b)] … objectives [to] determine a range of reasonable royalty rates that would serve all these objectives adequately but to differing degrees, [and] the [Judges are] free to choose among those rates, and courts are without authority to set aside the particular rate chosen … if it lies within a "zone of reasonableness." *See Recording Indus. Ass'n of America v. Copyright Royalty Tribunal*, 662 F.2d 1, 9 (D.C. Cir. 1981) (footnotes omitted). Thus, the Judges may establish such a zone of reasonableness, but are not required to do so.

[9] Original petitioners included George Johnson d/b/a GEO Music Group; Music Choice; Music Reports, Inc.; Muzak LLC; Sirius XM Radio, Inc.; SoundExchange, Inc. (SoundExchange); and David Powell. SoundExchange appeared on behalf of itself and its members, the American Association of Independent Music; the American Federation of Musicians of the United States and Canada; the Recording Industry Association of America; the Screen Actors Guild and the American Federation of Television and Radio Artists; Sony Music Entertainment; Universal Music Group; and Warner Music Group.

[10] In addition to live witnesses, participants also designated prior testimony of witnesses in prior proceedings. *See* 37 C.F.R. § 351.4(b)(2).

[11] GEO Music Group (GEO) presented the testimony of George Johnson. Mr. Johnson asked to be qualified as an expert in the music sound recording business. There being no objection, the Judges acknowledged his experience as a songwriter, singer, and independent record producer for approximately 30 years and qualified him for purposes of the present proceeding as an expert in the music business.

[12] Immediately prior to and during the hearing in this proceeding, participants filed motions seeking to limit or exclude opposing parties' evidence. The Judges' conclusions on those motions are issued by separate order or orders. References to evidence in this Determination are to evidence admitted to the record.

that the value of the § 112 ephemeral license is linked to the value of the § 114 performance license.[13] Music Choice asks that the Judges include the section 112 rate in the overall rate. Sirius and SoundExchange ask the Judges to determine that the value of the licenses be allocated 5% to the ephemeral license and 95% to the performance license, consistent with the current regulations applicable to SDARS, webcasters, and new subscription (CABSAT) services. *See, e.g., Sirius* XM ... Proposed Findings … and Conclusions at 234 (SXM PFFCL); Proposed Findings … and Conclusions of SoundExchange … at 938 (SX PFFCL); *see* 37 C.F.R. §§ 382.3(c), 382.12(b) (2016).

The parties' positions and the Judges decisions concerning the ephemeral license regulations are detailed in section XI.C of this Determination; the regulatory language adopted by the Judges is attached as Appendix A.

IV. PSS Performance License

A. Background

The Act defines a PSS 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). When Congress enacted that definition, there were three PSS entities in existence. *See* H.R. Rep. No. 105-796, at 81, 85, 89 (Oct. 8, 1998). Only two remain, and Music Choice was the only PSS that participated in this proceeding.[14] SoundExchange represented Copyright Owners in the PSS portion of the proceeding. George Johnson, an individual licensor, also proposed a PSS rate.

Music Choice operates a residential audio service that consists of 50 channels of audio programming delivered to subscribers' televisions. Written Direct Testimony of David J. Del Beccaro, Trial Ex. 55, at 4 (Del Beccaro WDT). Music Choice's services are delivered to customers by cable operators and other multichannel video programming distributors (MVPDs) as part of customers' digital basic cable service. *Id*.

In addition to its cable TV-based service, Music Choice makes its 50 cable channels, plus an additional 25 channels of audio programming, available to authenticated television subscribers through its website and a mobile app. *Id*. Music Choice describes these Internet transmissions as "an ancillary part of its residential music business …." Written Rebuttal Testimony of David J. Del Beccaro, Trial Ex. 57, at 25 (Del Beccaro WRT).

1. PSS Rates from *SDARS II*

The parties in the prior proceeding (*SDARS II*) reached agreement on the rates and terms of the Section 112 license prior to the hearing. *See* 78 Fed. Reg. at 23054-56.[15] Therefore, the

[13] *See* Music Choice Written Direct Statement at 6; Introductory Memorandum to the Written Statement of Sirius Radio Inc. at 1; Proposed Rates and terms of SoundExchange, Inc. and Copyright Owner and Artist Participants at 5.

[14] The other remaining PSS entity, Muzak LLC, filed a Petition to Participate, but withdrew it before the deadline for filing Written Direct Statements.

[15] In the prior proceeding, SoundExchange and Music Choice submitted a joint stipulation with respect to the Section 112(e) ephemeral license, and the Judges adopted the proposal based on the stipulation. 78 Fed. Reg. at 23055-56. The provision addressing the Section 112(e) license appears in current CRB Rule 382.3(c). It states that "[t]he royalty payable under 17 U.S.C. 112(e) for the making of phonorecords used by the Licensee solely to facilitate

Judges' focus in that proceeding was limited to determining the appropriate rates and terms for the Section 114 license. The Judges began with a consideration and analysis of the market benchmarks and testimony submitted by the parties and then measured the rate or rates yielded by that process against the Section 801(b) statutory objectives to reach a decision. 78 Fed. Reg. at 23055. The Judges repeat that approach in the current proceeding.

In *SDARS II*, Music Choice advocated adoption of the annual royalties it pays to performing rights societies (PROs) (*i.e.*, ASCAP, BMI, and SESAC) for the right to perform musical works to subscribers of its residential audio service as a precedential benchmark. Indeed, Music Choice asserted that the Judges were *required* to rely on that musical works rate. The Judges rejected that contention but analyzed whether the rates that Music Choice paid the PROs were a useful benchmark. 78 Fed. Reg. at 23056. Music Choice contended that two pieces of evidence corroborated use of the musical works rates as a benchmark: (1) decisions from Canada and the United Kingdom concluding that royalty rates for sound recordings and musical compositions have equivalent value[16] and (2) results of an economic model called the Asymmetric Nash Bargaining Framework (Nash Framework)[17] offered by Music Choice's expert, Professor Gregory Crawford.[18] Based on his analysis, Professor Crawford concluded the PRO rates were an appropriate benchmark for the sound recording license at issue.

The Judges disagreed and found that the musical works benchmark lacked comparability to the hypothetical PSS market. *Id*. at 23058. The Judges found that the musical works market involved different sellers (PROs versus record companies) selling different rights (musical works performance rights versus sound recording performance rights) than those at issue in this proceeding.[19]

With regard to the Nash Framework, the Judges noted:

> The Nash Framework is a theoretical concept whose goal is to evaluate how the surplus from a hypothetical transaction might be divided between negotiating parties. Even assuming that the Nash Framework has predictive value in some real-world contexts, Music Choice provided no data to support the theoretical approximations in the market for any intellectual property rights, much less those that the Judges are charged with evaluating. Therefore, the Judges find that the Nash Framework is not useful corroborating evidence.

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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."

[16] The Judges dismissed Music Choice's reliance on foreign jurisdictions because of a lack of proof of comparability between foreign markets and U.S. markets. Further, Music Choice failed to convince the Judges that the governing laws were sufficiently similar to U.S. law to offer even analogous reasoning. *See* 78 Fed. Reg. at 23058.

[17] The Nash Framework, as presented in the instant proceeding, is discussed in greater detail *infra*, section IV.C.1.a.

[18] Professor Crawford's Nash Framework from *SDARS II* (as well as the Judges' reasons for rejecting it) is described at length in the determination and need not be repeated here. *See SDARS II*, 78 Fed. Reg. at 23056-57, 23058. As discussed below, in the current proceeding Music Choice does not premise its Nash-based model (or any other model) on an asserted equivalency between the value of sound recordings and musical works, in light of the Judges' rejection of that argument on the record presented in *SDARS II*. Nonetheless, Professor Crawford's Nash Framework in the instant proceeding is strikingly similar to his Nash Framework in *SDARS II*.

[19] The Judges acknowledged that musical works performance rights and sound recording performance rights are likely perfect complements, but concluded that, based on the record, such complementarity had not been shown to inform the decision regarding relative value of the rights.

78 Fed. Reg. at 23058.[20]

For its part, SoundExchange offered certain marketplace agreements executed by interactive music streaming services as a benchmark. The Judges also rejected this proposed benchmark on comparability grounds. 78 Fed. Reg. at 23058.[21]

The Judges concluded that the evidence presented by Music Choice framed the lower end of a range of reasonable rates and that presented by SoundExchange framed the upper end. 78 Fed. Reg. at 23059. Having rejected the parties' respective proffered benchmarks (and proposed corroborating evidence) for any purpose other than to frame a range of potential rates, the Judges were left with a consideration of the then-prevailing royalty rate of 7.5% of gross revenues, which fell within that range. The Judges started with the then-prevailing rate and applied the Section 801(b) factors. Consideration of the section 801(b) factors persuaded the Judges that they should adopt that rate, but adjust it up to 8.5% based on Music Choice's planned expansion of its service from 46 channels to up to 300. The Judges concluded that the planned expansion would result in a substantial increase in the number of plays of recorded music without any corresponding increase in compensation. 78 Fed. Reg. at 23059-60. Nevertheless, the Judges acknowledged that the upward adjustment of the benchmark rate was based on projected usage that was likely to occur during the rate period. The Judges noted that "[s]hould Music Choice alter its anticipated usage under the statutory license in the future, such evidence can be taken into account in a future rate proceeding…." *Id*. at 23061.

2. Standard for PSS Royalty Rates

When the Judges determine a section 114 rate for PSS, they generally begin with an appropriate rate (or range of rates) and adjust it, as appropriate, in accordance with the section 801(b)(1) statutory factors. By contrast, the section 112 ephemeral license requires the Judges, among other things, to "establish rates that most clearly represent the fees that would have been negotiated between a willing buyer and a willing seller." 17 U.S.C. § 112(e)(4).[22] The ephemeral license also requires a minimum fee for each type of service offered by a transmitting organization.[23]

[20] The Judge who dissented from the majority decision offered what the majority characterized as a "more spirited rejection of the probative value of the Nash Framework as proffered in this context." The majority concurred with this assessment but concluded that "as a threshold matter, [the] Nash Framework, without real-world data to support its predictive capacity, is unworthy of further consideration. 78 Fed. Reg. at 23058, n.17.

[21] The markets that the proffered agreements covered were subscription interactive webcasting, ringtones/ringbacks, and digital downloads. The Judges concluded that these markets involve the licensing of products and rights separate and apart from the right to publicly perform sound recordings in the context of the PSS proceeding. The Judges noted that the buyers are different from the target PSS market. Thus, the key characteristic of a good benchmark—comparability—was not present. 78 Fed. Reg. at 23058. The Judges noted that the bundling of Music Choice's services with multiple channels of video and other non-music programming significantly dim the possibility of market comparators. The Judges concluded that "in the absence of some rational, reasoned adjustment to make the music agreements data more comparable to the PSS market, the Judges find its probative value in this proceeding of only marginal value." *Id*.

[22] Section 112(e)(4) also directs the Judges to base their decision on such factors as (1) whether use of the service may substitute for or promote the sale of phonorecords or otherwise interferes with or enhances the copyright owner's traditional streams of revenue and (2) the relative roles of the copyright owner and the transmitting organization 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. 17 U.S.C. § 112(e)(4).

[23] The ephemeral license for both PSS and SDARS is addressed in section XI.C.

Consistent with this process, in determining the appropriate rate for the PSS market for the upcoming rate period, the Judges must first identify a starting point for applying the Section 801(b) policy factors. A marketplace benchmark, if available, can be a useful starting point for applying the Section 801(b) factors. *See SDARS II*, 78 Fed. Reg. at 23056. A key component of a marketplace benchmark is that the market it purports to represent is comparable to the hypothetical target market in the proceeding. *See SDARS I*, 73 Fed. Reg. at 4088 ("'comparability' is a key issue in gauging the relevance of any proffered benchmarks."). In determining whether a benchmark market is comparable, the Judges consider such factors as whether it has the same buyers and sellers as the target market and whether they are negotiating for the same rights. 78 Fed. Reg. at 23058. "Although the applicable Section 114 statutory standard provides a broader scope for analyzing relevant 'benchmark' rates than the 'willing buyer/willing seller standard' …, nevertheless potential benchmarks are confined to a zone of reasonableness that excludes clearly noncomparable marketplace situations." 73 Fed. Reg. at 4088.

In the hypothetical PSS market the buyers are the PSS services, and the sellers are the copyright owners of the sound recordings that are being transmitted (which most often means record companies). The buyers and sellers are negotiating for the same bundle of rights as those granted to a PSS under Section 114(f)(1)(A) of the Copyright Act to make digital subscription transmissions of the copyrighted works.

When the parties (or the Judges) identify variances in the comparability of the hypothetical target market and the proffered benchmark market, the Judges will consider reasoned adjustments that might more closely align the two markets.[24] Even when a proffered benchmark is not comparable to the target market, however, the Judges may use the rates derived from the proffered benchmark as a reference point (or guidepost) to help frame a zone of reasonableness within which to set an appropriate rate for the upcoming rate period (as they did in *SDARS II*).[25]

B. The Parties' Rate Proposals

1. Music Choice's Proposal

Since 1998, the PSS have paid a fee based on a percentage of ***gr****oss revenues*, as that term is defined by regulation.[26] *See SDARS II*, 78 Fed. Reg. 23054, 23056; 63 Fed. Reg. 25394, 25413 (May 8, 1998). Music Choice has proposed continuing that rate structure but seeks at least a 34% reduction in the current rate of 8.5% of gross revenues, to a rate no higher than 5.6% of gross revenues. MC PFF at ¶ 30.

[24] When the Judges are faced with proposed benchmarks that are not comparable and cannot be made so with reasoned adjustments, the Judges reject the proffered benchmarks. *See, e.g.*, *SDARS II*, 78 Fed. Reg. at 23058; *SDARS I*, 73 Fed. Reg. at 4089-90.

[25] *See supra*, section IV.A.1.

[26] Music Choice also does not propose an alternative per-subscriber rate should the Judges adopt such a rate structure rather than a percent-of-revenue structure. Neither party has proposed to combine both rate structures (e.g., in a greater-of structure). Given that neither party has advocated a hybrid rate structure nor provided sufficient evidence to support such a rate structure in the current proceeding, the Judges weigh the arguments and evidence in the record to determine the applicable rate structure from the two structures that the parties proposed.

2. SoundExchange's Proposal

SoundExchange requests that the Judges change the PSS rate structure. Rather than the percentage-of-revenue formula, SoundExchange proposes that PSS pay a per-subscriber fee that would begin at $0.0190 in 2018, the first year of the new rate period, and rise to $0.0214 in 2022, the last year of the rate period. Amended Proposed Rates and Terms of SoundExchange, Inc. and Copyright Owner and Artist Participants at 7. Although SoundExchange does not offer a percent-of-revenue alternative to its proposed per-subscriber rates, it acknowledges that converting its proposed rates to a percentage-of-revenue rate would plausibly yield a rate of [[redacted]]% for 2018, the first year of the upcoming rate period. SX PFFCL at ¶ 1949; *see* Written Rebuttal Testimony of Gregory Crawford, Trial Ex. 59, at ¶ 113 (Crawford WRT).[27] The evidence in the record supports that this conversion estimate is correct; thus the lowest rate that SoundExchange proposes ([[redacted]]%) exceeds the highest rate that Music Choice proposes (5.6%) by [[redacted]]%; it exceeds the current rate by [[redacted]]%, assuming no increase in subscribers.[28]

SoundExchange also proposed a separate rate for Internet transmissions by a PSS, leading to a dispute between the parties over whether a PSS's Internet transmissions are included in the PSS license and subject to the PSS rate standard. The Judges referred the question of categorization of Music Choice's streaming service to the Register of Copyrights (Register) for a legal opinion. Analysis of the Register's opinion follows in Section IV.D.2.

3. GEO's Rate Proposal

George Johnson, d/b/a GEO Music Group (GEO) proposes that PSS pay a per-subscriber rate of $0.10 in 2018 rising to $0.20 in 2022. Johnson WDT at 14. He also proposes a percentage-of-revenue rate of 45% of gross revenues. It is unclear whether he proposes that PSS pay both components or that they pay them as a greater-of or lesser-of structure. Mr. Johnson does not proffer a benchmark or any other evidence to support his rate proposals for PSS. He merely states that "[t]hese are estimates from public data and actual royalty statements. If the Sirius XM and Music Choice would provide number of listeners per station and on a per-play basis, that would help GEO to better establish a more reasonable rate." *Id*. The Judges find that there is no evidence in the record to support the PSS rates that Mr. Johnson proposes and therefore decline to adopt them.[29]

[27] Music Choice's expert, Professor Gregory Crawford, estimates that Music Choice would pay [[redacted]]% of its unadjusted residential service revenue in sound recording performance royalties in 2018 under the CABSAT rates, the basis for SoundExchange's rate proposal, compared to the 8.5% it currently pays. Crawford WRT at ¶ 113, Table 6. This estimate appears consistent with the effective rate that Stingray, a Music Choice competitor, paid in 2015 under the CABSAT rates. SX PFFCL at ¶ 1949; Trial Ex. 1017 at SoundX 000145808.

[28] Assuming that the number of subscribers that carried Music Choice's service remained flat over the upcoming rate period, the annual 3% increases SoundExchange proposes would bring the rates to [[redacted]]% for 2019, [[redacted]]% for 2020, [[redacted]]% for 2021, and [[redacted]]% for 2022, or [[redacted]]% over the current rate. This estimate is consistent with SoundExchange's estimate that a CABSAT service pays almost [[redacted]] times as much on a per-subscriber basis as a PSS. SX PFFCL at ¶ 1940 and evidence cited therein. *See id*. at ¶¶ 1934-35 (estimating that Music Choice's PSS statutory royalty payment amounts to [[redacted]] cents per listener per year whereas for a CABSAT service, the annual per-subscriber royalty for 2017 is 22.2 cents).

[29] Mr. Johnson also proposes requiring the PSS to install a "buy button" on their services to promote sales of music downloads. 5/3/17 Tr. 2232, 2238 (Johnson). Such proposal is beyond the scope of the Section 114 and 112 licenses and therefore beyond the Judges' authority in the current proceeding.

C. Rates for Music Choice's Cable Radio Service

1. Analysis of the Parties' Proffered Benchmarks

a. Music Choice's Proffered Nash Model

Music Choice, through its expert, Professor Crawford, contends that in the absence of an appropriate marketplace benchmark, the best way to estimate the royalties that would arise in a hypothetical effectively competitive market for the PSS sound recording rights is to use an economic model. Professor Crawford chooses as that model one based upon the Nash Bargaining Solution, developed by Nobel-prize-winning economist John Nash. Crawford WDT at ¶¶ 62, 64. Professor Crawford offers a variation of the Nash Framework that the Judges rejected in *SDARS II* as a means of corroborating the proffered musical works benchmark. Crawford WDT at ¶ 65.[30]

In his Nash Framework proposal, Professor Crawford modeled a single record label as the "upstream" firm in the negotiation of sound recording performance rights to be licensed to a single PSS, the "downstream" firm in the negotiation. *Id*. at ¶ 67. The Nash Framework is based on the assumption that the record label and PSS provider each have a certain degree of market power. *Id*. at ¶ 71. Professor Crawford asserts that this assumption is applicable with respect to Music Choice given its current product offerings and established relationships with MVPDs. *Id*. at ¶ 73. According to Professor Crawford, Music Choice has negotiated long-term contracts with the MVPDs and possesses a unique bundle of technology that would be costly and time consuming for other firms to duplicate. *Id*. at ¶ 73. Professor Crawford concludes that because both PSS providers and record labels have some market power, a non-cooperative bargaining model such as the Nash Framework is an appropriate framework for analyzing market outcomes for the PSS sound recording performance rights in the absence of a compulsory license. *Id*. at ¶ 75.

In the Nash Framework three fundamental factors determine how two firms would "split a pie" in a hypothetical negotiation. These "Nash Factors" are: (1) the Joint Agreement Profits; (2) each firm's Threat Point; and (3) each firm's bargaining power. *Id*. at ¶ 81.[31] To determine the royalty that would arise in the hypothetical market for sound recording performance rights for the PSS over the 2018-2022 rate period, Professor Crawford quantified the Nash Factors based on Music Choice's costs and revenues of its residential audio service as a standalone business. *Id*. at ¶ 110.

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[30] Music Choice acknowledges that the Judges rejected its proposed musical works benchmark as a marketplace benchmark in *SDARS II*. Rather than proffer a marketplace benchmark from another market, however, Music Choice proffers Professor Crawford's Nash Framework, not to corroborate the musical works benchmark rejected in *SDARS II*, but as a stand-alone benchmark.

[31] Joint Agreement Profits are the combined profits to both the upstream and downstream firms in the market under study from reaching an agreement. For the PSS this means the revenue the PSS earns for the PSS less all non-PSS royalty costs that they incur. Crawford WDT at ¶ 81. The Threat Point for each firm is the profit it would receive when no agreement is reached. *Id*. The difference between the Joint Agreement Profits and the sum of the firms' Threat Points is called the "Incremental Profits" which are the profits the firms could earn by reaching an agreement above and beyond the profits they could earn in the absence of an agreement. *Id*. The profits each firm receives in a bargain equals its Threat Point plus its Bargaining Power times the Incremental Profits. *Id*. at ¶ 82. Dr. Crawford communicates this formula in mathematical terms as Royalty=Threat Point+Bargaining Power*Incremental Surplus. *Id*. at n.69.

i. Joint Agreement Profits

Because Music Choice keeps its books on a consolidated basis, Professor Crawford analyzed Music Choice's costs and revenues to determine how they would have been allocated if Music Choice operated its residential audio service as a standalone business. *Id*. at ¶¶ 122-149; 4/24/17 Tr. 733-38 (Crawford); 5/18/17 Tr. 4549-52 (Del Beccaro).[32] This process was conducted not in the ordinary course of business but to isolate Music Choice's residential audio business for use in the Nash Framework and in response to the Judges' observation in *SDARS II* that the residential audio service is the applicable Music Choice business line in analyzing the Section 114 license. Crawford WDT at ¶ 110. Professor Crawford also asserts that isolating the residential audio service is necessary to ensure that Music Choice does not subsidize this business line with profits from other business lines, which Professor Crawford believes would be inconsistent with economic policy and the statutory objectives of the PSS license as he understands them to be. *Id*. at ¶ 176; 4/24/17 Tr. 787 (Crawford).

Although the Judges do not believe it would be fruitful to detail the multistep process Professor Crawford conducted to disaggregate costs and revenues to derive inputs for the Nash Framework analysis, it is worth noting that many of the steps required judgment calls on Professor Crawford's part that undoubtedly affected the inputs he later plugged into the Nash Framework.[33] The Judges do not suggest that Professor Crawford's adjustments were erroneous or inappropriate under the circumstances but only mention them to highlight the level of discretion and subjectivity that Professor Crawford employed in developing the inputs that he fed into the Nash Framework. Given the extreme complexity of the process that Professor Crawford developed, it would be impracticable if not impossible for the Judges to "back out" one or more of the adjustments Professor Crawford made in developing the model if the Judges believed they were unwarranted. The discretion that Professor Crawford exhibited in disaggregating Music Choice's costs and revenues pales, however, in comparison to that he exercised in choosing other Nash Factors, such as bargaining power and Threat Point. The great degree of discretion in quantifying the inputs in the Nash Framework as proposed by Professor Crawford underscores the inherent weakness in the Crawford model. The Judges concerns about the model are more applicable in the current proceeding than they were in *SDARS II* because Music Choice seeks to elevate the model to benchmark status rather than as information to corroborate a proffered rate as was the case in *SDARS II*.

[32] Music Choice has three business lines: a residential audio service, a residential video service, and a commercial audio service. Some of Music Choice's subscription fee revenue bundles residential audio and video services. Many of Music Choice's costs are used in the production of both the residential audio and video business lines. Crawford WDT at ¶ 110. According to Professor Crawford, the residential audio service remains the most important in terms of revenues and company strategy. Professor Crawford asserts that if the residential audio service were to cease, Music Choice would cease providing any services and would close altogether. Crawford WDT at ¶ 129.

[33] For example, Dr. Crawford chose to exclude certain legal costs that Music Choice incurred or expected to incur related to the *PSS III* proceeding in 2016 and 2017 because those costs relate to litigating the 2018-2022 rate proceeding. Instead he substituted costs that Music Choice purportedly incurred during the *PSS II* rate period (2013-2017). He also chose to average certain patent litigation costs over an eight-year period that Music Choice incurred during 2016-2017 because, based on his discussions with Music Choice executives, Music Choice historically has incurred such patent costs every eight years. Crawford WDT at ¶ 148. Of course, as a practical matter, no individual company can know with any reasonable degree of certainty when, in the future, it may be sued for patent infringement or sue another that allegedly violates one of its patents.

Professor Crawford used the disaggregated costs and revenues to *begin* the Nash Framework calculations. The first step in that process is to create the first Nash Factor—Joint Agreement Profits—the joint economic profits to be shared between a record label and PSS provider in the PSS market if an agreement is reached. It is the total economic profits that the PSS provider earns before payment of a sound recording performance royalty. Crawford WDT at ¶ 92.

Based on his analysis of Music Choice's financial information as discussed above, Professor Crawford estimated the Joint Agreement Profits in the hypothetical market for PSS sound recording performance rights would range from [[redacted]] in 2018 to [[redacted]] in 2022. Crawford WDT at ¶¶ 113, 171.

ii. Threat Points

Professor Crawford then calculated each party's Threat Point, the second factor in the Nash Framework. A Threat Point is a theoretical construct representing the profit that would accrue to a record label and a PSS provider if they are unable to reach an agreement. Each firm in a hypothetical negotiation will have a Threat Point. Crawford WDT at ¶ 67. Under the model, threat points can be positive, negative, or zero. *Id*. at 26 n.71. For a record label, a negative threat point could occur where the record label could earn additional profit in a non-PSS market (*e.g.*, music downloads) if it reaches an agreement with a PSS in the PSS market. If the record label fails to reach the agreement with the PSS provider, it loses all prospective profits it would have earned in the PSS market and the profits it could have earned in the non-PSS market. *Id*. at ¶ 85.

The profit each firm earns in a bargain equals its threat point plus its bargaining power (discussed below) times incremental profits. *Id*. at ¶ 82. Incremental profits are the difference between the joint agreement profits and the sum of the firms' threat points. *Id*. at ¶ 81. Professor Crawford determined that Music Choice's threat point would be zero because, in the absence of an agreement between Music Choice and a theoretical record label, Music Choice would not be able to offer a viable residential audio service and therefore would have economic profits of zero. *Id*. at ¶ 173. Professor Crawford asserts that assigning a zero threat point to Music Choice is conservative because it is based on an assumption that Music Choice could not offer a viable service in the absence of an agreement with a *single* label.[34] If Music Choice could offer such a service in the absence of the catalog of any record label, then Music Choice's threat point would be higher than zero, which would suggest that Music Choice should pay a lower royalty rate under the model. *Id*. at 49 n.149.

Outside of the threat point discussion, however, Professor Crawford asserted that Music Choice's residential audio service remains the most important in terms of revenues and company strategy. Indeed, Professor Crawford asserted that if the residential audio service were to cease,

[34] Rather than postulate the hypothetical PSS market as a negotiation between a single PSS and a single record label Professor Crawford could have constructed the model as a negotiation between a single PSS and a group of record labels. Under this scenario, the PSS might reach agreements with some labels but not others. The failure of an agreement with certain labels (*i.e.*, smaller labels) might not preclude the PSS from offering a service whereas the failure of the PSS to reach an agreement with any of the larger labels might preclude the PSS from offering any type of service (*i.e.* PSS service or non-PSS service). Under this scenario, the assignment to the PSS of a negative threat point might be more appropriate than assigning a zero threat point because if Music Choice failed to reach an agreement with one major label then it might be precluded from offering any service.

Music Choice would cease providing any services and would close altogether. *Id*. at ¶ 129. Placed in the context of the threat point discussion, this concession strongly suggests that Music Choice deserves a negative threat point under Professor Crawford's model, the extent of which would be measured by the amount of profits Music Choice would lose if it closed its non-PSS business lines. SoundExchange's expert points out this inconsistency in Professor Crawford's presentation. 5/3/17 Tr. 2461, 2343 (Wazzan) ("Dr. Crawford concedes that Music Choice would go out of business altogether without the residential music business. So they would lose their commercial and video revenue streams. And if you look at the financials, we know that Music Choice is forecasting significant profits in its non-PSS lines of business.").

Music Choice's responses to this disconnect between Professor Crawford's threat point assessment and his statements about the primacy of Music Choice's residential audio business are unavailing. For example, Music Choice contends that the *SDARS II* decision is precedent for treatment of the threat point analysis that Professor Crawford employs. Music Choice Reply to SE PFF 2044 at 817-18. The passage from *SDARS II* that Music Choice refers to pertained to an analysis of Factor B in Section 801(b)(1), regarding the setting of a rate that provides a fair return (for the service) and a fair income (for the copyright owners) under existing market conditions. The Judges were concerned in that context that Music Choice was making claims of unprofitability of its business as a whole to support a downward adjustment in the rates under the Section 801(b) factors. The Judges pointed out that the subject of the Section 114 license was Music Choice's residential audio business rather than its entire business, which included non-PSS lines. 78 Fed. Reg. at 23059. By that point in the determination, the Judges had already discounted the use of the Crawford model and the proffered musical works benchmark the results of which the model purportedly corroborated. The Judges did not opine on how Professor Crawford should have calculated the threat point for his own model because the Judges dismissed the usefulness of the model. 78 Fed. Reg. at 23058 ("without real world data to support its predictive capacity [Professor Crawford's application of the Nash Framework] is unworthy of further consideration.").

Therefore, the Judges agree with SoundExchange's criticism that Professor Crawford incorrectly assigned a threat point of zero to Music Choice when, under Professor Crawford's own testimony, Music Choice would lose profits from non-PSS business lines if Music Choice could not reach an agreement with one or more record labels. Based on that fact alone, the results of Professor Crawford's model in the current proceeding are suspect, but the flaws in Professor Crawford's presentation do not end there.

With respect to the threat point for a hypothetical record label, Professor Crawford asserts that it would be zero in the PSS market. As for the label's threat point in the non-PSS market (*e.g.*, sales of CDs and downloads), Professor Crawford asserted that the analysis was more "nuanced." Crawford WDT at ¶¶ 94-95, 174-175. Due to an alleged promotional effect that the PSS has on the label in the non-PSS market, Professor Crawford concludes that the record label's threat point could be negative. Professor Crawford has no way of estimating the purported promotional effect of Music Choice's services in the non-PSS market so he assigns a zero threat point to the hypothetical record label. *Id*. at ¶¶ 175-176. We concur with Professor Crawford's decision not to attempt to assign any promotional value to Music Choice's service in the non-PSS market. The evidence he cites to support such an effect is either dated (*i.e.*, from a 1998 CARP decision) or anecdotal (*i.e.*, record labels provide Music Choice with "promotional copies" of new singles or albums). *Id*. at ¶¶ 97-104. The Judges do not doubt that record labels seek exposure for the artists they promote, and digital platforms like Music Choice may provide meaningful exposure to the artists that appear on its PSS service. The Judges find no evidence in the record in this proceeding that they can use to quantify what impact, if any, promotional activities on Music Choice's platform would have on artists (and the labels that sign them) in non-PSS markets.

The Judges are less sanguine, however, about Professor Crawford's assignment of a zero threat point to the first portion of a record label's threat point (*i.e.*, that dealing with the PSS market). It is not at all clear that a record label's failure to reach an agreement with Music Choice would mean a loss of all record company profits in the PSS market if that market includes all providers of residential audio services. There is evidence in the record that at least one Music Choice competitor, Stingray Music, provides a service that is comparable to the residential audio service that Music Choice provides, but pays a much higher royalty rate than Music Choice pays.[35] Although that competitor, which is a recent entrant to the U.S. market, has not sought a royalty rate closer to that which Music Choice pays, it certainly could in the future, perhaps using the lower rate paid by Music Choice as a comparable to support its own rate reduction. In other words, the lower rate that Music Choice pays as a PSS could put downward pressure on the rates that competing services pay to record labels.

By contrast, if Music Choice and the theoretical record label were unable to reach an agreement, the rate that Music Choice pays could no longer be used by providers of comparable services to justify lower royalty rates. Under that scenario, a record label could actually benefit from the loss of Music Choice to the extent that the rate it pays could be shown to be below a market rate, which would result in a positive threat point for the record label.[36] As with the asserted promotional effect, however, such an effect is impossible to estimate with any accuracy. The Judges do not conclude from this discussion that zero is the correct threat point for the hypothetical record label but rather confirm the lack of usefulness of the Crawford model because critical components of the model, at least as presented by Dr. Crawford in the current proceeding, allow a broad level of discretion and subjectivity, which undermines the credibility of the results.

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[35] Stingray Music is a Canadian digital pay television audio service owned and operated by Stingray Digital. It has about 50 music channels that are available to television service subscribers of several cable and IPTV providers in the U.S. Like Music Choice, Stingray also has a business service and streams to individuals who subscribe to television services that provide Stingray Music. Wazzan WDT at ¶ 62. The PSS and services such as Stingray, which SoundExchange refers to as CABSAT (cable/satellite) services compete for the same MVPD wholesale buyers. Stingray bought Music Choice's European affiliate, which it operates as Music Choice International. In the U.S., Music Choice and Stingray are direct competitors. *Id*. at ¶ 62(g), (h).

[36] *See* Wazzan WRT at ¶ 57 ("there is considerable reason to believe that the existence of Music Choice imposes significant opportunity costs on record companies in today's market [in that] record labels receive substantially higher revenues from interactive and non-interactive music services than from the PSS"). SoundExchange's expert, Dr. Wazzan, attempts to correct this error and others in Professor Crawford's model and derives a range of rates that are several times greater than those Professor Crawford's estimated. Wazzan WRT at ¶ 48. SX PFFCL at ¶ 2046 (comparing Crawford's range of 1.4% to 5.6% to Wazzan's "Corrected" range of 9.0% to 36%). If the Judges were to rely to some extent on the Crawford model, the evidence in the record does not support a rate outside of this wide range of 1.4% to 36% of gross revenues. After reviewing each party's evidence regarding the Crawford model, however, the Judges do not have a high level of confidence regarding where within that broad range a reasonable rate might lie. Nevertheless, the many flaws in Professor Crawford's model suggest that the lower end of the range of rates that the Crawford model yields is likely outside the zone of reasonableness.

iii. Relative Bargaining Power

Professor Crawford's assignment of the parties' respective bargaining powers (the last element of the Nash Framework) is also based on faulty reasoning. Under the Nash Framework, each firm's bargaining power is a number between 0 and 1, which measures the strength of that firm in the negotiation. Crawford WDT at ¶ 81. The sum of the two parties' bargaining powers equals 1. *Id*. Professor Crawford relates each firm's bargaining power to each party's patience in a negotiation. The party with greater patience also has greater bargaining power. Professor Crawford contends that that comparison is consistent with the nature of bargaining between Music Choice and the copyright owners. According to Professor Crawford,

> [b]oth record labels and Music Choice have a history of successful negotiations, so there is nothing *a priori* to suggest that in the hypothetical marketplace, one would be more or less patient than the other. Furthermore, estimating Bargaining Parameters of firms in marketplace settings is a challenging undertaking at the frontier of economic research…. I will therefore assume that a range of Bargaining Powers is possible. As I think it unreasonable to believe that either a record label or a PSS provider could extract *all* the profits from a bargain, I choose a range of bargaining powers for each party between 0.2 and 0.8.

Crawford WDT at ¶ 105. The Judges interpret Professor Crawford's statement regarding relative bargaining power as saying he has no way to quantify what the relative bargaining powers are between Music Choice and the record labels. Ultimately, we believe that this is an accurate statement that further undermines the usefulness of the Nash Framework in the proceeding. That being said, what evidence there is in the record regarding the relative bargaining power of Music Choice and the record labels suggests that the record labels have much greater bargaining power than Music Choice (or a similarly situated PSS in the hypothetical market).

Mr. Del Beccaro, Music Choice's President and CEO testified about a history of "inequality in bargaining power" between Music Choice and the record labels that forced Music Choice to accept rates that were higher than it would have otherwise. *See*, *e.g*., Del Beccaro WDT at 10 ("Music Choice had no choice but to accept a rate increase to 7 percent for 2002 to 2003 and 7.5 percent for 2004 through 2007"); *id*. at 11 ("[d]espite repeated efforts by Music Choice to engage in settlement negotiations, when the royalty rate came up for adjustment for the next rate period, SoundExchange did not negotiate a settlement until directed to by the Judges during the direct trial opening statements of the SDARS I proceeding in June 2007"); and *id*. at 12 ("[In *SDARS III*] Music Choice reached out to SoundExchange yet again, in January 2016, to attempt settlement solely to avoid the costs of litigation. SoundExchange once again failed to negotiate, and did not even respond to Music Choice's offer until July.").

Professor Crawford contends that "there is no direct evidence on the relative bargaining power of either a record label or Music Choice in a hypothetical market for sound recording performance rights for PSSs." Crawford WDT at ¶ 177. But he need look no further than Mr. Del Beccaro's statements about Music Choice's efforts to negotiate settlements with SoundExchange. These statements strongly suggest that Music Choice has very little if any bargaining power in its negotiations with the labels. The greater the bargaining power by the record labels, the higher the rates that Music Choice would be required to pay. Crawford WDT at 73, Ex. B.3. Therefore, we find no support in the record to suggest that Music Choice or a similarly situated PSS would enjoy anything but minimal bargaining power in negotiations with the labels, particularly any of the major labels. As a result, even under the fundamentally flawed Crawford model, nothing but the highest projected rate of 5.6% would even be considered to fall within a zone of reasonableness. Given the inherent subjectivity of the model, however, the Judges continue to believe that it provides no useful information regarding the royalty rates that a PSS should pay, other than perhaps to eliminate from a potential zone of reasonableness all rates at or below 5.6%. Therefore, we reject, for the second time in two consecutive PSS proceedings, the usefulness of Professor Crawford's presentation of the Nash Framework as a model for determining reasonable royalty rates for the PSS.

b. SoundExchange's Proffered CABSAT Rate

i. The CABSAT Benchmark

SoundExchange asserts that there is no applicable marketplace benchmark suitable for the PSS market, even with a comparability adjustment. *See* Wazzan CWDT at ¶ 12. According to SoundExchange "nobody has identified any agreements relating exclusively to a PSS, or even relating in material part to a PSS." *Id*. at ¶¶ 45, 47.[37] SoundExchange observes that even if such agreements existed, one would expect the rates under those agreements to be influenced by the statutory license. *Id.* at ¶ 44.

Rather, SoundExchange proffers as its benchmark a royalty rate developed in a settlement under section 114 of the Act and applicable to certain "new subscription services" that offer digital music transmissions to cable or satellite television subscribers.[38] SoundExchange refers to these new subscription services' rates as "CABSAT" rates. The Judges adopted the "CABSAT" rates in a separate proceeding under a statutory provision that prescribes a rate-setting standard different from the one at issue in the present proceeding. *See* Written Direct Testimony of Paul Wazzan, Trial Ex. 27, at ¶ 11 (Wazzan WDT).

SoundExchange asserts that the CABSAT rates are set in a "hybrid" market in which negotiations occur in a marketplace setting but, in the case of an impasse, either party can appeal to a judicial or regulatory body for a rate determination. SoundExchange contends this "hybrid" environment makes CABSAT rates an appropriate benchmark if the parties have similar stakes in the benchmark and target markets. *See* Crawford WDT at ¶ 50; Wazzan CWRT at ¶ 20. SoundExchange concludes that while no party has identified a suitable marketplace benchmark for the PSS that is not constrained by regulation, the statutory CABSAT rates are "a market-like rate." *See* Crawford WDT at ¶ 58.

SoundExchange argues that the two services that use the statutory PSS license (*i.e.*, Music Choice and Muzak's Dish CD service) "are in all important respects functionally equivalent to the three services "that use the statutory CABSAT license." *See* SX PFFCL at xxiv. SoundExchange asserts that both services are cable radio services that are delivered to consumers through MVPDs; both provide a similar number of channels and similar genres of music; both would

[37] SoundExchange acknowledges that the record includes evidence of two Muzak agreements that address Muzak's PSS service, but SoundExchange asserts that these agreements are concerned primarily with Muzak's business establishment service. Trial Exs. 401, 402. But, in any case, SoundExchange asserts that there are a number of reasons why these agreements would not make suitable benchmarks. *See* Wazzan CWDT at ¶ 45.

[38] *See* 37 C.F.R. Part 383. Three services currently offer residential audio services through cable and satellite television providers and pay royalties under Part 383 regulations as New Subscription Services: Stingray, Sirius XM, and Muzak's legacy DMX.

negotiate in the hypothetical market for the same rights from the same entities; and PSSs would meet every element of the regulatory definition of a CABSAT service. SoundExchange argues that PSSs and CABSAT services compete head-to-head for carriage on MVPDs. In short, according to SoundExchange, the only material difference between the two types of services is the date on which they commenced operation. *See, e.g.*, Wazzan CWDT at ¶¶ 59, 60, 66; Crawford WDT at ¶ 50; 5/3/17 Tr. at 2305-06 (Wazzan); 4/24/17 Tr. at 714 (Crawford); Written Direct Testimony of Jonathan Bender, Trial Ex. 29, at 29 (Bender WDT). For that reason and "because setting relatively lower rates for the PSS would distort the market in their favor" SoundExchange believes "the CABSAT rates present an appropriate benchmark in the absence of any clearly-appropriate unregulated marketplace benchmark." *Id*.

According to SoundExchange, Music Choice considers Stingray, one of the CABSAT services, to be its primary competitor. 5/18/17 Tr. 4641-42 (Del Beccaro). SoundExchange acknowledges that the CABSAT rates, which are statutory rates set in the context of a CRB rate proceeding, are not unregulated marketplace rates. Nevertheless, SoundExchange asserts that the CABSAT rates represent the "best available benchmark for the PSS rates." SX PFFCL at xlv. SoundExchange acknowledges that the statutory rate standard for CABSATs is a willing buyer/willing seller standard. Nonetheless, SoundExchange contends that no adjustment would be required to the CABSAT rates under the Section 801(b) factors before applying them to the PSS services. *See* Wazzan CWDT at ¶ 18. The extant CABSAT rates only apply for three of the five years of the current PSS rate period (2018-2020), therefore SoundExchange proposes that the Judges apply a 3% per year rate increase (the size of the CABSAT rate increases in 2018-2020) to the 2020 CABSAT rate to derive the rates for 2021 and 2022, the last two years of the upcoming PSS rate period. *See* Bender WDT at 29-31.

Under SoundExchange's proposal, the rate for PSSs' residential audio services would be a monthly per-subscriber rate of $0.0190 for 2018, $0.0196 for 2019, $0.0202 for 2020, $0.0208 for 2021, and $0.0214 for 2020. SX Amended Rate Proposal at 7, 10. These rates would cover the PSSs' royalty obligations under the Section 114 and 112(e) licenses. *Id*.

For PSSs' webcasting activities,[39] SoundExchange proposes that the PSS pay the same rates that apply to commercial webcasters providing a subscription service under 37 C.F.R. §380.10. Through 2020, that rate would be a per-performance rate of $0.0022, adjusted for inflation. For PSSs that are unable to measure performances, the rate would be based on the average number of recordings on the service played per hour multiplied by the Aggregate Tuning Hours. SX Amended Rate Proposal at 8.

In advocating for the CABSAT benchmark, SoundExchange also stresses the importance of changing the current rate structure from a percent-of-revenue to a per-subscriber structure, because CABSAT rates are calculated per-subscriber. SX PFFCL at ¶ 1949. SoundExchange acknowledges that one could convert the proffered CABSAT-based rates to a percentage rate. SoundExchange estimates that in 2015, Stingray paid an effective percentage royalty rate of "just under [[redacted]]" of its revenues. SX PFFCL at ¶ 1949. This converted CABSAT rate compares to Professor Crawford's estimate that Music Choice would pay between [[redacted]] of its

[39] This proposed rate would apply to "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)." SX Amended Rate Proposal at 8.

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unadjusted residential audio service revenue under SoundExchange's rate proposal. *See* Crawford WRT at ¶ 113. Given this perceived equivalence, SoundExchange sees no reason to adopt a percent-of-revenue rate structure for PSS in the current proceeding. *Id*.

SoundExchange contends that a per-subscriber rate structure is preferable because Music Choice is paid under such a structure by its MVPD customers. *Id*. at ¶ 1950. SoundExchange also believes that a per-subscriber rate is easier to apply and more transparent than a percentage-of-revenue rate. *See* Orszag AWDT at ¶ 27; Crawford WDT at ¶¶ 147-148; Bender WRT at 13.[40] Of particular concern to SoundExchange is the perception that a revenue-based structure gives Music Choice the flexibility to reduce the amount of royalties it pays by charging its affiliated owners discounted prices. According to SoundExchange, Music Choice is partially owned by cable companies, including Comcast, Time Warner Cable, and Cox, and charges lower prices to its MVPD owners than it charges to other MVPDs. *See* Wazzan CWDT at ¶ 90. SoundExchange argues that "the Judges should be suspicious of commercial arrangements between Music Choice and its MVPD partners." *Id*. at ¶ 1979.

SoundExchange disputes Music Choice's attestations that its MVPD partner affiliate fees are a function of the relative size of affiliated MVPDs *vis-à-vis* non-affiliates. *See* Del Beccaro WDT at 22-23; *but see* Wazzan WDT at ¶ 91. SoundExchange contends that evidence in the record shows that all affiliates received discounted rates from Music Choice, regardless of the number of subscribers they had at the time. SX PFFCL at ¶ 1990; Trial Ex. 410, Music Choice Partner Affiliation Agreement, Sch. B at MC0012247-48; 5/3/17 Tr. 2333 (Wazzan). SoundExchange contends that this purported affiliate discount, which remains in effect, represents a [[redacted]]% discount to fees that non-affiliated MVPDs are required to pay. 5/3/17 Tr. 2333-37 (Wazzan). SoundExchange represents that Music Choice's non-partners with the largest number of subscribers are expected to pay $[[redacted]] or $[[redacted]] per subscriber per month in 2018, while the partners are expected to pay $[[redacted]] per subscriber per month, about one third as much. *See* Wazzan CWRT, App. C. at 43-44.

ii. Music Choice's Opposition to the CABSAT Benchmark and Per-Subscriber Rate Structure

Music Choice opposes SoundExchange's proffered CABSAT benchmark and proposed per-subscriber rate structure. As a preliminary matter, Music Choice contends that SoundExchange's identification of the necessary components of a comparable market for benchmarking purposes omits two key requirements, namely that the benchmark represent a workably competitive market and that the buyers and sellers in both the target market and the benchmark market have similar stakes. *See* Crawford WDT at ¶ 50; 5/24/17 Tr. at 695-96 (Crawford). Music Choice contends that the proffered CABSAT benchmark fails on both accounts because the CABSAT rates and terms were set by a settlement between SoundExchange and Sirius XM. Crawford WDT at ¶¶ 55-56. According to Music Choice, the settlement did not reflect any sort of competitive marketplace. *Id*.

Music Choice asserts that Sirius XM is not an active participant in the CABSAT market, providing its CABSAT service to only one affiliate (DISH Network). Music Choice contends that

[40] SoundExchange acknowledges that although allocation disputes can arise under a percent-of-revenue structure, "such disputes have not materialized between SoundExchange and Music Choice in recent memory." SXPFFCL at ¶ 1952.

Sirius XM's CABSAT service is merely a promotional vehicle to drive subscriptions to its primary business, the satellite radio service. *See* Crawford WRT at ¶ 43. In support of this argument, Music Choice notes that Sirius XM's CABSAT service generates only [[redacted]]% of Sirius XM's revenues. Given that the CABSAT service generates such a miniscule percentage of Sirius XM's revenues, Music Choice argues that Sirius XM had no real incentive to vigorously negotiate the CABSAT settlement let alone incur the costs of a rate proceeding.[41] *Id*. at ¶¶ 55-56. By contrast, Music Choice has a far different stake because the PSS service is its primary business. Crawford WDT at ¶ 129 (Music Choice's residential audio service remains its most important business in terms of revenues and company strategy).

In Music Choice's estimation, the proffered CABSAT benchmark lacks a key indicator of comparability—similar stakes—which Music Choice believes must be present when using a benchmark from a hybrid market (*i.e.*, a market in which negotiations occur in a marketplace setting but, in the case of an impasse, either party can appeal to a judicial or regulatory body for a rate determination). *See* Crawford WRT at ¶¶ 55-56. Music Choice also argues that the "sellers" in the proffered CABSAT market and the hypothetical PSS market are not comparable because in the CABSAT market SoundExchange represents the entire record industry as opposed to individual record companies which purportedly would reflect the sellers in the hypothetical PSS market. *Id*.

Music Choice also believes that the proffered CABSAT benchmark is flawed because the underlying CABSAT market is neither competitive nor stable. *See* Del Beccaro WRT at 5-6. According to Music Choice, "[t]here has never been a CABSAT licensee that has proven able to operate a long-term profitable business from its CABSAT operations, nor have the majority of participants in the CABSAT market actively or successfully sought new affiliates or competed in the marketplace." *Id.* Music Choice asserts that Stingray is the "only active CABSAT." *Id.*[42] According to Music Choice, after six years in the CABSAT market Stingray has captured only 6% of the MVPD market and, until recently, all of its affiliates were small cable operators that pay high rates, which have sustained Stingray. *See* Del Beccaro WRT at 10. Music Choice projects that if it left the market, Stingray could not replace it because Stingray would have to reach agreements with larger MVPDs at lower rates while still paying the high per-subscriber CABSAT rates. *Id*. Over time under this market dynamic Music Choice contends Stingray would be forced to exit the CABSAT market. *Id*.

Music Choice also faults SoundExchange for glossing over the legislative history of the PSS license and the Section 801(b) policy standard, which, Music Choice contends, reflects Congressional intent to "protect the unique business expectancies of the PSS, even against later market entrants, which is inapplicable to other statutory licensees and must inform any interpretation or application of the 801(b)(1) policy standard to the PSS." MC Reply to SX

[41] Music Choice argues that the "bargaining and market dynamics that led to the settlement from which the current CABSAT rates and terms are derived also make clear that those rates are not market rates, or even market-like…" MC Reply to SoundExchange's PFFCL at 68. According to Music Choice, Sirius XM had no rational business incentive to litigate the last CABSAT proceeding, so it had little choice but to settle. *Id*. at 69-70 (and evidence cited therein).

[42] According to Music Choice, the only companies ever to enter the CABSAT market are MTV, DMX, Sirius XM, and Stingray. Music Choice represents that MTV and DMX have since exited the CABSAT market. According to Music Choice, Sirius XM has only one affiliate, which it purportedly uses as a promotion tool, and is not competing for new business. MC Reply to SX PFFCL at 71-72 (and evidence cited therein).

PFFCL at 66. Music Choice notes that "Congress 'grandfathered' the three PSS, Music Choice, DMX and Muzak, which were already in operation at the time Congress passed the Digital Millennium Copyright Act (DMCA)[43] allowing the PSS to continue operating under the 801(b)(1) policy-based rate standard rather than be subjected to the new [willing buyer/willing seller] marketplace standard." *Id*. at 65. Thus, Music Choice concludes, "the mere fact that non-comparable services pay different rates provides no useful data for setting the PSS rates." *Id*. at 66.

Music Choice agrees with SoundExchange (and Dr. Wazzan) that there are no types of licensed music services comparable to the PSS. *Id*. at 67. Music Choice disagrees, however, that the current PSS rate is below market. In fact, it contends that the current PSS rate is an above-market rate, given that it is the result of settlements that Music Choice had little choice but to accept to avoid litigation costs. *Id.* (MC Reply to SX PFFCL ¶ 1789).

Music Choice contends that, despite SoundExchange's claims to the contrary, the reason Music Choice has not sought direct licenses is not because it would not get a better rate than the statutory rate but because the cost of direct license negotiations would be too high. *Id*. Music Choice also notes that since the current statutory rate does not exclude revenues from direct licenses for PSS, Music Choice would still have to pay a share of revenues attributed to the sound recordings from the direct licenses in addition to the royalties required by those direct licenses. *Id*. at 67-68. According to Music Choice, direct licensing would only make sense if it could directly license 100% of its music. *Id*. at 68 (Reply to SX PFFCL ¶ 1789).

Music Choice acknowledges that PSS providers and CABSAT services both sell cable radio to MVPDs but contends that material differences in quality, programming, on-screen displays and other features set the PSS (or at least Music Choice's) service apart from that of the CABSATs. *Id*. at 77. Music Choice contends that its screen displays provide significantly more promotional impact than those of any CABSAT service. *Id*. at 78-79.[44]

Music Choice also opposes the per-subscriber rate structure that SoundExchange proposes. Music Choice contends that the proposal is based on the false premise that Music Choice provides unfairly advantageous discounts to cable providers with which Music Choice is affiliated. MC PFF at ¶ 279; Wazzan WDT at 37-38; 5/3/17 Tr. 2330 (Wazzan). Music Choice represents that a supermajority interest in Music Choice is owned by non-cable companies, including some affiliated with record companies, which would be harmed if Music Choice gave below-market rates to its cable affiliates. Therefore, according to Music Choice, doing so would make no economic sense. MC PFF at ¶¶ 283, 285-288; Del Beccaro WRT at 16, 19-20.

Music Choice asserts that any preferential pricing it offers is the result of the size of the cable company, although factors such as long-term commitment to the Music Choice service may also play a role. Del Beccaro WRT at 16-17. Indeed, Music Choice represents that at times its cable affiliates have made concessions on price just to help Music Choice survive. MC PFF at ¶ 299; 5/18/17 Tr. 4593-94 (Del Beccaro); 4/24/17 Tr. 804-05 (Crawford).

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[43] Pub. L. No. 105-304, 112 Stat. 2860 (Oct. 28, 1998).

[44] Music Choice cited the fact that it bundles its residential PSS with its video offerings as "critical and relevant, because those bundled offerings provide a value proposition that is appealing to MVPD providers and allows [Music Choice] to compete effectively against the Stingray and Sirius XM's CABSAT services." MC Reply to SXPFFCL at 85.

iii. Judges' Analysis of SoundExchange's Proffered CABSAT Benchmark and Proposed Per-Subscriber Rate Structure

In determining whether a proffered marketplace benchmark is comparable to the hypothetical target market the Judges have looked at the comparability of the buyers, sellers, and rights over which the parties negotiated.[45] When the two markets were comparable (*i.e.*, the buyers, sellers, and rights are the same), the Judges have found that the rate that the buyers and sellers have negotiated in the market can provide useful guidance in determining the rate for the target market.[46] In the present proceeding, SoundExchange concedes that "[t]he CABSAT benchmark is not a marketplace benchmark. It is instead a regulated rate." SX PFFCL at ¶ 1847 (and evidence cited therein). The prevailing CABSAT rates were agreed to by SoundExchange and Sirius XM, the only remaining participants, in a CRB rate-setting proceeding. *See, e.g.*, Crawford WRT at ¶ 33.[47]

As a threshold matter, the Judges note that in setting a statutory rate for PSS they are not required to approximate a market rate.[48] Rather, the Judges' mandate is to set a reasonable rate consistent with the Section 801(b) factors.[49] In enacting the DMCA, Congress carved-out the PSS from application of the willing buyer/willing seller standard intended to approximate a market rate.[50] The intent of the carve-out was to acknowledge the pioneering status of the PSS, which invested in a new type of digital audio service (*i.e.*, transmission of noninteractive audio to the television) in reliance on the existing, 801(b) rate standard and protect their prior investments.[51] The PSS took the risks and received the benefits, one of which was a statutory exception from the rate-setting provisions in the DMCA that were designed to "move the industry to market rates."[52] SoundExchange now argues, however, that the Judges should adopt the proffered CABSAT rate benchmark as a market-like rate. The Judges decline.

Notwithstanding the similarities in PSS and CABSAT service offerings that SoundExchange notes, the Judges do not believe that the proffered CABSAT rate benchmark is a useful starting point from which to apply the Section 801(b) factors.

First, it is not at all clear to the Judges that the proffered CABSAT benchmark market and the hypothetical PSS market offer the same rights. As discussed in reference to the Register's Memorandum Opinion regarding the scope of the PSS market (discussed below), the rights that the PSS can exercise while maintaining the grandfathered rate-setting methodology are limited to

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[45] *See, e.g., SDARS I*, 73 Fed. Reg. 4080, 4088 (Jan. 24, 2008).

[46] *See id*. ("'comparability' is a key issue in gauging the relevance of any proffered benchmarks…potential benchmarks are confined to a zone of reasonableness that excludes clearly noncomparable marketplace situations").

[47] The rates that the participants agreed to and the Judges adopted based on that agreement were monthly per subscriber payments of: 2016: $0.0179; 2017: $0.0185; 2018: $0.0190; 2019: $0.0196; and 2020: $0.0202. 80 Fed. Reg. at 36928 (37 C.F.R. § 383.3(a)(1)).

[48] *Music Choice v. CRB*, 774 F.3d. 1000, 1012 ("nothing in the statute requires the Judges to rely on market rates or agreements when setting Section 114 rates").

[49] 78 Fed. Reg. at 23055; *Music Choice v. CRB*, 774 F.3d at 1013 ("The Copyright Act does not 'clearly require[] the use of 'market rates'. [I]nstead, 'reasonable rates' are those that are calculated with reference to the four statutory criteria.").

[50] *SoundExchange v. Muzak*, 854 F.3d 713, 714-15 (D.C. Cir. 2017).

[51] *See Id.* at 719.

[52] *Id*.

PSS entities' existing service offerings and expanded service offerings, as the Register defines those terms. Services that a PSS entity provides outside the scope of the grandfathered categories constitute different service offerings, *i.e.*, rights outside those offered in the hypothetical PSS market. Although the types of activities that PSS and CABSAT entities perform may overlap in certain respects, for purposes of determining comparability of the hypothetical market to the target market, the relevant service bundle is limited to those activities that the hypothetical PSS entity may provide consistent with the grandfathered rate methodology.

PSS entities, such as Music Choice, and CABSAT entities may (and do, subject to an appropriate royalty rate) provide services outside the scope of the PSS license (*e.g.*, Internet-based and mobile application-based services that are consumed outside the home).[53] These different services, however, are not included within the bundle of rights that PSS entities would negotiate for in the hypothetical market. Although it is theoretically possible to adjust the proffered CABSAT benchmark to accommodate for the difference in the bundle of rights that the CABSAT and PSS services negotiate for, SoundExchange acknowledged no such difference and, consequently, offered no adjustment in the current proceeding to account for the difference. The Judges can find no persuasive evidence in the record that would allow the Judges to develop such an adjustment *sua sponte*.[54]

SoundExchange attempts to conflate what the PSS services and CABSAT services do (as represented by SoundExchange) with what they have the right to do either in the hypothetical PSS market or in the CABSAT market. SX PFFCL at ¶ 1794 ("the same rights are conveyed, because

[53] Dr. Wazzan references some of the differences he perceives between the services that PSS and CABSAT entities provide. Wazzan WDT at ¶¶ 67-72. For example, he notes that Music Choice provides "Internet simulcasts of its channels to subscribers of the MVPDs that distribute Music Choice" but takes no position on whether such streaming is part of its PSS. *Id*. at ¶¶ 67-68. He continues that "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." *Id*. at ¶ 70. According to Dr. Wazzan, "Internet streaming is something else, because streams are typically transmitted to devices other than televisions, over the public Internet." *Id*. Dr. Wazzan notes that Sirius XM and Stingray both provide Internet streaming services but do so under a different rate structure than that applicable to the CABSAT service. *Id*. at ¶ 72. In finding that the rights conveyed to the CABSAT services are not comparable, for benchmarking purposes, to those for which a theoretical PSS would negotiate, the Judges do not take a position on whether the rights conveyed to the theoretical PSS entities are broader or narrower than those conveyed to the CABSAT services. They could be broader in some senses and narrower in others, but the evidence in the record shows that there are meaningful differences. All differences could affect the value of the underlying license and therefore are relevant in assessing the comparability of the proffered benchmark market and the target market. Ultimately, a detailed analysis might support a finding that, on balance, the differences are a wash, which would support a finding that, notwithstanding the differences in the rights granted, no comparability adjustment was necessary. Based on the record in the current proceeding, however, the Judges are not in a position to make such an assessment and therefore are left with a record that shows a lack of comparability of rights with no adjustment to sufficiently align the markets.

[54] Although the Register's Memorandum Opinion was issued after the record was closed in the current proceeding, the D.C. Circuit's *Muzak* decision, which highlighted the limitations in the rights that a PSS could exercise consistent with the grandfathered rate methodology, was issued during the proceeding. As a party to the case, SoundExchange advocated for the restrictions on the PSS license that the D.C. Circuit found. SoundExchange certainly could reasonably anticipate the impact that the *Muzak* decision would have on the rights that other PSS entities could exercise consistent with the grandfathered rate-setting methodology. Indeed, one of SoundExchange's witnesses referenced the decision and the limitations it placed on the rights that a PSS entity could exercise consistent with the grandfathering provision. SX PFFCL at ¶ 1807; 5/10/17 Tr. 3205 (Bender). *See also* SX PFFCL at ¶ 1807 ("[d]uring 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.") Therefore, SoundExchange had notice that the rights that a hypothetical PSS entity could exercise consistent with the grandfathering provision were limited to providing the types of services (*i.e.*, existing and expanded service offerings) that the Register set forth in her Memorandum Opinion addressing the scope of the PSS license.

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."). *See* 5/3/17 Tr. at 2305-06 (Wazzan). *See also* SX PFFCL at ¶¶ 1797-1799 ("CABSAT Services And PSS Are Functionally Equivalent Cable Radio Services And So Implicate the Same Rights"). Similarities in service offerings do not necessarily equate to comparability of rights that each of the service types is authorized to exercise.

SoundExchange's attempted direct compare-and-contrast of the various activities in which the two types of entities engage also ignores the fundamental, statutory difference between PSS and CABSAT: legislative intent that PSS and non-PSS be treated differently with respect to the way in which their respective royalty rates are determined. By SoundExchange's own admission, the CABSAT rates were based on a settlement agreement negotiated in the context of a proceeding in which the applicable rate standard was a willing buyer/willing seller standard. In adopting the DMCA, Congress expressly carved-out the PSS from that standard. The Judges believe that applying the CABSAT rate benchmark as proffered by SoundExchange in the current proceeding would effectively subject the PSS to the willing buyer/willing seller standard, which, in the Judges' view, would be inconsistent with Congress's intent in adopting the PSS rate-setting methodology in the DMCA.

The proffered CABSAT benchmark also raises concerns because of the enormous difference between the current PSS statutory rate of 8.5% of gross revenues and the rates proposed under the CABSAT benchmark (converting to approximately [[redacted]]% of revenue in the first year). In *SDARS II*, the Judges characterized a difference between the prevailing statutory rate of 8% and a proposed rate as high as 32.5% (for SDARS services) as a "yawning gap" that raised concerns about the reasonableness of the proffered benchmark that yielded such rates. *See* 78 Fed. Reg. at 23066. The Judges have the same concerns about the rates derived from the proffered CABSAT benchmark and believe that the wide gap strongly suggests that the buyers in the CABSAT market lack comparability with those in the theoretical PSS market. This difference in comparability of buyers is supported by SoundExchange's own admission that Sirius XM, which negotiated the CABSAT rates with SoundExchange, "is first and foremost the provider of an SDARS" that "also provides a CABSAT service." SX PFFCL at ¶ 1838. The PSS in the theoretical market are buyers negotiating for rights to operate their core business and therefore will have a greater stake in negotiating the most favorable rate. On the other hand, a buyer negotiating for rights for a non-core service might be more willing to settle for an acceptable rate rather than the best possible rate. Significant differences in the stakes of the respective buyers between the PSS and the CABSAT services suggest a lack of comparability between the two for benchmarking purposes.

The Judges conclude that the CABSAT benchmark as proposed in the current proceeding is not sufficiently comparable to the hypothetical PSS target market and that the CABSAT rates are outside of the zone of reasonableness for determining PSS rates for the upcoming rate period. The only useful information that the proffered CABSAT benchmark provides is to identify a rate ceiling that any reasonable PSS rates must remain below. In other words, a reasonable PSS rate for the upcoming rate period must be lower than the lowest rate proposed by SoundExchange based on the CABSAT benchmark (*i.e.*, $0.0190 per subscriber or [[redacted]]% of gross revenues).

By rejecting the proffered CABSAT benchmark, the Judges also reject one of SoundExchange's arguments in support of abandoning the current percent-of-revenue rate structure in favor of a per-subscriber rate structure. *See* SX PFFCL at ¶ 1949. The Judges also find SoundExchange's other reasons in support of a per-subscriber rate structure equally unpersuasive. Even reviewing the evidence SoundExchange presents in a light most favorable to SoundExchange, the Judges do not find that Music Choice's arrangements with its affiliated MVPD customers support a change in the rate structure to a per-subscriber structure. In this regard, the Judges accept as credible the evidence that Music Choice presented that historically it has charged and currently charges similarly situated non-partner affiliates rates that are the same as or lower than those charged to its partners. MC Reply to SX PFFCL at 188 (Reply to SX PFFCL at ¶ 1960) (and evidence cited therein). *See, e.g.*, 5/18/17 Tr. 4582 (Del Beccaro); Del Beccaro WRT at 18; 5/18/17 Tr. 4593-94 (Del Beccaro).

If SoundExchange and Music Choice were to agree to a per-subscriber rate structure, that structure would not, on its face, be inconsistent with the Copyright Act. Without a persuasive argument, supported by the evidentiary record, however, the Judges are reluctant to change the existing rate structure, which has thus far seemingly operated effectively. The arguments and record in the current proceeding do not support such a change. Therefore, the Judges reject SoundExchange's request to change the rate structure to a per-subscriber structure.

After reviewing and dismissing both proffered benchmarks, the Judges are left with the broad parameters of a zone of reasonableness that must be higher than 5.6% of gross revenues[55] and lower than [[redacted]]% of gross revenues (or $0.0190 per subscriber). The current rate of 8.5% of gross revenues falls within that range, albeit toward the lower end. In *SDARS II,* the Judges could endorse no proffered benchmark as an appropriate starting point for application of the Section 801(b)(1) factors. *See* 78 Fed. Reg. at 23059. Therefore, the Judges looked to the prevailing statutory rate to begin the analysis of the Section 801(b)(1) factors. *Id.*

Notwithstanding that no party advocated using the statutory rate as the starting point of the Section 801(b)(1) analysis and that the rate was negotiated in the shadow of the statutory license, the Judges found in *SDARS II* that the current rate was neither too high, too low, nor otherwise inappropriate. *Id*. The Judges reach the same conclusion in the current proceeding. As was the case in *SDARS II*, neither party has proposed using the current statutory rate as the starting point for applying the Section 801(b)(1) factors. SX PFFCL at ¶ 1889; 4/25/17 Tr. 848 (Crawford). Music Choice contends that the current rate is too high and SoundExchange contends that it is too low. The parties do not contend that the previous PSS proceeding was "necessarily" wrongly decided, only that the Judges now must look elsewhere to find a reasonable rate. *See* 5/3/17 Tr. 2305 (Wazzan).[56]

Both parties' disdain for the current statutory rate appears to stem primarily from the fact that in the first proceeding to set a rate for the PSS, which occurred about twenty years ago, the CARP looked to the musical works royalty rate to help determine what the rate should be for the PSS. *See, e.g.*, SX PFFCL at ¶¶ 1894-1900. Since then, the parties have either agreed to a royalty rate or, as occurred in *SDARS II*, the Judges selected a rate after fully reviewing the evidence in the record. The Judges and their predecessors each chose a rate that they viewed as reasonable and supported by the evidence before them at the time. The fact that once upon a time one decision-maker relied on a type of evidence that the Judges do not find persuasive in the

[55] *See supra*, section IV.C.1.a

[56] As discussed below, Music Choice does fault the Judges' decision to make an upward adjustment to the prevailing statutory rate to account for Music Choice's anticipated increase in the number of channels it offered.

current proceeding on the current record is irrelevant in the current proceeding. Unlike Music Choice and SoundExchange, the Judges are not convinced that the specter of the musical works rate on the prevailing PSS rate is so great as to preclude the Judges from using the current PSS rate as the starting point for applying the Section 801(b)(1) factors.

The Judges must continue to have the flexibility to rely on the best evidence they have available on the record before them in selecting reasonable rates and terms for the upcoming rate period. At this time, in this proceeding, on this record, the best available evidence is the prevailing statutory rate, which falls within the broad parameters of the zone of reasonableness indicated by the evidence that the parties presented. Therefore, the Judges look to the prevailing statutory rate of 8.5% as the starting point for the Section 801(b) analysis.

2. Application of the 801(b)(1) Factors

The digital performance license requires that the rates (but not the terms) be determined to achieve the statutory objectives detailed above. *See* 17 U.S.C. 801(b)(1). SoundExchange believes that if the Judges use the prevailing statutory rate as the starting point of the Section 801(b) factors then they should adjust the rates upward to provide copyright owners a fair return (Factor 2), to reflect their greater contributions to the product made available to the public (Factor 3), and to avoid further disruption of the industries involved (Factor 4). SX PFFCL at ¶ 2112.

Music Choice contends that the Judges should not have adjusted the prevailing statutory rate upward in *SDARS II* to account for Music Choice's projected increase in usage of sound recordings. Music Choice argues that the PSS license is not a general "usage" license (in that making more channels available does not necessarily lead to a greater number of performances), and that listeners can only listen to one channel at a time, regardless of how many channels are available for them to choose from. Del Beccaro WDT at 16.[57] The Judges find this claim somewhat peculiar. Music Choice appears to assume that all members of a household are transfixed to the same television set as they might have been at the dawn of the television age. Modern viewing habits, however, are far different. Televisions and other comparable electronic devices abound in modern households. It is not unreasonable to assume that each individual in a modern household could have access to his or her own viewing or listening device, any one of which might be capable of viewing or listening to the Music Choice service.

In *SDARS II*, the Judges found evidence of Music Choice's then current intention to increase the number of Music Channels offered from 46 to 300. 78 Fed. Reg. at 23059. Music Choice does not dispute that intention. Del Beccaro WDT at 15. A greater variety of channels could reasonably be expected to attract its own audience.[58] The Judges may rely on a party's present intentions as to future actions. Of course, present intentions of future actions do not

[57] Music Choice contends that had there been any increase in revenues due to the increase in the number of channels that Music Choice offered that SoundExchange would have reaped the benefits through increased royalties under as a percentage of revenues. In *SDARS II*, the Judges found no evidence to support a projected increase in revenues. 78 Fed. Reg. at 23060 ("Music Choice provided no evidence, however, to suggest that the planned expansion in usage would result in increased revenues to which the statutory royalty rate is to be applied".) Indeed, Music Choice represents that even though it added 25 channels to its app and Internet platforms during the current rate period, its listenership remained flat while its revenues actually decreased. Del Beccaro WDT at 16, 18.

[58] Mr. Del Beccaro suggests that the Judges should follow the principle that PSS royalties should only be payable based on actual performances, which occur when a song is actually received by a listener as is the case with respect to webcasters. He quickly cautions, however, that Music Choice is not able to track the actual number of performances to enable such a per-performance rate. Del Beccaro WDT at 16-17 and n.2.

ensure that the latter will come to fruition. In this instance, the Judges' finding was based on the evidence in the record before them. Music Choice represents that in actuality, the expansion of its service was far more limited than it had anticipated in the last rate period. Del Beccaro WDT at 18. Consequently, Music Choice contends that it has been overpaying for the past rate period because the rate should have been kept at 7.5% of gross revenues. Del Beccaro WDT at 18. Indeed, Music Choice believes that this alleged "overpayment justifies a rate reduction in the next rate period" below the previous period's 7.5% rate. Crawford WDT at ¶ 214.

While Music Choice chose not to expand its channel offerings as it had anticipated, it had the right to do so consistent with the statutory license, and the rate that the Judges adopted reflected Music Choice's stated intention regarding that projected expansion. A licensee has no *general* statutory or regulatory right to a rebate in a subsequent proceeding. Nevertheless, the Judges *specifically* noted in *SDARS II* that if Music Choice's projected increase in channels did not materialize the Judges could take that fact into account in a future proceeding. 78 Fed. Reg. at 23061. In *SDARS II*, the Judges found the increase from 7.5% to 8.5% was consistent with the second Section 801(b) factor (fair return to copyright owners).[59] In this proceeding, the Judges examine again whether the basis for that increase continues to exist in the present market.

a. Factor A: Maximize Creative Works to the Public

Music Choice contends that the PSS services are favored under this factor because the PSS (and Music Choice in particular) generate original content (such as on-screen displays and curated channels) in providing the PSS service. MC PFF at ¶ 334-335. Music Choice contends that this original creative content has great promotional impact on the sound recordings they play on the service, which is illustrated by the fact that record labels lobby to get their sound recordings played on the service. *Id*. at ¶¶ 352-362. The Judges do not doubt that Music Choice expends resources promoting the artists that appear on the service and that such exposure can be promotional to the artists and their record labels. These efforts are already incorporated into the current statutory rate and therefore no downward adjustment is justified to the extent Music Choice promotes artists.

Music Choice contends that the current rate is actually hindering it in providing the types of promotional services that help artists and labels. Del Beccaro WDT at 17-18. By Music Choice's own admission, however, much of the decline is due as much to Music Choice's declining revenues as to the royalty rate it pays. Written Direct Testimony of Damon Williams, Trial Ex. 56, at 32-33 (Williams WDT). Indeed, since the royalty is currently based on a percent of revenue, a decrease in revenues would actually result in a decrease in the royalties Music Choice pays. Nevertheless, Music Choice provides no quantification of the promotional effects, if any, its service has on the artists it promotes. Moreover, it provides no persuasive evidence to connect the current statutory rate with any decrease in such artist services. Given the record before them, the Judges do not believe the evidence supports a decrease from the current rate based on this section 801(b) factor.

SoundExchange limits its discussion regarding this factor to arguments in support of adoption of the CABSAT rate and arguments against lowering the current PSS rate. The Judges

[59] 78 Fed. Reg. at 23059.

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do not adopt the CABSAT rates and find no persuasive evidence in the record to support a lower rate based on the first section 801(b) factor.

b. Factor B: Afford Fair Return and Fair Income

The second section 801(b) factor requires the Judges to assess whether the rate (or rates) they have chosen to begin the section 801(b) analysis affords the copyright owner a fair return for his or her creative work and the copyright user a fair income under existing economic conditions. 17 U.S.C. § 801(b)(1)(B).

As discussed above, in *SDARS II* the Judges found that an increase from the then-prevailing statutory rate was warranted because Music Choice anticipated greatly expanding the number of channels of music it would offer without any anticipated increase in revenues that would adequately compensate copyright owners for this increase. 78 Fed. Reg. at 23060. In actuality, Music Choice's expansion was far more modest than it had anticipated. Del Beccaro WDT at 18; 5/18/17 Tr. 4521 (Del Beccaro); Del Beccaro WDT at 4 (Music Choice currently provides 50 television-accessible music channels). Given that the basis for the Judges' increase in the royalty rate after the *SDARS II* hearing was a projected expansion of music channels that did not materialize, the Judges find that, all things being equal, a downward adjustment to the PSS rate from 8.5% back to 7.5% is most supported by the evidence and by *SDARS II*. *See* 17 U.S.C. § 803(a)(1) ("The … Judges shall act in accordance with …prior determinations … of … the Judges ….").

According to Music Choice, the current rate has not provided the service a fair income under existing economic conditions. MC PFF at ¶ 395. Music Choice asserts that, due to changes in Music Choice's downstream MVPD market, it anticipates losing money on its residential audio business over the next two years under the current rate. *Id*. at ¶¶ 395-396. Music Choice's main contention is that a hyper-competitive market for its services is making it more difficult for it to remain profitable and provide the same level of services to copyright owners under current market conditions. Nevertheless, all of the conditions that Music Choice cites to support a downward adjustment are already incorporated into the current statutory rate. Music Choice provides no evidence that any new threat is on the horizon that might warrant a downward adjustment from the current statutory rate going forward. Moreover, as SoundExchange correctly notes, no copyright user, not even a PSS, is guaranteed any level of profitability.

Music Choice argues that a decrease from the current rate would not have a material effect on the copyright owners and artists. MC PFF at ¶ 409. SoundExchange contends that the PSS pay lower royalty rates than any other music service and that these rates have a negative effect on copyright owners and artists who receive these low rates. *See* 5/18/17 Tr. at 4621-23 (Del Beccaro) (PSS pay lower rates than other music services); Harrison WDT at ¶ 29 (record companies would not agree to current PSS rates). SoundExchange contends that the PSS rate is so far below a market rate that it would be "foolish" for any record company to attempt to directly license their sound recordings at rates near the current rate. SX PFFCL at ¶ 2131 (and evidence cited therein). SoundExchange also asserts that a higher rate for PSS would not be unfair because Music Choice could continue to operate; it would only make less money doing so, and the Copyright Act does not guarantee a copyright user a certain minimum level of profits. *Id*. at ¶ 2134.

The Judges do not mean to discount the fact that the market for providing content to cable and satellite providers is competitive and perhaps likely to grow more competitive in the future. Nevertheless, nothing in section 114 of the Copyright Act would authorize the Judges to shield PSS services from market forces and the Judges see no reason to do so in the absence of such a mandate. Music Choice's argument that a rate reduction would not materially affect the return that record labels receive for the sound recordings they put into the marketplace is also misplaced. The relevant market for determining whether an adjustment is warranted is the market for PSS services, not the sound recordings market as a whole. As a percentage of total royalties, the amount copyright owners receive from the PSS services may be low. Nevertheless, all revenue sources are important for those that have earned them, and the rate charged for the use of sound recordings by the PSS must ensure that the copyright owners receive a fair return. Therefore, no additional downward adjustment is warranted.

SoundExchange claims that the PSS pay the lowest royalty rates of any type of music service. Even if true, those comparative rates are already reflected in the current statutory rate. Section 114 is clear that the PSS that qualify for the grandfathered rate methodology are *sui generis*. At the time the grandfathered provision was adopted the number of qualifying services was very limited and has become more limited over time. Only two companies qualify for the grandfathered rate methodology and only for portions of their respective businesses. Therefore, consistent with the section 114 grandfathering provision, the correct question to ask is not whether the current statutory rate (or whatever rate the Judges choose to begin analysis of the section 801(b) factors) offers copyright owners a fair income vis-à-vis the rate they would earn from non-PSS music services but whether the current statutory rate offers copyright owners an unfairly low return that warrants an upward adjustment to ensure that copyright owners receive a fair return in the upcoming rate period. Admittedly, it is a difficult standard to meet, but SoundExchange has not provided sufficient persuasive evidence to support such an upward adjustment.[60]

After reviewing the evidence provided by both parties, the Judges conclude that (outside of a 1 percentage point reduction due to the anticipated expansion of the number of music channels that did not materialize) neither party has provided sufficient evidence to support a change from the current rate based on the second Section 801(b) factor.

c. Factor C: Reflect Relative Roles

The third section 801(b) factor requires the Judges to assess whether the rate they have chosen to begin the section 801(b) analysis reflects 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. 17 U.S.C. § 801(b)(1)(C).

[60] Having determined that a downward adjustment is justified by the second section 801(b) factor, the Judges have reassessed the first section 801(b) factor and determined that no further adjustment is warranted notwithstanding the rate decrease supported by the second factor. The Judges review the evidence with respect to the third and fourth factors with the assumption that a rate reduction is already supported based on the second factor. 78 Fed. Reg. 31842, 31843 (May 28, 2013).

Music Choice contends that with respect to this factor it has made a much stronger evidentiary showing than SoundExchange and therefore a lower rate should be warranted. MC PFF at ¶ 426. For example, Music Choice notes that it makes significant creative contributions in terms of original programming, curation, and promotional content that increases subscribers' engagement with the music and increases the promotional impact of the Music Choice service. Williams WDT at 56; 5/18/17 Tr. at 4693 (Williams). Music Choice notes that it expends substantial resources on improving its service offerings but that declining revenues over the past rate period have forced Music Choice to cut staff that are used to provide these services. Williams WDT at 7. Music Choice discounts the record labels' contributions in this regard, arguing that they apply only to the sound recordings and not specifically to the PSS service. *See* MC PFF at ¶ 447. Music Choice also notes that historically it has had to invent the technology necessary to get high-quality digital music programming to subscribers, but that the current rate has limited its ability to continue investing in improving its technology. *Id*. at ¶¶ 450-52.

Music Choice asserts that the risks it faces are increasing relative to those faced by the record companies. Music Choice also contends that it (and other PSSs) has fewer opportunities for profitability. Del Beccaro WDT at 20. Music Choice notes that its residential business has still not become profitable on a standalone basis. *Id*. at 19-20. Music Choice points to consolidation among MVPDs and shrinking margins in the cable industry combined with competitive pressures that have led to a rapid deterioration of Music Choice's subscriber fees. *Id*. at 21. Music Choice represents that this changing MVPD market has fundamentally changed the financial outlook for Music Choice's residential audio service. *Id*. at 24-25.

Music Choice disputes SoundExchange's assertions that the Music Choice service is substitutional. *See* 5/16/17 Tr. 4076-77 (Harrison); 5/15/17 Tr. 3882 (Walker). Finally, Music Choice argues that it contributed more to the opening of new markets for creative expression and new media for its communication than the record companies. For all of these reasons Music Choice believes that this factor warrants a downward adjustment. MC PFF at ¶¶ 500-501.

Not surprisingly, SoundExchange argues that no downward adjustment is warranted under this factor. SoundExchange believes that "Music Choice's wholesale distribution model seems to be relatively inexpensive to operate." *See* Wazzan CWDT at ¶ 80. By comparison, record companies spend far more on artists, repertoire, and marketing. *Id*. SoundExchange counters Music Choice's argument that the record companies' expenditures are not PSS-centered, arguing that without the record companies' expenditures the PSS would have no sound recordings to use for their services. *Id*. at ¶ 80. SoundExchange further disputes Music Choice's contentions that past expenditures by investors in Music Choice warrant a rate reduction. According to SoundExchange, these capital costs were invested long ago and the investors have made no investments in the last eighteen years. *See* SX PFFCL at ¶ 2141; *but see* Del Beccaro WDT at 20. SoundExchange contends that these investors have realized returns on their investments and that those investments have helped fuel Music Choice's non-statutory video service line of business. *See* SX PFFCL at ¶ 2141; *but see* 5/18/17 Tr. at 4630-31 (Del Beccaro).

With the exception of Music Choice's assertion that market conditions have deteriorated recently, neither party makes a persuasive argument that a further change in the current statutory rate is warranted, in either direction. Virtually all of the evidence that the parties present reflects conditions that have occurred under the current statutory rate. Therefore, all of the relative contributions of SoundExchange and Music Choice are already incorporated into that rate and no adjustment is warranted. The small rate reduction from the current statutory rate that the Judges found warranted under the second section 801(b) factor does not change the Judges' assessment.

As for the negative change in market conditions, Music Choice only notes a decline in the resources it spends and the staff it intends to employ to improve the service. If anything, a decrease in the resources it spends on the service, if quantifiable, would militate against a rate reduction. At this time, it is unclear how market conditions will affect Music Choice's business in the upcoming rate period. Conceivably, persuasive evidence of dramatically deteriorating conditions in the market for PSS service might militate against an upward rate adjustment if such adjustment could be deemed disruptive but any such adjustment would be warranted under the fourth section 801(b) factor rather than the third. At this point, on the current record, the Judges find no persuasive evidence to support an adjustment from the current statutory rate in either direction under the third factor.

d. Factor D: Minimize Disruptive Impact

The fourth and final section 801(b) factor requires the Judges to assess whether the rate (or rates) they have chosen to begin the Section 801(b) analysis minimizes any disruptive impact on the structure of the industries involved and on generally prevailing industry practices. 17 U.S.C. § 801(b)(1)(D). A royalty rate may be considered disruptive "if it directly produces an adverse impact that is substantial, immediate and irreversible in the short-run because there is insufficient time for [the parties affected by the rate] adequately to 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 I,* 73 Fed. Reg. 4080, 4097 (Jan. 24, 2008).

Music Choice argues that the current statutory rate has had a disruptive effect on the PSS market. As support for this premise, Music Choice notes the previously discussed deterioration of Music Choice's financial condition, which it contends is due, in part, to the fact that the rate was increased in *SDARS II*. MC PFF at ¶ 503. Music Choice does not believe that profits from Music Choice's other business lines should be considered in determining the possible disruptive effect of the PSS rate. *Id*. at ¶ 506.

SoundExchange contends that if Music Choice and other PSSs cannot continue to operate then the market will adjust by allowing other competitors to take their place. *See* Wazzan CWRT at ¶¶ 83, 86. From SoundExchange's perspective, Music Choice's quest for a lower rate is motivated by increased competition from Stingray. According to SoundExchange, Music Choice seeks a lower rate that would serve as a subsidy that would allow Music Choice to maintain its unfair advantage and its market share over non-PSS competitors. *See* 5/18/17 Tr. at 4532-37 (Del Beccaro). SoundExchange asserts that such a subsidy "fosters Music Choice's inefficient operation and risks disrupting the market for residential audio services." Wazzan CWDT at ¶ 84. From SoundExchange's perspective, the PSS rates are already artificially low and merely serve to insulate Music Choice from market forces at the record companies' expense. *See* Wazzan CWRT at ¶81, n. 112; 4/25/17 Tr. at 933-34 (Crawford). SoundExchange argues that the current statutory rate is disruptive because it provides Music Choice a significant barrier to entry in the market for non-PSS (CABSAT) services. 5/3/17 Tr. at 2318 (Wazzan); SX PFFCL at ¶ 2147. SoundExchange does not believe a higher rate (even one as high as SoundExchange proposes) would be disruptive to the PSS market. Rather it believes that an upward adjustment would introduce a needed element of competition. *See* 4/25/17 Tr. at 902-03 (Crawford); Wazzan CWRT at 76, 83.

The Judges find that neither party provides persuasive evidence to warrant any further adjustment of the current statutory rate (other than that warranted by the second 801(b) factor) in either direction. Music Choice argues that the "significant deterioration of its financial condition" is due in part to the current statutory rate but the only evidence it cites to deals with the effects of market competition. *See* Del Beccaro WDT at 21. The competitive pressures that Music Choice faces were not caused by the current statutory rate. While the rate increase that the Judges approved in *SDARS II* may have negatively affected Music Choice's margins, the Judges addressed any potential disruptive effect of that increase by phasing it in over the first two years of the rate period. The grandfathered rate calculation methodology was not intended to shield Music Choice from all negative impacts arising from competitive pressures. The reversal of that increase that the Judges find warranted under the second section 801(b) factor only makes Music Choice's arguments on this point less compelling.

The reality of the marketplace contradicts SoundExchange's contention that the current rate is disruptive. As SoundExchange points out, Music Choice faces stiff competition in the market. SX PFFCL at ¶ 1879. The modest decrease in the statutory rate that the Judges find warranted under the section 801(b)(1)(B) factor does not change the Judges' assessment on this point.

On balance, the Judges find that neither party has provided persuasive evidence to support a finding that, under current market conditions, an adjustment to the current statutory rate (other than that discussed with respect to the second section 801(b) factor), is warranted under the fourth Section 801(b) factor. Therefore, the Judges determine that the appropriate rate for PSS services in the upcoming rate period shall be 7.5%. This rate shall apply to the gross revenues that the PSS services earn for all "existing service offerings" in addition to all "expanded service offerings" as those terms are defined and used at pages 15-16 of the Register of Copyright's (Register's) *Memorandum Opinion On Novel Material Questions of Law* (Memorandum Opinion) (Nov. 20, 2017). Based on the limited evidence in the record, the Judges find no justification for applying a different rate methodology to these two types of services at this time.

The Judges accept as credible Music Choice's evidence that additional channels that might conceivably fall within the expanded service category currently constitute a marginal portion of Music Choice's PSS service in terms of music usage. *See* Del Beccaro WDT at 16. While those types of services may increase over time, at this point the Judges do not believe that the service offerings that fall within this category are sufficiently distinct from the existing service offerings to justify the creation of a separate rate methodology. Nevertheless, the Judges acknowledge SoundExchange's assertion that PSS services that might fall within the expanded service category have recently increased and may warrant a different rate methodology in the future. *See* Del Beccaro WRT at 25; 5/18/17 Tr. 4658-59, 4661 (Del Beccaro).

D. Music Choice's Internet Streaming Service

For the first time, in the present proceeding, SoundExchange proposes a separate rate for PSS that stream their services over the Internet. 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), SoundExchange requests that the per-performance royalty fee for a commercial webcaster set forth in 37 C.F.R. § 380.10 apply.[61] Music Choice contends that its streaming activity is already included within the PSS statutory license and the royalty rate that PSS pay already includes this service. *See* Del Beccaro WRT at 27. As a result, Music Choice contends that no additional royalty payment should apply for Internet streaming of the PSS service. *Id.*

1. Referral to the Register of Copyrights

The Judges concluded that the threshold issue of whether the streaming activities of PSS were even included within the scope of the PSS license was a novel material question of copyright law that the Judges must refer to the Register of Copyrights (Register). 17 U.S.C. § 802(f)(1)(B). Hence, the Judges referred the issue to the Register, asking:

> (1) Are a preexisting subscription service's transmissions of multiple, unique channels of music that are accessible through that entity's website and through a mobile application "subscription transmissions by preexisting subscription services" for which the Judges are required to determine rates and terms of royalty payments under Section 114(f)(1)(A) of the Copyright Act?
>
> (2) If yes, what conditions, if any, must the PSS meet with regard to streaming channels to qualify for a license under Section 114(f)(1)(A)? For example, must the streamed stations be identical to counterpart stations made available through cable television? Is there a limitation on the number of channels that the PSS may stream? Is there a limitation on the number or type of customers that may access the website or the mobile application?

Order Referring Novel Material Question of Substantive Law and Setting Briefing Schedule at 3-4 (Oct. 5, 2017).

2. Register's Conclusions

The Register concluded that

> transmissions by a PSS entity that are accessible to a cable or satellite television subscriber through that entity's website and through a mobile application can be "subscription transmissions by preexisting subscription services" for which the CRJs must determine rates and terms of royalty payments under section 114(f)(1)(A), but only if such transmissions are sufficiently similar to the transmissions made to those subscribers via the entity's preexisting residential cable or satellite music service.

Memorandum Opinion at 12.

As a preliminary matter, "the preexisting services must be limited to the three named entities in the [DMCA] Conference Report, *i.e.*, DMX (operated by TCI Music), Music Choice (operated by Digital Cable Radio Associates), and [DiSHCD] (operated by Muzak)." *Id*. at 14, internal footnotes omitted. Moreover, the Register noted that "not every subscription transmission made by a PSS entity is subject to section 114(f)(1)." *Id*. at 13. The Register observed that the DMCA's amendments to section 114 of the Copyright Act were designed to

[61] If a PSS does not have the technological capability to track individual performances, SoundExchange proposes that the PSS estimate its performances by multiplying its Aggregate Tuning Hours by the average number of recordings played per hour across its service. SX Amended Proposed Rates and Terms at 8.

move the industry to market rates. *Id*. at 23. Nevertheless, the Register noted that "Congress intended for PSS entities to be able to expand their service offerings to some limited extent and still have those service offerings be considered PSS offerings." *Id.* at 14.

According to the Register, the ultimate question is "whether a particular program offering by a PSS entity qualifies as a PSS offering within the meaning of section 114(j)(11), and is therefore subject to the grandfathered rate standard under section 114(f)(1)." *Id*. at 15.

The Register distinguished among three different types of service offerings:

(1) A service offering identified by Congress as being a PSS offering as of July 31, 1998, that is still offered today *in the same transmission medium* identified by Congress in 1998. (The Register refers to this type of offering as an "**existing service offering**"). According to the Register, an existing service offering would be entitled to *both* a rate established under the grandfathered rate standard under section 114(f)(1) and the grandfathered license requirements in section 114(d)(2)(B). *Id*.

(2) A service offering identified by Congress as being a PSS offering as of July 31, 1998, that is still offered today, but *in a different transmission medium* than the one identified by Congress in 1998, *where only transmissions similar to the existing service offering are provided*. (The Register refers to this type of offering as an "**expanded service offering**"). According to the Register, an expanded service offering would be entitled to a rate established under the grandfathered rate standard in section 114(f)(1), but would not be able to take advantage of the grandfathered license requirements in section 114(d)(2)(B). A PSS that offered this type of service would be required to comply with the more detailed license requirements in section 114(d)(2)(C). Memorandum Opinion at 15-16.

(3) A service offering that is not an existing service offering or an expanded service offering. (The Register refers to this type of offering as a "**different service offering**"). A "different service offering" is insufficiently similar to an "existing service offering" to be considered an "expanded service offering" and would not be entitled to either a rate established under the grandfathered rate standard under section 114(f)(1) or the grandfathered license requirements in section 114(d)(2)(B). Instead, the royalty rate for a different service offering would be set under the willing buyer/willing seller standard in section 114(f)(2). A PSS marketing a different service offering would be required to comply with the license requirements in section 114(d)(2)(C).[62]

Memorandum Opinion at 16.

The Register noted that "an existing service offering can grow and expand significantly within the same transmission medium while remaining a PSS offering." *Id* at 19. Consistent with this understanding, the Register noted that

[62] The Register's categorizations of service types presumes that a service offering is eligible for the section 114 license. The categorization is meant to delineate whether the rate for a license-eligible service is determined pursuant to section 114(f)(1) or section 114(f)(2). If a PSS entity began offering an interactive service, for example, that service offering would not fall into one of the categories and would not be eligible for the statutory license. Memorandum Opinion at 16-17.

> [t]he user interface can be updated, certain functionality can be changed, the number of subscribers can grow, and channels can be added, subtracted, or otherwise changed. The only restriction is that the existing service offering as it is today must be fundamentally the same type of offering that it was on July 31, 1998—*i.e.*, it must be a non-interactive, residential, cable or satellite digital audio transmission subscription service.

Id. at 19-20 (internal footnotes omitted).

With respect to the second category of offerings (*i.e.*, expanded service offerings) "a [PSS] does not lose its designation as such in the event the service decides to utilize a new transmission medium, *provided that the subscription transmissions are similar*." *Id*. at 20 n.72.[63]

In assessing whether a service offering is an expanded service offering and thus qualifies as a PSS offering, the Judges must compare the service offering in question to the existing service offering as it exists at the time of the comparison (rather than as it existed on July 31, 1998). *Id*. at 21. To aid the Judges in this comparison, the Register offers a non-exhaustive list of factors:

(1) Whether the service offering has a similar effect on displacing or promoting sales of phonorecords.

(2) Whether the quantity and nature of the use of sound recordings by the service offering is similar.

(3) Whether the service offering provides similar content to similar user groups.

(4) Whether the service offering is consumed in a similar manner, provides a similar user experience, and has similar form, feel, and functionality.

(5) Whether and to what degree the service offering relates to the pre-July 31, 1998 investments Congress sought to protect.

(6) Whether and to what degree the service offering takes advantage of the capabilities of the medium through which it is transmitted (*i.e.*, whether and the extent to which differences between the service offerings are due to limitations in the existing service offering's transmission medium that are not present in the other service offering's transmission medium).

Id. at 21-22.[64]

A "different service offering" (the third category the Register identified) can never qualify as a PSS offering because it would not be one of the specifically identified pre-July 31, 1998 business operations (*i.e.*, the three PSS offerings) Congress sought to protect when it enacted the DMCA. This is true regardless of whether the service offering is developed internally or

[63] For a service offering to qualify as an expanded service offering, the PSS entity must continue to operate its existing service offering. According to the Register, "[a] service offering that is not an existing service offering can only be subject to the grandfathering provision if it provides transmissions similar to their existing service." Memorandum Opinion at 20, internal quotes omitted.

[64] Even if a service offering is found to be an expanded service offering (rather than an existing service offering) qualifying for the section 114(f)(1) grandfathering provision for purposes of rate calculation, it would still not be eligible for the section 114(d)(2)(B) grandfathering provision (regarding license requirements) because it uses a different transmission medium than the existing service offering. Such an offering would be subject to the license requirements in section 114(d)(2)(C). Memorandum Opinion at 22.

acquired. *Id*. at 22. When a PSS entity expands its operations and provides additional transmissions to subscribers to a different service, this is an entirely new investment and is not a PSS offering. *Id*. at 23.

The Register offered guidance regarding applications of the above categorization of service offerings. First,

> in accordance with the principles of narrow construction afforded to grandfathering provisions, the Register finds that, as a matter of law, it is irrelevant whether or not Music Choice or another PSS entity, to some limited degree, was making transmissions via a different medium than those specified in the legislative history on July 31, 1998, such as the Internet. If such a service was in fact doing so, it would not be as part of an existing service offering—any such transmissions today would be considered either an expanded service offering or a different service offering….

Id. at 19.

The Judges must determine a royalty rate for the former type of service (*i.e.*, expanded service offering) in the current proceeding. The latter type of service (*i.e.*, different service offering) is outside the scope of the current proceeding; a royalty rate for any different service offering by a PSS (if any) must be determined by reference to existing rate regulations covering that type of service offering, in a separate, future proceeding under the willing buyer/willing seller standard, or through voluntary negotiations.

The Register observes that

> the mere fact that a service offering is transmitted to cable or satellite television subscribers over the Internet does not automatically disqualify the service offering from being an expanded service offering subject to the grandfathered rate standard, so long as the service offering, as a factual matter…is sufficiently similar to the PSS entity's existing cable or satellite service offering.

Id. at 25.

In assessing whether an Internet-based service offering is sufficiently similar to a PSS entity's existing cable or satellite service offering, the Judges should consider "the degree to which making the existing service offering accessible outside the home of the subscriber constitutes a fundamental change to the offering." *Id*.

According to the Register:

> at least in the cable television market, there appears to be a distinction drawn between accessing content within the home and accessing that same content outside of it. To be clear, this distinction is one based on the *location* where the PSS offering is consumed, not the type of device on which the service is accessed. If the service offering is available through an Internet-connected smartphone or tablet, but is designed so that the service offering will only work when accessed within the confines of the subscriber's residence, then it would be within the home and more similar to the PSS entity's existing cable or satellite service offering.

Id. at 26 (internal footnote omitted).

With respect to the impact that the number and type of channels offered by a service has in determining its categorization for rate-setting purposes, the Register identified examples of factors the Judges could consider, such as how many additional or fewer channels there are, how many channels offer different programming, and how different that programming is from that offered by the existing service offering. *Id*. The Register also notes that the Judges should consider the reasons why any such differences exist. If the service offering has more channels because of some benefit the Internet provides (*e.g.*, greater bandwidth or different contractual arrangements with cable operators), then the PSS entity could be taking advantage of the capabilities of the Internet as a transmission medium, which could tend to disqualify that service offering from the grandfathered royalty calculation method. *Id*. at 26-27. A similar analysis could be conducted with respect to the number and type of customers. *Id*. at 27.[65]

The Register notes that if a service offering qualifies for the grandfathered rate-setting methodology, the Judges still have the authority under section 114(f)(1)(A) to distinguish among the different types of digital audio transmission services in operation. If material differences between an existing service offering and an expanded service offering exist, the Judges may set separate rates based on those difference, using the section 801(b)(1) standard. *Id*. at 27-28.

3. Application of Register's Conclusions to Current Proceeding

Music Choice provides 50 channels of audio music programming delivered to subscribers' televisions (the Cable Radio Service). It also makes these 50 channels, plus an additional 25 Internet-only channels, available to authenticated television subscribers through its website and a mobile app (the Internet Service). Del Beccaro WDT at 4.[66]

The Register has determined, as a matter of law, that Music Choice's Internet Service[67] is not an "existing service offering." Memorandum Opinion at 19. Consequently, the Internet Service is either an "expanded service offering" (*i.e.*, qualifying for grandfathered royalty determination under the Section 801(b) factors but subject to the expanded license requirements under section 114(d)(2)(C)) or a "different service offering" outside the scope of the PSS license.

By reference to the Register's six-factor list of criteria to differentiate an expanded service offering from a different service offering, the Judges find that an Internet-based service that allows subscribers to access music outside their residences is a "different service offering" and is not eligible for grandfathered PSS rate structures or license requirements applicable to PSS. The regulations in Appendix A, therefore, exclude Internet-based transmissions to the extent they are available outside a subscriber's residence.

[65] Differences in a service offering that directly and solely result from the imposition of the section 114(d)(2)(C) requirements that do not apply to the existing service offering (which is subject to section 114(d)(2)(B)) should not alone disqualify the service from the grandfathered royalty calculation methodology necessitated by the change in medium, nor should minor differences in the user interface or in the visual presentation. Memorandum Opinion at 27.

[66] *See also* Wazzan CWDT at ¶ 62(e) ("Music Choice provides 75 audio channels through various MVPDs, … and streaming to subscribers of the cable services that carry its channels, through a family of apps and a web portal.") (internal footnotes omitted).

[67] Neither party has asked the Judges to determine whether Music Choice's Cable Radio Service, as it exists today, constitutes an "existing service offering" or and "expanded service offering" by a PSS. As the Judges have already determined that the PSS rate covers both types of offerings, the question is moot and the Judges need not address it.

V. SDARS Performance License – Rate Structure

A. Rate Structure Arguments

1. Maintaining the Current Rate Structure

Sirius XM emphasizes that the Judges have utilized a percent-of-revenue rate structure for ten years, and that absent any new and sufficient factual bases to deviate from that history, the Judges should continue to adopt this rate structure. SXMRPFF ¶ 384 (and record citations therein). Moreover, it notes that SoundExchange itself proposed a percent-of-revenue rate structure, not a "greater-of" structure, as recently as in the *SDARS II* proceeding. SXMPFF ¶ 253 (and record citations therein).

SoundExchange does not take issue with the historical *bona fides* of the current rate structure. However, SoundExchange notes that it urged the Judges to adopt what it describes as a simpler percent-of-revenue approach in *SDARS II*, but the Judges refused, opting instead for a more complicated structure that led to substantial disputes. SERPFF ¶ 253.

The Judges are not convinced by Sirius XM's argument that the rate structure should be maintained merely because it has been in place over the past two rate periods. The Judges are charged with setting rates and terms *de novo* for each period. If there are sufficient valid reasons why the rate structure should be changed, then the Judges will adopt those changes. Accordingly, the Judges consider the issues to determine whether to change the existing rate structure.

2. Factors Relating to a Change in Structure

a. Lack of Expert Support

SoundExchange advocates for a deviation from the percent-of-revenue rate structure that has existed throughout the *SDARS I* and *SDARS II* rate periods. SoundExchange asks the Judges to establish a "greater of" structure, by which the royalty rate is calculated "on a calendar year basis," but payable monthly, as the greater of a specified percentage of revenue or a specified per subscriber dollar value. *See Amended Proposed Rates and Terms of SoundExchange, Inc. and Copyright Owner and Artist Participants* App. A at 14-15. (Jun. 14, 2017).

Sirius XM notes that no economist appearing in this proceeding has endorsed the use of a greater-of formula. SXM RPFF ¶ 383. Moreover, Sirius XM points out that Mr. Orszag, an economic witness appearing for SoundExchange, expressly testified that he advocated *either* a percent-of-revenue rate structure *or* a per subscriber structure, and that he did not testify in support of a structure incorporating those two approaches in a single greater-of approach. SXM PFF ¶ 251. In response, SoundExchange did not identify any testimony that explicitly or adequately endorsed the use of a greater-of formula from an economic point of view.

The Judges are troubled by the lack of a cogent explanation from the licensors' economic witnesses as to the merits, on balance, of a greater-of rate formula. The absence of such evidence could be overcome by explanations derived from other evidence or testimony. Not having that further evidence, the Judges find it significant that no economist has sufficiently explained the benefits of this greater-of approach.

b. Impact on the Parties' Risks and Rewards

SoundExchange maintains that its proposed greater-of approach is warranted because it allows record companies to share in the growth of Sirius XM's revenue, while offering protection to the record companies on the downside if revenues are too low. SEPFF ¶ 252 (and record citations therein). Sirius XM maintains, in essence, that this approach smacks of a heads I win, tails you lose approach, whereby record companies share the upside of Sirius XM's success, but have protection in the form of a default to the per subscriber rate if the upside does not materialize. SXM PFF ¶ 252.

c. Benchmarks Include a Greater-of Rate Structure

SoundExchange emphasizes that many interactive license agreements utilize the greater-of approach that SoundExchange advocates here, demonstrating the market's adoption of this approach. SEPFF ¶¶ 164-165 (and record citations therein). However, Sirius XM notes that these interactive agreements were all negotiated in a market characterized by the lack of effective competition, and that the lack of competition would affect the structure as well as the level of rates. SXMPFF ¶ 385 (and record citations therein).

The Judges find Sirius XM's effective competition point well-taken in this context. Given that SoundExchange's expert economic witnesses acknowledged the need for rates that reflect an effectively competitive market, it is no surprise that none of their economists touted the greater-of structure as a reflection of effective competition. The Judges find that the greater-of rate structure, advantageous to licensors through the shifting risks, may well represent an example of what licensors can and would obtain when they exploit their "must have" status for a special competitive advantage. The Judges do not find it persuasive that interactive streaming services and record companies adopt the greater-of structure in their negotiated licenses.

d. Impact on Royalty Disputes

SoundExchange argues at length that a greater-of rate structure that contains a per-subscriber prong will eliminate disputes regarding the definition of revenue under the percent-of-revenue approach. SEPFF ¶¶ 1646-1650 (and record citations therein). However, Sirius XM convincingly counters that a greater-of formula will not eliminate the issues of revenue definition and identification, because the issue of which prong creates the "greater" royalty will itself be dependent on the definition, identification, and calculation of the revenue-based royalty prong. SXM PFF ¶ 386.

The Judges agree with Sirius XM. If SoundExchange had proposed a per-subscriber rate only, then the issues surrounding the percent-of-revenue rate would be eliminated. But SoundExchange has not proposed a pure per-subscriber rate; nor has Sirius XM. Thus, the problems regarding the revenue-based royalty would continue to be present (albeit perhaps less often than under a pure revenue-based rate).

e. The Greater-of Rate Structure and Trial Subscriptions

SoundExchange argues that its greater-of proposal helps to obviate the dispute between the parties regarding the length of free trials offered to potential subscribers by new owners of automobiles. SoundExchange notes that interactive services are generally required to pay royalties for any free trial that exceeds [[redacted]]. Orszag AWDT ¶ 85.[68] By contrast, Sirius XM

[68] The benchmark interactive services agreements address free trials longer than [[redacted]] by imposing a [[redacted]] royalty. *See* Orszag AWDT ¶ 89.

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typically offers free trials to new and used car purchasers that last three to twelve months.[69] *Id*. at ¶ 81. SoundExchange argues that "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," *id*. at ¶ 85, and proposes to eliminate that disparate treatment by classifying trial users as "subscribers" for royalty purposes, and setting a per-subscriber rate that varies depending on how long the user has been in the free trial period.[70] Thus, it would be irrelevant to the licensors if the free trial generated no revenue or lower revenue from automobile Original Equipment Manufacturers (OEMs) during the period offered free to the listener. SEPFF ¶¶ 1657-1665.

Sirius XM argues that trials, both paid and unpaid, provide value to licensors to the extent they entice new subscribers whose subscription revenue is then shared by the licensors. Sirius XM describes the trials as a "joint effort" by Sirius XM and the record companies to attract more Sirius XM subscribers and produce future subscription revenues that inure to their mutual benefit. Corrected Written Rebuttal Testimony of Carl Shapiro, Trial Ex. 9, at 55 (Shapiro CWRT). Sirius XM further argues that it is in the best position to determine the most beneficial length of the trial period, and that requiring Sirius XM to pay per-subscriber royalties without recompense from the trial users would act as a disincentive to Sirius XM to utilize what it otherwise understood to be the optimal trial period. SXMRPFF ¶ 388.[71]

The Judges agree with Sirius XM. Under a percent-of-revenue royalty structure, Sirius XM and the record companies are aligned in their interest to minimize the time period for unpaid trials and trials paid by OEMs at less than the full subscription rate. Moreover, because Sirius XM is in the business of recruiting and interacting with potential subscribers, it would be less efficient for the licensors (or the Judges) to second-guess Sirius XM's downstream (retail) business model as it relates to the optimal period of trial use. Although it would appear from a cursory analysis that artists and record companies suffer from the use of their recordings without recompense (or sufficient recompense) during trial periods, the fuller view, given Sirius XM's aligned economic incentive to maximize revenues, demonstrates that the length and terms of trial

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[69] Some *paid* promotions (where the automobile Original Equipment Manufacturer pays a reduced subscription fee to Sirius XM during the free (to the consumer) trial period) may last longer than [[redacted]] months. *See* Trial Ex. 322 at 14, 15 ([[redacted]]-month free trial for purchasers of certain high-end luxury cars ([[redacted]])). Under a percentage revenue rate structure Sirius XM pays a royalty on this discounted subscription revenue. *See* Orszag AWDT ¶ 82.

[70] SoundExchange's amended rate proposal would charge no royalties for subscribers who are in the first month of their free trial. During the second and third months of a free trial, SoundExchange proposes a per-subscriber royalty rate that represents a discount of approximately 42% off SoundExchange's proposed full per-subscriber rate. The full per-subscriber rate would apply to all free trials after three months. *See* Amended Proposed Rates and Terms of SoundExchange, Inc. and Copyright Owner and Artist Participants, at 3 (Jun. 14, 2017).

[71] Sirius XM also argues that the record companies have a higher benefit/cost ratio from trial subscriptions than Sirius XM, and would thus agree in an unregulated market to waive royalties "for as long as Sirius XM would choose to run unpaid trials." Shapiro CWRT at 55-56. SoundExchange rejects this argument because Professor Shapiro assumed, in computing his benefit/cost ratio, that no record company is a "must have" for Sirius XM. SEPFF ¶ 1619; *see* 4/24/17 Tr. 562 (Shapiro). As a result of this assumption, Professor Shapiro's benefit/cost calculation relies on a much lower record company opportunity cost than that adopted by the Judges. *See infra*, section VI.B.3. The Judges do not rely on this Sirius XM argument, therefore, in rejecting SoundExchange's proposal with regard to trial subscriptions.

periods are likely consonant with the interests of the licensors. This record evinces no evidence to the contrary.[72]

B. Conclusion Regarding the Rate Structure

For the foregoing reasons, the Judges adopt a percent-of-revenue rate structure in this proceeding for the 2018-2022 rate period.

VI. SDARS Performance License: SoundExchange Proposal

SoundExchange proposes a royalty fee that is the *greater of* a per-subscriber rate and a percentage-of-revenue rate. With regard to the percent-of-revenue prong, SoundExchange requests a rate equal to 23% of Sirius XM's "Gross Revenues," as that quoted term shall be defined in the forthcoming regulations. *See SoundExchange's Proposed Rates and Terms*, at 2-3.[73] The per-subscriber rate proposed by SoundExchange is set forth in the table below:

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

For affirmative economic support of its rate proposal, SoundExchange relies principally on the expert opinions of two economic witnesses, Mr. Jonathan Orszag and Professor Robert Willig. Mr. Orszag used a "ratio equivalency" analysis, which he applied through two separate approaches. Professor Willig considered several economic models: (1) an "Opportunity Cost" analysis;[74] (2) a "Ramsey Pricing" analysis;[75] and (3) a "Nash Bargaining Solution" approach.[76] Professor Willig also discussed a fourth model – the Efficient Component Pricing Rule (ECPR), which he noted in his oral testimony as analytically analogous to his "Opportunity Cost" analysis, and yielded the same rate.[77]

A. Professor Willig's Opportunity Cost Model

1. "Walk-Away" Opportunity Cost

SoundExchange called Professor Robert Willig in support of its proposed rates. Professor Willig approached the rate determination using an opportunity cost model. As Professor Willig testified, opportunity costs are incurred when "sales through one distribution channel reduce (*i.e.*,

[72] For example, there is no credible evidence that Sirius XM is interested in growing market share irrespective of revenue growth, in order to compete *for* the market (rather than merely *in* the market). This is unsurprising, because Sirius XM has already captured the satellite radio market. *See infra*, text following note 115.

[73] The definition of "Gross Revenues" for the forthcoming rate period is discussed *infra*, section XI.A.2.

[74] *See infra*, sections VI.A-VI.C.

[75] *See infra*, section VI.G.

[76] *See infra*, section VI.F.

[77] *See infra*, section 0.

substitute for, or "cannibalize") sales through other distribution channels (thereby reducing compensation earned by content creators from those other channels …)." Written Rebuttal Testimony of Robert Willig, Trial Ex. 46, at ¶ 20 (Willig WRT); *see also* Written Direct Testimony of Carl Shapiro, Trial Ex. 8, at 19 (Shapiro WDT) (sellers incur opportunity cost when sales in one market diminish sales in other markets). Based upon his interpretation of survey evidence, Professor Willig established a walk-away opportunity cost of $2.55 per subscriber, which he equates to [[redacted]]% of Sirius XM's relevant revenue.

SoundExchange asserts that the appropriate opportunity cost for rate-setting purposes is the "walk-away" opportunity cost. SE PFF ¶¶ 486-95. Professor Willig defined a record label's walk-away opportunity cost as "compensation that it would earn from other sources of distribution," if a label were "to literally walk away from a distributor." 5/2/17 Tr. 2014-15 (Willig). Professor Willig refers to the opportunity cost as "creator compensation cannibalization,"[78] and observes that "the need to cover opportunity cost is part of what assures efficiency in the ultimate choice of the balance of … varieties of modes of distribution." 5/2/17 Tr. 2019-20 (Willig). In an unregulated market, a supplier (record label or copyright owner) will not sell (license) to a service unless the supplier is compensated at or above its walk-away opportunity cost. *See id.* at 2019. In this regulated market, however, the creators do not have the option to walk away; the licenses are compulsory. *Id.* at 2015. Professor Willig thus perceives the role of the Judges to "redress that imbalance created by the statutory license."[79] *Id.* at 2017.

As a matter of economic principle, Sirius XM does not dispute the use of an opportunity cost approach as appropriate in identifying a market-based SDARS royalty rate. *See* SX RPFF ¶ 109. However, Sirius XM disagrees with Professor Willig's use of "walk-away opportunity cost," as he defines that phrase. *Id.*

The Judges summarize the parties' opportunity cost dispute as: Whether, in a hypothetical market with freely negotiated rates, opportunity cost should (1) *include* the value of each Major's "must-have" status which gives each Major the theoretical ability to put Sirius XM out of business by refusing to grant it a license at a royalty less than opportunity cost; or (2) *exclude* this value – a complementary oligopoly power – by which each Major hypothetically could put Sirius XM out of business. [80]

[78] Sirius XM's rebuttal economic expert, Professor Farrell, concurred with the substance of this definition, agreeing that walk-away opportunity cost "is the *profit* that a label would realize elsewhere" if it did not license to Sirius XM. 4/24/17 Tr. 607 (Farrell).

[79] Opportunity costs are more than a theoretical concept. For example, UMG recognizes that on-demand subscription services may substitute for sales of digital downloads. *See* Written Direct Testimony of Aaron Harrison, Trial Ex. 32, at ¶ 17 (Harrison WDT). Accordingly, when UMG licenses fully interactive streaming services, it [[redacted]] Because the *direct* marginal costs of distributing additional sound recordings to Sirius XM are "zero or nearly zero," the principal marginal cost to a record company of licensing to a service is its opportunity cost. Shapiro WDT at 19; *see also* SEPFF ¶ 460 (not disputing Professor Shapiro's point that physical marginal cost is zero and that the only marginal cost at issue is marginal opportunity cost).

[80] Professor Willig calculates walk-away opportunity cost on the tautological assumption that, because each Major is a "must have," its refusal to provide a license to Sirius XM would cause Sirius XM to go out of business. As discussed elsewhere in this Determination, Professors Shapiro and Farrell propose the use of a different form of opportunity cost, one that does not assume that the loss of any one Major would cause Sirius XM's demise.

Professor Willig asserted that the walk-away opportunity cost for a "must-have" label is effectively the same as the label's *pro rata* share of the industry-wide opportunity cost. [81] *See* 5/2/17 Tr. 2137 (Willig);[82] *see also* SEPFF 502 at ¶ 502. Professor Willig's opportunity cost calculation thus measures what a must-have *single* record label would earn elsewhere, and proposes it as an industry-wide measure, even if that single record label is the *only* label that declines to license. On this theoretical point, Professor Farrell, one of Sirius XM's economic experts was in basic agreement. *See, e.g.,* 4/24/17 Tr. 665-66 (Farrell) (for label to recover pro rata walk-away opportunity cost, industry-wide royalty rate would have to be at least equal to industry-wide opportunity cost).

Further, Professor Willig opined that individual labels would bargain with an understanding that a royalty unacceptable to that label is likely also unacceptable 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 each label's opportunity cost will equate to an industry-wide opportunity cost. *See* 5/2/17 Tr. at 2030 (Willig).

2. Sirius XM's Criticism of Willig's use of "Walk-away" Opportunity Cost

Sirius XM disputes the notion that opportunity costs should be defined and calculated on an *industry-wide* basis; rather, it asserts that the appropriate calculation must be undertaken in a "label specific" manner. Sirius XM asserts an essential and disqualifying premise: the opportunity cost Professor Willig calculates is the opportunity cost of "either a single monopoly record label or a fully effective cartel."[83] Farrell WRT ¶ 27; *see also id*. at ¶ 31. As Professor Shapiro noted:

> Most fundamentally, Professor Willig is *asking the wrong question*. Rather than attempting to calculate the opportunity cost to an individual label of having its sound recordings performed on Sirius XM, Professor Willig calculates the opportunity cost to the entire recorded music industry, as if a single entity (or a fully functioning cartel) controls the rights to all sound recordings.

Shapiro CWRT at 34. Moreover, Sirius XM claims Professor Willig acknowledged that his opportunity cost calculation was identical to the opportunity cost that would apply "if there were a single monopoly seller of sound recordings…." 5/2/17 Tr. at 2140 (Willig); *see also* Farrell WRT ¶¶ 67-71 (Willig's calculation is "extreme" and leads to inflated opportunity costs).

According to Sirius XM, Professor Willig's opportunity cost approach ignores the goal of determining a statutory rate reflective of an effectively competitive marketplace (as tempered by

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[81] The evidence in this proceeding strongly demonstrates the "must have" status of each Major. *See* SE PFF ¶¶ 517-525 (and record citations therein). Indeed, Sirius XM implicitly acknowledges the "must have" status of a Major, citing a steering adjustment as a method by which to mitigate the "must have" status and complementary oligopoly power of a Major to allow for an effectively competitive market.

[82] Professor Willig did not cite any authority that has previously used the phrase "walk-away opportunity cost." Sirius XM's economic experts assert that Professor Willig's "walk-away opportunity cost" is actually the "monopoly" or "cartel" opportunity cost. For the sole purpose of referring to and discussing Professor Willig's approach, the Judges will use his "walk-away" terminology; that usage does not suggest an equivalence with, or distinction from, monopoly or cartel opportunity cost.

[83] Professor Farrell testified that if a particular label's decision to license is based on "the profit impact on the industry as a whole, that's what we would normally describe as monopoly or cartel behavior." 4/24/17 Tr. 614 (Farrell).

the enumerated section 801(b)(1) factors). *See* 4/20/17 Tr. 418 (Shapiro) ("he is measuring the wrong thing by looking at the monopoly opportunity cost."). Thus, Professors Shapiro and Farrell both opined that a rate based on this industry-wide opportunity cost would be inconsistent with the economic concept of "workable competition."[84] *See* Shapiro CWRT at 37; Farrell WRT ¶¶ 27-29.

Sirius XM candidly admits that its criticism of Professor Willig's walk-away opportunity cost analysis is premised on the *assumption* that a single label "does not have the 'must-have' monopoly power to effectively shut-down Sirius XM's music offering …." SXM PFFCL ¶ 367 (and record citations therein). Having made this assumption, Sirius XM's witnesses explain what they characterize as a fairly simple intuition grounded on their economic modeling in the record: "[A] change in Sirius XM's music mix (*i.e.*, something less dramatic than losing access to *all* music) is likely to result in only some relatively modest loss in subscribers, if any – *not*, as Professor Willig models, *every* Sirius XM subscriber seeking music elsewhere. *See* Farrell WRT ¶ 67.[85]

Sirius XM lodges another fundamental objection to Professor Willig's opportunity cost approach. As Sirius XM notes, Professor Willig's $2.55 opportunity cost calculation was derived by applying the royalties alternative services pay to record companies. In *Web IV*, the Judges found these rates to be inflated by the complementary oligopoly power of the Majors. Sirius XM criticizes "importing" that "supracompetitive" rate into this statutory setting in the absence of any adjustment or allowance for effective competition. The royalty with the most disproportionate impact in this regard is the $[[redacted]]/month royalty charged to subscription interactive services.[86] *See* Written Direct Testimony of Robert Willig, Trial Ex. 28, at ¶ 41 & Table 2 (Willig WDT). Professor Farrell argued that Professor Willig's calculations are significantly infected by the noncompetitive market for licenses to interactive services. *See* 4/24/17 Tr. 636, 640 (Farrell). Professor Farrell cautioned against putting "heavy weight on a rate that has been found to be supracompetitive and driven by complementary oligopoly …." 4/24/17 Tr. at 641 (Farrell). Even Professor Willig agreed that a lack of steering in the interactive market could inflate the opportunity cost calculation for Sirius XM. 5/2/17 Tr. at 2037-38 (Willig).

Further, Sirius XM chastises Professor Willig for a claimed inconsistency. Professor Willig acknowledged on the one hand that *benchmarks* from other distribution channels, such as the interactive services benchmark, must be free of the effects of complementary oligopoly. Nonetheless, he applies the rates from these same distribution channels without a downward adjustment to offset the upward impact of the complementary oligopoly effect when computing opportunity cost. *See* 5/2/17 Tr. 2152-54 (Willig).

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[84] "Effective" competition, as used in this Determination is synonymous with the term "workable competition" that is more commonly used by economists.

[85] Professor Farrell's argument "demonstrated mathematically that if Sirius XM's failure to obtain a license from a record label led to the loss of some, but not all, subscribers, then the walk-away opportunity cost for that label would be significantly less than that label's pro-rated share of the monopoly opportunity cost calculated by Professor Willig, the difference between the two depending on the fraction of Sirius XM subscribers who would cancel their subscriptions in response to the failure of Sirius XM to secure a license from the individual label." Farrell WRT ¶¶ 68, 71.

[86] Based upon Professor Dhar's survey, interactive services' diversion ratio of 31% comprises 70% of Professor Willig's $2.55 opportunity cost. The Judges examine the survey data *infra*, section VI.B.

Sirius XM also criticizes Professor Willig for his second alternative justification for using the industry-wide opportunity cost; that is what Sirius XM labels his "unilateral alignment" approach. *See* SXM PFFCOL ¶¶ 379-382. Sirius XM characterizes this as the "conscious parallelism" of like-minded oligopolists, *viz.*, a form of anticompetitive "tacit collusion which, even though not a violation of any antitrust laws, would nonetheless lead to results that would be inconsistent with the necessity that rates be consistent with the principles of effective (workable) competition." *Id.* ¶ 381 (and record citations therein).

3. The Judges' Use of the Opportunity Cost Model to set the SDARS Royalty Rate

The Judges find that Professor Willig's industry-wide walk-away opportunity cost approach is an appropriate tool, on the present record, to apply as an interim step in crafting the statutory rate. On the one hand, there is no dispute between the parties that the Majors would use this industry-wide opportunity cost calculation to set royalty rates in an unrestricted market. On the other hand, the Judges find there is no *bona fide* dispute but that these rates would partially reflect the complementary oligopoly effect of Majors.

Standing alone, the complementary oligopoly effect within the walk-away opportunity cost model would inflate the rate above the "reasonable rate" the Judges must determine. However, the Judges may mitigate the industry-wide walk-away opportunity cost that incorporates complementary oligopoly effects, as they do in their "fork in the road" approach later in this Determination. Thus, even if one could construe Professor Willig's "walkaway" approach, standing alone, as inconsistent with the concept of effective competition, that inconsistency can be—and is—mitigated because the because the Judges have considered and accounted for such "must have"/complementary inefficiencies by also accepting Professor Willig's practical and reasonable "fork in the road" approach, discussed below.

The Judges find unhelpful SoundExchange's alternative justification for the use of walk-away opportunity costs in the marketplace. This alternative point simply notes that the major record labels, who are oligopolists, would engage in some form of what is known as "conscious parallelism" when negotiating royalties. *See* 5/2/17 Tr. 2027 (Willig) ("decision-making is unilateral, but parallel, across the record [l]abels"); *see also* SE PFF ¶ 526. This exposition explains why oligopolists would move in concert without engaging in explicit collusion, but begs the question whether that concerted price movement would incorporate walk-away opportunity cost *ab initio*. It is Professor Willig's *first* point—that each Major's knowledge of its "must have" status imbues it with *individual* market power to walk-away—that is sufficient to demonstrate the market logic of the industry's collective exploitation of walk-away opportunity cost. *See* 5/2/17 Tr. 2031-34 (Willig).

The Judges also find unhelpful Sirius XM's argument that Professor Willig's opportunity cost approach is the equivalent of a benchmarking approach. To be sure, the point is correct, but its advancement as a criticism is wrong. When properly weighted, the opportunity cost approach is tantamount to a useful benchmark, because the weightings are quite analogous to (and more precise than) the "adjustments" the Judges consistently make to proposed benchmarks. To the extent the opportunity cost is infected by complementary oligopoly inefficiencies that increased the rates from which that opportunity cost is derived, the Judges look to the entire record to ascertain whether and how to account for that factor, as they have by applying Professor Willig's "fork in the road" approach.

B. Application of the Opportunity Cost Approach

To apply the walk-away opportunity cost approach in the satellite radio market, Professor Willig utilized the survey conducted by Professor Ravi Dhar (the Dhar Survey) to calculate his $2.55 per subscriber per month opportunity cost of licensing sound recordings to Sirius XM. Willig WDT at ¶ 41. Professor Willig's analysis is built upon two principal elements: diversion ratios and creator compensation data.

Professor Willig derived the first element (his "diversion ratios"), from substitution data which indicate the other sources and modes of distribution of recorded music to which Sirius XM subscribers would gravitate if Sirius XM were no longer available at acceptable prices. 5/2/17 Tr. 2057-58 (Willig). More particularly, the Dhar Survey examined how Sirius XM subscribers would react to a higher price for a subscription to Sirius XM. 5/2/17 Tr. 2057-58 (Willig). The Dhar Survey first asked respondents if they would discontinue their Sirius XM service at various higher prices. Willig WDT at ¶ 40. Those respondents who answered these "pricing questions" by stating they would cancel their Sirius XM subscriptions were then asked certain "switching questions." The respondents were asked how they would listen to music, and specifically which of the alternative distribution channels presented in the survey question they would select. Willig WDT at ¶ 40 (summarizing relevant aspects of Dhar Survey); Corrected Written Direct Testimony of Ravi Dhar, Trial Ex. 22, ¶¶ 58-60 and App. D at 69-70 (Dhar CWDT).

With the foregoing information in hand, Professor Willig needed to assign monetary values to the diversion ratios. This second element, for which Professor Willig coined the phrase "creator compensation data," is the amount of compensation that would flow to sound recording licensors from the distribution platforms to which Sirius XM subscribers would migrate. 5/02/17 Tr. 2058-59 (Willig).[87]

To link the diversion ratio and creator compensation data for each alternative distribution mode to which Sirius XM subscribers would migrate, Professor Willig multiplied the diversion ratio by the creator compensation data (per subscriber). The product according to Professor Willig equals the opportunity cost associated with consumers listening to Sirius XM as opposed to each alternative distribution mode. 5/2/17 Tr. 2059-60 (Willig).

Professor Willig then added each of the positive weighted levels of monthly creator compensation for each alternative distribution mode. Willig WDT at ¶ 41. According to Professor Willig, this summation represents the total opportunity cost of licensing Sirius XM across all alternative modes of distribution. He summarized his calculations in the following table.

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 Noninteractive	15%	[[redacted]]	[[redacted]]

[87] Professor Willig detailed how he derived the creator compensation data for each line item in his table. *See* Willig WDT ¶¶ 477-485. (The calculation methods are not in dispute.).

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Purchase CDs/downloads	10%	[[redacted]]	[[redacted]]
Ad-supported Noninteractive	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	**2.55**

Willig WDT at ¶ 41, Table 2.

As his tabular data demonstrate, Professor Willig calculated the full opportunity cost across all alternative modes of distribution as totaling $2.55 per subscriber per month. Willig WDT at ¶ 41. This opportunity cost calculation is consistent with SoundExchange's proposed per-subscriber royalty range of $2.48 in 2018 to $2.79 in 2022. Given Sirius XM's ARPU of $[[redacted]] per month, Professor Willig's $2.55 per subscriber rate is equivalent to [[redacted]]% of revenue.[88] Thus, Professor Willig's conclusion is consistent with SoundExchange's 23%-of-revenue rate proposal covering all five years in the forthcoming rate period.

1. Survey Data Underlying "Opportunity Cost" Approach

Professor Willig's opportunity cost approach is dependent upon the weights he placed on various distribution channels. The Judges, therefore, test the underlying survey data on which he relied to assess their reliability or, more specifically, their strength in supporting Professor Willig's conclusions.

The Dhar Survey was conducted as an online survey. The purpose was to measure, *inter alia*, the preferences of Sirius XM subscribers who would choose to cancel their Sirius XM subscriptions at a given price. Dhar CWDT ¶ 10; 5/8/17 Tr. 2728 (Dhar). The survey respondents consisted of current paid Sirius XM subscribers who stated they have the Sirius Select package, as well as current users of a free trial subscription to Sirius XM (typically available with certain new or used vehicle purchases). Dhar CWDT at ¶ 10. Accordingly, the potential population of survey respondents excluded those who understood (correctly or incorrectly) that they subscribed to any other Sirius XM package, such as "XM Select," "Mostly Music," or "All Access."

Professor Dhar directed and conducted the survey between September 14 and September 22, 2016. To ensure the reliability and validity of his online survey results, Professor Dhar designed and administered the survey by applying principles of survey research applicable to online surveys. In total, 2,602 respondents completed the survey. Dhar CWDT at ¶¶ 18-19.[89]

[88] ARPU is the industry acronym for "Average Revenue per User." *See infra* note 141 regarding the calculation of ARPU.

[89] An online survey obtains respondents from existing panels of individuals who have expressed a willingness to participate. Thus, the respondents are not randomly selected from a statistical perspective and, accordingly, no

As noted above, the Dhar Survey consisted of two broad types of questions: "pricing questions" and "switching questions." The pricing questions measured the preferences of Sirius XM subscribers who would choose to cancel their subscriptions at given prices. The Dhar Survey results demonstrated that 76% of Sirius XM subscribers would cancel their subscriptions to Sirius XM at various prices between $11.49 and $20.49 per month.

The first of the "switching questions" asked the 76% who said they would cancel their Sirius XM subscription (at any of the price levels examined) to identify the type of music distribution channel to which they would *subscribe*. The results showed that 28% of Sirius XM subscribers said they would switch to a paid on-demand (*i.e.*, interactive) music streaming service and 14% said they would switch to a paid not-on-demand (*i.e.*, noninteractive) music streaming service. 5/8/17 Tr. 2761-62 (Dhar).[90] In offering survey respondents alternative *subscription* services, the Dhar survey specified a cost of $9.99 per month for interactive services and $4.99 per month for noninteractive services. Respondents were prompted to choose only "a new subscription … not … a music service that you currently subscribe to." Dhar CWDT App. D at 69.

The Dhar Survey also explored preferences of respondents who indicated they would not subscribe to a paid music service. Respondents were permitted to choose more than one alternative music source from among: (1) purchased physical or digital tracks or albums, (2) free music, (3) other, (4) none of the above, and (5) "don't know/unsure." The follow-on question to those respondents who chose "free music" asked them to identify all of the free music sources they would choose. Dhar CWDT at 59-60. The free music options listed included, *inter alia,* (1) free not-on demand (including AM/FM radio over the Internet), (2) free (ad-supported) on-demand music services, (3) borrowed recordings, (4) recordings the respondent already owns, and (5) AM/FM or AM/FM HD broadcast radio. *Id.*

Professor Willig used the results of this Dhar Survey to identify the "Alternative Mode Mix" in his Opportunity Cost analysis, and presented his results in the previous table.

2. Professor Hauser's Criticisms of the Dhar Survey

Sirius XM called Professor John Hauser as a rebuttal expert witness on survey design and methodology. In his written and oral testimony, Professor Hauser leveled a number of criticisms at the Dhar Survey. In particular, he criticized the switching questions and accompanying response choices in the Dhar Survey. Professor Hauser testified that the Dhar Survey was constructed in a manner that biased its results because it: (1) over-emphasized paid interactive

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margin of error or confidence interval can be applied to the results. However, Professor Dhar used what is known as a "bootstrapping procedure," by which a sampling of the survey respondents is itself randomly selected and thereby created a confidence interval around each of the reported survey results. Dhar CWDT ¶ 90.

[90] The percentages of respondents selecting an alternative service are stated as a portion of the entire population of the Sirius XM respondents in the survey, rather than as a portion of those who would choose to cancel their Sirius XM subscription. There were 388 respondents who stated they would cancel their Sirius XM subscription at various price points, which is the denominator Professor Dhar used in his trial testimony to arrive at the 28% and 14% figures. Dhar CWDT ¶ 92. Professor Willig's percentages were higher because he excluded 33 respondents who answered "Don't Know/Unsure" to the switching question. Professor Willig thus determined that 31% (not 28%) of the relevant universe would switch to a paid on-demand service and 15% (not 14%) to a paid not-on-demand service. Willig WDT, App. B at B-2. Sirius XM's witness, Professor Farrell, did not dispute that the relevant denominator is the number of respondents who would choose to cancel their Sirius XM subscription. He used the same adjustment in his rebuttal opportunity cost analysis, as explained elsewhere in this Determination.

and paid noninteractive subscriptions in a biased and artificial manner; (2) "buried" the choice of free music, such as terrestrial radio[91] as an alternative to Sirius XM; and (3) failed to give respondents the option of replacing a Sirius XM subscription with increased listening to an *existing* (as opposed to a new) paid interactive or non-interactive subscription. Rebuttal Expert Report of John Hauser, Trial Ex. 11, at ¶¶ 66-69 (Hauser WRT).

As a preliminary matter, Sirius XM and Professor Hauser assert that Professor Dhar's tilt toward paid subscription services was the consequence of his understanding that the relevant inquiry was "if [respondents] cancelled their [Sirius XM] subscription, what would they *subscribe* to." 5/8/17 Tr. 2886-87 (Dhar). Accordingly, Sirius XM asserts that the Dhar Survey was tainted from the inception because it presented respondents only with definitions for three types of services: satellite radio, on-demand services, and non-on-demand services. Dhar CWDT at 66 (Question 200), 69 (Question 200 and 210). According to Professor Hauser, putting *only* these three types of services in respondents' minds immediately prior to asking the switching questions "emphasize[d] both on-demand and not on-demand services." 5/9/17 Tr. 3034-35 (Hauser). Professor Hauser contended that the Dhar survey "provided no cues to aid in the recall of other music options (*e.g.*, terrestrial radio) to which respondents could switch." Hauser WRT at ¶ 68. As Professor Hauser explained, "[b]y aiding in the recall of paid music services, but relying on unaided recall for other music options (including free music options), Professor Dhar biase[d] his results in favor of switching to paid music services." *Id.*

According to Professor Hauser, this phrasing and choice selection inevitably skewed responses in a way that did not reflect real-world behavior. Specifically, he opined that the non-subscription option that Professor Dhar provided as a potential response ("No, I would not subscribe to a paid music service") was not nearly specific enough to capture a wide range of non-paid music options that respondents might consider, including terrestrial radio. He further testified that, if Professor Dhar had "provided a list of non-paid alternatives or existing paid subscriptions to which respondents might reasonably switch, respondents may have been more likely to select non-paid alternatives or existing paid subscriptions and less likely to select new paid subscriptions." Hauser WRT ¶ 69; *see also* 5/9/17 Tr. 3034-35 (Hauser) (discussing "availability heuristic" and how "when you show people something, it becomes available in memory and they're much more likely … to choose it").

Accordingly, Professor Hauser concluded that the Dhar Survey wrongly *buried* other switching options such as listening to terrestrial radio and omitted altogether listening to services to which the respondents *already paid* to subscribe. Hauser WRT at ¶¶ 65-70.[92] He described the terrestrial radio option as *buried* because, for a Dhar Survey respondent to select terrestrial radio as a choice, he or she would first need to indicate an unwillingness to subscribe to a paid music service in place of Sirius XM. Only then would the respondent be shown the undifferentiated choice of listening to "free music." Even then, the respondent would need to indicate that he or she would "listen to free music," and still would not be offered the explicit choices of listening to

[91] In this Determination, "terrestrial radio" refers to free, over-the-air AM/FM and AM/FM HD radio, but not to AM/FM radio streamed over the Internet.

[92] Confirming the importance of this criticism, Professor Willig criticized the survey by Joseph Lenski, on behalf of Sirius XM, *for the same failure* to offer the alternative of more intense listening to an existing subscription service. Willig WRT ¶ 48. This is an important failure, according to Professor Willig, because a survey that does not offer respondents the option of listening more to an existing subscription "cannot provide the information needed to assess the relevant effect, namely, the impact on creator compensation." Willig WRT ¶ 46.

terrestrial radio or to increase listening to a streaming service to which he or she already subscribed or listened. Only if the survey respondent selected the "free music" option would he or she be presented—for the first time—with terrestrial radio as an optional answer. *See* SXM PFF ¶ 390 (citing Dhar CWDT at 69; 5/8/17 Tr. 2916-20 (Dhar)).

In addition to critiquing the Dhar Survey's switching questions, Professor Hauser created and implemented a "Modified Dhar Survey." In the Modified Dhar Survey, he essentially repeated Professor Dhar's pricing questions, but attempted to reformulate the switching questions in order to provide respondents with the immediate and explicit choices of replacing Sirius XM with either terrestrial radio or increased listening to streaming services to which they already subscribed.[93]

In the Modified Dhar Survey, Professor Hauser first moved the option of listening to terrestrial radio forward in the survey. 5/9/17 Tr. 3049-50 (Hauser). He also added additional alternative responses to the options of choosing "new CDS and/or music downloads," the respondent's "existing collection of CD and/or music downloads," and "other free music option(s) (*e.g.*, free, ad-supported Pandora or Spotify, AM/FM radio over the Internet, and YouTube.)" Hauser WRT at ¶ 79; *id.* App. I at 10. Professor Hauser then added yet more response options to allow respondents to choose explicitly to switch to *existing* music service subscriptions. Hauser WRT at ¶¶ 79, 88, App. I at 10; 5/9/17 Tr. 3061 (Hauser).

When Professor Hauser administered his Modified Dhar Survey to a group of on-line survey respondents, he obtained results significantly different from those Professor Dhar reported. Specifically, Professor Hauser's modifications led to a material drop in the percentage of Sirius Select respondents who indicated that they would replace their Sirius XM subscription with a new paid on-demand service: from 28% of respondents in Professor Dhar's survey (31% as measured by Professor Willig) to only 15% in the Modified Dhar Survey. *See* Hauser WRT Table 1 & ¶¶ 101, 104; 5/9/17 Tr. 3056 (Hauser).

In addition, when Professor Hauser provided respondents the terrestrial radio option early and explicitly, approximately 78% of Sirius Select respondents indicated they would switch to terrestrial radio. Hauser WRT Figure 11-A; 5/9/17 Tr. 3059 (Hauser). This result was in stark contrast to the results from the original Dhar Survey, which indicated that only 29% of the total Sirius Select respondents would replace Sirius XM with terrestrial radio. Hauser WRT Fig 10-B; Dhar CWDT ¶ 52, Table 1. Sirius XM notes that Professor Dhar himself was *unsurprised* by these results. He testified at the hearing that he anticipated that, if he had explicitly offered respondents the choice of free music or AM/FM radio from the outset, he would have expected the number of people who chose those options to be higher. 5/8/17 Tr. 2920-22 (Dhar).

The Judges find the original Dhar Survey to be seriously flawed. The Dhar Survey failed to make prominent to respondents the option of selecting terrestrial radio as an alternative source

[93] Professor Hauser also criticized the "pricing" questions in the Dhar Survey for listing from "low to high" the choice of prices at which Sirius XM subscribers would not renew their subscriptions, rather than also randomly reversing the order to "high to low" for 50% of the surveys. He also found fault with the overall Dhar Survey because it only permitted participation by individuals who thought they were subscribers to Sirius Select. Only about 27% of all Sirius XM subscribers subscribe to the Sirius Select package, and it was unclear whether subscribers knew the name of the Sirius XM product to which they subscribed. Hauser WRT ¶ 124 & Figure 13; *see also* 5/8/17 Tr. 2858-2859 (Dhar). However, Professor Hauser essentially utilized the same predicates to the "switching" questions in his Modified Dhar Survey.

of music if they made a price-based decision not to renew their Sirius XM subscriptions. Equally problematic are the absences from the Dhar Survey of any choice for a respondent to state that he or she would either increase listening to a streaming service *to which he or she already subscribed*, or to increase listening to downloads or CDs *that the respondent already owned*.

Professor Dhar testified that the purpose of the study, as explained to him by the SoundExchange economic expert witnesses, was to estimate the number of cancelling Sirius XM subscribers who would then subscribe to an on-demand or a "not-on-demand" music streaming service. He explained that he did not make alternative free choices more prominent and explicit because the "marketplace context" that "the [SoundExchange] economists … were really interested in" was the subscription streaming context. Tr. 5/18/17 2752 (Dhar); *see also id.* at 2751, 2752, 2754, 2810, 2889, 2921 (multiple instances of justifying the original formulation by reference to "marketplace context"). The Judges find this testimony to be credible, and it suggests that Professor Dhar was not engaged to prepare a study that would give equal prominence to the potential alternative that Sirius XM subscribers might choose free alternatives. Thus, the Judges agree with Sirius XM that, by his own admission, Professor Dhar did not comprehensively measure what Sirius XM subscribers would do if they stopped using Sirius XM. By focusing myopically on what he (misleadingly) was told was the "marketplace context" of subscription streaming, the Dhar Survey essentially assumed its conclusion. This is a crucial defect, given that the use for which the Dhar Survey was intended was to weight "opportunity costs" in a manner that expressly included at least one free alternative, *i.e.*, the substitution of terrestrial radio. It is disingenuous for SoundExchange to argue, through Professor Dhar, that its intention was not to identify the percent of Sirius XM listeners who would choose terrestrial radio (or any other free alternative), given that the Dhar Survey actually *did* solicit such responses, albeit in a fashion that reduced the frequency of that response, particularly in contrast with the results of the Modified Dhar Survey.

The switching questions in the original Dhar survey are problematic for additional reasons. First, the power of a "free" alternative is well-understood. *See* C. Anderson, *Free: The Future of a Radical Price* 4, 2 (2009) ("Free is both a familiar concept and a deeply mysterious one. … 'Free-to-air' radio …created the mass market."); D. Ariely, *Predictably Irrational* at 51-52 (2009).(when offered a Lindt Truffle for 26 cents and a Hershey's Kiss for 1 cent, 40% opted for each choice; when price of each decreased by one cent (making the Kiss free), 90% opted for free chocolate).

Second, as the Lenski Survey[94] made clear, 62% of Sirius XM subscribers had listened primarily to terrestrial radio before switching to Sirius XM. Written Direct Testimony of Joe Lenski, Trial Ex. 7, at 8 (Lenski WDT). Notwithstanding any problems in the Lenski Survey, it is not disputed that a substantial portion of the Sirius XM listener base migrated from listening to terrestrial radio. Sirius XM also presented testimony that the "vast majority" of Sirius XM listening, occurs in the automobile, and most listeners in automobiles still utilize terrestrial radio as their primary music source. *See* Written Direct Testimony of James Meyer, Trial Ex. 1, at ¶ 21 (Meyer WDT). Simply put, the marketplace is suffused with evidence of the substantial past and present use of terrestrial radio.

[94] Sirius XM commissioned a listener survey to determine the sources of Sirius XM listeners and the destinations to which they would migrate if Sirius XM were not available. The Lenski survey is discussed *infra*, section VII.D.

These data underscore the Judges' finding that the Dhar Survey's burying of the terrestrial radio alternative fails to depict the marketplace reality. Indeed, it is surprising that Professor Dhar (and anyone who directed him regarding the purpose of his survey) would repeatedly rely on the "marketplace context" rationale to justify the construction of the switching questions in the Dhar Survey and the results those questions elicited. The failure of the Dhar Survey explicitly to offer to a respondent, *in any set of responses to any questions*, the choice of increased listening to a streaming service to which the respondent has an *existing* subscription is especially problematic. From an economic perspective increased listening by a respondent to a service to which a respondent *already subscribes* is marginally "free," because there is no increase in cost to access an *existing* monthly "all-you-can-eat" subscription to a music service in the car. More egregiously, the Dhar Survey explicitly instructs respondents before presenting the first switching question:

> 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? This would only include a new subscription, and would not include a music service that you currently subscribe to.

Dhar CWDT, at 69, App. D. Thus, not only did the Dhar Survey fail to provide respondents with an explicit choice to utilize a music streaming service to which they had an existing subscription, it explicitly primed them to think specifically of such services and then to consciously NOT select that service as an alternative.

The Judges' foregoing critique should not be understood as a finding that Professor Hauser's Modified Dhar Survey is without defects. Professor Hauser altered the composition of the survey population by excluding respondents who had recently taken a music survey (in an attempt, he claimed, to eliminate respondents who participated in the original Dhar Survey). Hauser WRT at ¶ 96. Professor Hauser's different population renders the Modified Dhar Survey less than perfectly analogous to the original Dhar Survey. The record does not reflect that this alteration of the survey population biased the results; nor is there any evidence that the change was in any way material. Consequently, the Judges do not find this defect to render the Modified Dhar Survey unreliable.

In addition, 24 participants in the Modified Dhar survey said they would listen to an on-demand service to which they already subscribe, even though they had answered the "pricing question" by stating that they were not then subscribing to such a service.[95] *See* 5/8/17 Tr. 2822 (Dhar); Trial Ex. 293, at 1. In his defense, Professor Hauser explained that he used Professor Dhar's non-switching (*i.e.*, pricing) questions verbatim in order to tease out any differences arising from the switching questions, and that the non-switching questions listed only Spotify and Apple Music as interactive services, and Pandora, then a noninteractive service. *See* Dhar CWDTApp. D at 61, 63. Professor Hauser testified that, in his opinion, the anomaly *could* be explained by the fact that respondents who used *other interactive streaming services*, such as those offered by Amazon or Google, might have thought the "pricing" question about existing subscriptions to interactive services was limited to Apple Music and Spotify. Thus the

[95] Professor Dhar identified a potential similar problem with regard to respondents who indicated they would switch to an existing *noninteractive* service, but had previously indicated they did not subscribe to such a service. However, he did not make any adjustments to correct this problem.

respondents indicated they did not subscribe to either of them, but could respond affirmatively that they would listen to *another* On-Demand service to which they subscribed. 5/9/17 Tr. 3104-05 (Hauser). While that explanation is plausible, it is unsupported by record evidence.[96] As Professor Dhar demonstrated, this anomaly materially affected the survey results: if one were to re-categorize those 24 responses as having stated that they would subscribe to a new on-demand service, the percentage of respondents who would switch to a new interactive service would increase from 15% to 19%. 5/8/17 Tr. 2822-23 (Dhar).[97] The Judges adopt Professor Dhar's re-categorization to correct this anomaly in the Modified Dhar Survey.

Finally, Professor Hauser did not identify confidence intervals around his survey results which could have been estimated by use of the "bootstrap" method. Such a subsequent sub-sampling and calculation would have bolstered Professor Hauser's weighting based on the Modified Dhar Survey. *Cf.* Dhar CWDT at ¶ 90. There is no evidentiary requirement that an on-line survey that, by its non-random nature, fails to produce a statistical random sample must be subjected to a bootstrapping approach to carry evidentiary weight. Indeed, the requirements for precise statistical reliability that exist in the academic world should not constrain Judges from accepting and relying on evidence that is otherwise probative when considered in the context of the entire evidentiary record. *See, e.g., Matrixx Initiatives, Inc. v. Siracusano*, 563 U.S. 27, 44 (2011) (demonstration of "statistical significance" not required to demonstrate reliable causal relationship when relationship demonstrated through "content and context" other evidence). Moreover, the standard-setting organization for survey work, the American Association for Public Opinion Research (AAPOR), upon which Professor Dhar relied to use a bootstrapping approach, is by its express language a "nonbinding document," and thus does not require the use of the bootstrapping technique through which statistical significance could be ascertained. *See* Dhar WDT, Ex. G, at 1(*AAPOR Guidance on Reporting Precision for Nonprobability Samples*).

On balance, the Judges find the Modified Dhar Survey (corrected by Professor Dhar, as noted *supra*) to be more probative than the original Dhar Survey. Once corrected to account for the anomalous responses described above, the potential deficiencies in Professor Hauser's Modified Dhar Survey appear to the Judges to be of relatively marginal significance when compared with the defects in the original Dhar survey. The Modified Dhar Survey came closer to the core of the issue at hand: distinguishing among the alternative distribution channels to which erstwhile Sirius XM subscribers would migrate if the Sirius subscription price became so high as to dissuade renewal.

3. Re-Weighting Opportunity Cost Calculation with Modified Dhar Survey

Professor Farrell took Professor Hauser's data from the Modified Dhar Survey and plugged them into Professor Willig's opportunity cost calculations. In so doing, Professor Farrell persuasively demonstrated that Professor Willig's opportunity cost fell significantly below the $2.55 per subscriber per month level, and thus below the [[redacted]]% royalty rate Professor Willig

[96] Professor Dhar posits a different explanation for this anomaly. *See* 5/8/17 Tr. 2814-16 (Dhar). In light of Professor Hauser's failure adequately to explain the anomaly, the Judges need not consider Professor Dhar's alternative explanation.

[97] Professor Hauser also conceded that he checked all the numbers in Trial Ex. 293 (in which Professor Dhar tabulated inconsistent answers in Professor Hauser's survey and listed the sources for the data), and Professor Hauser found them to be correct. 5/9/17 Tr. 3143-44 (Hauser).

found to be implied by that $2.55 figure.[98] *See* 4/24/17 Tr. 636-37 (Farrell); Farrell WRT at ¶¶ 62-66.

Professor Farrell noted that the Modified Dhar Survey had 498 respondents who self-identified as paid Sirius XM subscribers. Among these 498 respondents, 13 answered the survey's pricing questions by stating that they would continue to subscribe to Sirius XM at any price. Therefore, like Professor Willig, Professor Farrell excluded these 13 from the pool used to weight the opportunity cost calculation. Another 22 respondents to the Modified Dhar Survey answered "Don't know/unsure" to whether they would cancel at various hypothetical Sirius XM subscription prices. Again, consistent with Professor Willig's treatment of respondents who answered in this manner, Professor Farrell excluded these 22 respondents from the pool used to weight the opportunity cost calculation. The remaining 463 respondents were then asked what source of music they would switch to *in lieu* of listening to Sirius XM. Farrell WRT, App. F at F-1.

Professor Farrell presented in tabular form (1) the options from which the 463 respondents in the Modified Dhar Survey could choose; (2) the counts of respondents who chose each option; (3) the ratio by which the respondents would divert to each option; and (4) the creator compensation for each option. His calculations are detailed on the following table.

Modified Dhar Survey Responses
Diversion and Creator Compensation

Respondent Choice	Count	Diversion Ratio	Creator Comp/subscriber/mo.
Alternate paid interactive service (*e.g.*, Spotify/Apple Music)	69	15.10%	$[[redacted]]
Existing paid interactive service (*e.g.*, Spotify/Apple Music)	57	12.50%	$0.00
Alternate paid non-interactive service (*e.g.*, Pandora One etc.)	45	9.90%	$[[redacted]]
Existing paid non-interactive service (*e.g.*, Pandora One etc.)	30	6.60%	$[[redacted]]
Alternate CDs or music downloads	97	21.30%	$[[redacted]]
Existing CDs or music collection	240	52.60%	$0.00
AM/FM radio	359	78.70%	$0.00
Other free options	184	–	–
Free, ad-supported non-interactive service	138	30.30%	$[[redacted]]
Free, ad-supported interactive service	92	20.20%	$[[redacted]]
Free, ad-supported music video sites	70	15.40%	$[[redacted]]
Music channel included in existing cable/SAT TV subscription	59	12.90%	$0.00
Peer-to-peer file sharing or free download sites	17	3.70%	$0.00

[98] To be clear, Professor Farrell did not agree with the opportunity cost *values* that Professor Willig calculated, because Professor Farrell described them as monopoly-based opportunity costs (as noted, *supra*, Professor Willig called them walk-away opportunity costs). However, Professor Farrell's re-working of Professor Willig's opportunity cost analysis utilizes, *arguendo*, Professor Willig's "walk-away" opportunity costs.

Borrow CDs, vinyl or tapes from friends or a library	52	11.40%	$0.00
Other free services	13	2.90%	$0.00
Don’t know/unsure	9	2.00%	$[[redacted]]
Other	15	3.30%	$0.00
None	8	1.80%	$0.00
Don’t know/unsure	7	–	–
Total	**463**	–	–

Farrell WRT, App. F, at F-2 (Table 3).[99]

Professor Farrell used the above data to calculate the opportunity cost (*i.e.*, the walk-away opportunity cost). More particularly, Professor Farrell engaged in a nine-step calculation to compute opportunity costs.

Professor Farrell first eliminated the seven respondents who chose “Don’t know/unsure,” noting that this was equivalent to assuming that these seven would divert to the different options in the same proportions as the remaining 456 respondents.[100] He calculated the diversion ratio for each option as the number of respondents who chose that option divided by 456. Professor Farrell then used the same values for “creator compensation per subscriber per month” as set forth in Table 2 of Professor Willig’s WDT, including Professor Willig’s adjustments for intensity of use.[101] *See* Farrell WRT, App. F at F-2.

Professor Farrell noted that in both the Dhar Survey and the Modified Dhar Survey, many respondents chose multiple nonsubscription options. Professor Farrell generally matched Professor Willig’s approach, assuming equal intensity of use for the multiple options chosen by a given respondent.[102] Professor Farrell calculated the *overall* intensity of use for a given option across all respondents who selected that option as equal to the *average* intensity of use for that option across all respondents who selected that option. *See* Farrell WRT, App. F at F-3. Applying this foregoing approach for each option, Professor Farrell calculated an “intensity-adjusted creator compensation.”[103] Professor Farrell’s calculation generates an opportunity cost of $1.44 per subscriber per month.[104] (Professor Farrell also applied the diversion data from the

[99] Professor Farrell used the creator compensation figures from Table 2 in the Willig WDT whenever available. However, Professor Willig had not covered in his Table 2: peer-to-peer file sharing or free download sites, borrowed CDs, vinyl or tapes from friends or a library, other free services, don’t know/unsure regarding free options, and “other.” Professor Farrell discounted this point, noting that (with the exception of “Don’t know/unsure” under free options), these other services not in Professor Willig’s Table 2 have zero creator compensation value.

[100] Professor Willig adopted the same approach when treating “Don’t know/unsure.” Willig WDT at B-3.

[101] Professor Farrell did not opine on the appropriateness of Professor Willig’s adjustment for intensity of use. Farrell WRT at F-2.

[102] *See* Willig WDT at B-3 and B-4. Unlike Professor Willig, Professor Farrell assumed equal intensity of use percentages whenever individuals selected combined free options and paid services in in their multiple option choices, whereas Professor Willig assigned 50% to alternate CD or music downloads, and 25% to each of the free options. According to Professor Farrell, this difference did not have a large impact on the size of the opportunity cost.

[103] Professor Farrell assumed that creator compensation for the option “Other” to be zero. *See* Farrell WRT, App. F, at F-3. Professor Willig appeared to make the same assumption. *See* Willig WDT at B-8.

[104] Professor Farrell recognized that the value (unweighted) of the monthly “unit creator compensation $ per subscriber” could decrease if a lower intensity of use (fewer plays) among those who selected multiple options also

Lenski Survey (discussed later in this Determination) and arrived at a similar opportunity cost estimate of $1.43. Farrell WRT ¶ 66.[105]).

Professor Farrell used the same methodology for survey respondents who were Sirius XM free trial subscribers. *See id*., App F, at F-3–F-4. However, the Judges do not find the trial subscriber population to be an appropriate universe from which to calculate opportunity cost because trial subscribers have not demonstrated a positive WTP.

SoundExchange fails to raise persuasive objections to Professor Farrell's opportunity cost calculation based on the Modified Dhar Survey. In its PFF, SoundExchange asserts only:

> 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.

SEPFF561. Likewise, in its RPFF, SoundExchange does not attack any aspect of Professor Farrell's application of the Modified Dhar Survey, but rather renews its attack on the underlying work of Professor Hauser:

> Professor Farrell's recasting of Professor Willig's calculations using the Hauser survey is invalid since the Hauser survey entirely misstated the switching question, *see* SE FOF at ¶¶ 614-22, and since Professor Hauser conceded unequivocally that the economists should not rely on his survey, *see* SE FOF at ¶ 619 (citing Hauser testimony).

SERPFF, Response to ¶ 408 at 266.

SoundExchange's objection to the use of Professor Farrell's approach is dependent on its antecedent criticism of Professor Hauser's analysis. As discussed, however, the Judges have

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reduced the overall revenue base under a per play royalty structure as calculated under Professor Willig's assumptions. The $1.44 opportunity cost set forth in the accompanying text assumes (in favor of the licensors) that creator compensation for paid services and paid non-interactive services does *not* decrease for decreased intensity of use. Professor Farrell opined that – if *noninteractive* services alone would pay a lower royalty (because their royalty payments are based on a per-play/intensity-based formula), but *interactive* service royalties would not be similarly reduced because of a reduction in intensity of use (*i.e.*, if they more likely to pay royalties on a per-subscriber or percent-of-revenue basis) – his opportunity cost calculation would generate a lower opportunity cost of $1.35. *See* Farrell WRT, App. F, at F-3. However, Professor Farrell does not provide in his written or oral testimony a basis to make this "creator contribution" adjustment based on relative changes in intensity, and the Judges therefore do not credit his argument that – under his reworking of Professor Willig's opportunity cost calculations – the opportunity cost can be reduced from $1.44 to $1.35.

[105] As explained elsewhere in this Determination, the Lenski Survey did not provide pricing information to respondents, making it a less valuable tool for estimating opportunity cost. Accordingly, the Judges do not rely on Professor Farrell's $1.43 opportunity cost calculation that is based on the Lenski Survey as an independent basis to calculate opportunity cost, but rather consider it as confirmation that Professor Willig's opportunity cost calculation (based on the original Dhar Survey) was too high.

found the Modified Dhar Survey results to be more accurate and probative than the results produced by the Dhar Survey. Accordingly, SoundExchange's criticism is without merit.[106]

Using Professor Dhar's corrected calculation indicating that 19% of Sirius XM subscribers would switch to a new interactive subscription service, the per Sirius XM subscriber opportunity cost increases from $1.44 to $[[redacted]].[107] Given Sirius XM's ARPU of $[[redacted]], the percent-of-revenue royalty rate derived from the $[[redacted]] per subscriber per month opportunity cost is 15.5%.[108]

C. Opportunity Cost Model and Effective Competition

In *Web IV*, the Judges reconfirmed that a statutory willing-buyer, willing-seller royalty rate is one that would emerge in a market that is effectively competitive. *See Web IV,* 81 Fed. Reg. at 26334. Both SoundExchange and Sirius XM acknowledge that the rate set in this proceeding must reflect a market with such effective competition. 4/26/17 Tr. 1103 (Orszag) (agreeing that "the rates to be set here by the Judges … must reflect the workings of effective competition"); Shapiro CWDT at 21 ("My approach here is consistent with the one taken by the Judges in *Web IV* …. I use the terms 'workably competitive' and 'effectively competitive interchangeably."); 4/20/17 Tr. 366 (Shapiro) ("prices … at a complementary oligopoly level [are] not [at] a workably competitive level.").

The Judges defined an effectively competitive market In *Web IV* as one that "mitigate[s] the effect of complementary oligopoly on the prices paid by … services …." *Web IV*, 81 Fed. Reg. at 26366. To obtain the rate that is effectively competitive, the Judges considered the services' ability to "steer" listeners as a sufficient counterweight to the Majors' complementary oligopoly power. *Id.* at 26343. The Judges also noted in *Web IV* that SoundExchange had correctly described the concept of effective competition as "fuzzy" and that "no 'bright line' can be drawn between effectively competitive and noncompetitive rates." *Id.* As the Judges further noted, the implication of this "fuzziness" was not that the principle of effective competition should be discarded, but rather that this "fuzzy line" needs to be drawn *on a case-by-case basis*, from the evidence and testimony adduced at the hearing." *Id.* (emphasis added).

In the present proceeding, the parties' economists propose that the Judges once again adjust for improper market power by applying a steering adjustment. SoundExchange proposes

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[106] In its RPFF, SoundExchange adds to its argument: "Professor Hauser conceded unequivocally that the economists should not rely on his survey." However, Professor Hauser made this comment because he also objected to other aspects of the Dhar Survey, particularly with regard to its "pricing" questions, that he nonetheless retained in the Modified Dhar Survey. Thus, he argued that these antecedent deficiencies in the Modified Dhar Survey precluded reliance on the results derived from his modified "switching" questions in the Modified Dhar Survey. The Judges disagree with Professor Hauser's characterization of the deficiencies he identified in the Dhar Survey that were unrelated to the "switching" questions. Thus, the Judges can and do give considerable weight to the Modified Dhar Survey, which they find sufficiently credible and probative.

[107] 15.1% of the "creator contribution" value of $[[redacted]] equals $[[redacted]]. 19% of $[[redacted]] equals $[[redacted]]. The difference is $[[redacted]] ($[[redacted]] - $[[redacted]] = $[[redacted]]). When that $[[redacted]] is added to the $1.44 calculated by Professor Farrell, the full opportunity cost based on the Modified Dhar Survey (as adjusted for the foregoing anomaly in the Hauser survey answers) is $[[redacted]].

[108] Professor Willig attempted to corroborate Professor Dhar's diversion ratios with a regression analysis seeking to measure relative cross-elasticities. The Judges do not apply that analysis because: (1) the Dhar Survey results are without value (as discussed previously) and therefore cannot be "corroborated"; and (2) there were significant disputes regarding the accuracy of Professor Willig's regression that rendered the value of that analysis inconclusive. *See* Shapiro WRT at 27-37.

that the Judges select from one of three possible adjustments: (1) the 12% steering adjustment revealed by the specific steering evidence in *Web IV*; (2) a [[redacted]]% steering adjustment allegedly implied by the provisions of "Mid-tier" agreements[109] between record companies and streaming services, *see* 4/25/17 Tr. at 1053 (Orszag); or (3) a [[redacted]]% steering adjustment implied by rates in direct licenses between Sirius XM and certain Indies. *See* Written Rebuttal Testimony of Jonathan Orszag, Trial Ex. 43, at ¶ 70 (Orszag WRT). However, in this proceeding, these proposed adjustments are unacceptable.

The Judges cannot simply import the 12% steering adjustment from *Web IV* into the satellite market; that 12% figure was derived from highly specific evidence presented in *Web IV*. There is not an adequate basis in the present record to support a finding that the noninteractive market from which that steering adjustment arose is sufficiently similar to the satellite radio market to render reasonable an importation of the 12% steering adjustment here. In particular, the record shows that Sirius XM does *not* steer in the satellite market despite the ability of its human programmers (as opposed to algorithmic programmers) to do so in order to potentially reduce rates in exchange for additional plays, which is the essence of steering. *See infra*, section VII.C.

For two reasons, the Judges cannot accept the proffered [[redacted]] % steering adjustment that SoundExchange divines from the Mid-tier agreements. First, there is no evidence in the record to indicate whether that proposed adjustment may reflect a premium that a Major may impose not to prohibit a licensee from steering away from the licensor, rather than a discount offered to encourage a licensee to steer toward the licensor. Further, the rate differentials in those agreements on which SoundExchange's economic expert, Mr. Orszag, relied appear to be the product of many other differences in those agreements in addition to the steering/no-steering distinction, as Mr. Orszag candidly acknowledged. 4/26/17 Tr. 1155-56 (Orszag); *see also* SXM RPFF ¶¶ 85-86 (and record citations therein).

Finally, the Judges reject any steering adjustment based on the direct licenses between Sirius XM and various Indies. As explained in the discussion of Professor Shapiro's reliance on these direct licenses as benchmarks, the record is clear that multiple other provisions of those direct licenses provided substantial consideration to the Indie licensors to justify their willingness to enter into those deals. Moreover, the Indie direct licenses contain neither legal guarantees nor economic incentives that would compel or motivate steering by Sirius XM in favor of direct licensors.

Accordingly, the Judges must review the record in this proceeding to identify a means to establish rates that are consistent with effective competition. The Judges accept certain principles regarding the nature of effective competition. "Between the extremes of a market with 'metaphysically perfect competition' and a monopoly (or collusive oligopoly) market devoid of competition there exists '[in] the real world … a mindboggling array of different markets' … all of which possess varying characteristics of a 'competitive marketplace.'" *Web IV* at 26333 (citing *Web III Remand*, 79 Fed. Reg. at 23114, n.37).[110] Economists have long understood that the "fuzzy" nature of the concept of effective competition is inescapable, yet the concept must be

[109] "Mid-tier" services means Internet streaming services that offer only limited interactivity, and thus offer a tier of service between a noninteractive service and a fully interactive service. The limited interactive functionality of the mid-tier service offerings includes limited caching and playbacks.

[110] *See* J. M. Clark, *Toward a Concept of Effective Competition*, 30 Am. Econ. Rev. 241, 243 (1940) ("The specific character of competition in any given case depends on a surprisingly large number of conditions ….").

applied, lest pragmatic economic analysis be straightjacketed by rigid textbook models such as perfect competition and simple monopoly.[111] The D.C. Circuit has recognized this conceptual fuzziness, acknowledging in the rate-setting context the need for pragmatic market analysis, establishing rates intermediate between the pedagogical poles of perfect competition and pure monopoly. *See Intercollegiate Broad. Sys., Inc.* v. *Copyright Royalty Board,* 574 F.3d 748, 757 (D.C. Cir. 2009) (*IBS*) (statutory provisions "do[] not require that the market assumed by the Judges achieve *metaphysical* perfection in competitiveness" (emphasis added)).[112]

D. Professor Willig's "Fork in the Road" Approach and Sirius XM's Own Market Power

The Judges find no basis to lock themselves into a Hobson's choice by which they must either adopt an inapplicable steering adjustment as a proxy for an adjustment to reflect effective competition, or accept a rate that is higher than an effectively competitive rate.[113] "Steering" is not the only way the inefficient market power of complementary oligopoly can be offset or mitigated in order to establish an effectively competitive rate.

In this regard, in his hearing testimony, Professor Willig explained how and why his opportunity cost approach would result in a rate that is effectively competitive. Professor Willig described a "fork in the road" for the Judges as follows:

> [T]he fork in the road is whether, in considering the comparison between the opportunity cost and the royalty rate in the target market, should you take the other markets as they are or should you bring in hypotheticals and make adjustments to the opportunity cost based on … changes in the other markets? And that to me is a very consequential fork in the road ….

5/2/17 Tr. 2040 (Willig); *see id.* at 2047, 2153. Professor Willig opined that attempts to adjust one rate downward, such as the interactive rate, to account for the complementary oligopoly effect, would be incomplete, *because other distribution modes, such as terrestrial radio, do not generate sound recording royalties and thus do not create a positive opportunity cost.* Thus, Professor Willig described as a "morass" any attempt to take the "fork-in-the-road" by which the Judges attempt to adjust every rate that fails to reflect market forces. *See id.* at 2057, 2048. Rather, he recommends that the Judges "should take the fork in the road that says take those markets as they are because that's what drives honest-to-goodness opportunity cost." *Id.* at 2057.

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[111] *See* A. Kahn, *Antitrust Policy*, 67 Harv. L. Rev., 28, 35, (1953) ("[T]here exists *no generally accepted economic yardstick* appropriate for incorporation into law with which objectively to measure monopoly power or determine what degree is compatible with workable competition."); J. Markham, *An Alternative Approach to the Concept of Workable Competition* 349, 361 (1950) (The concepts of "market performance and workable competition are essentially pragmatic"); G. Stocking, *Economic Change and the Sherman Act: Some Reflections on "Workable Competition,*" 44 Va. L. Rev. 537, 553 (1958) ("the economists' concept of workable competition … is vague ….).

[112] The quoted language refers to section 114(f)(2)(B), which governs the compulsory license for eligible nonsubscription services and new subscription services. Under the license at issue in the present case, the D.C. Circuit has not required the Judges to adopt market rates. However, to the extent that the Judges choose to use market rates as an input for the development of rates under section 801(b)(1) (as they do here), the quoted language from *IBS* is instructive.

[113] A third possibility would be to utilize an otherwise appropriate market benchmark rate that is effectively competitive. However, the Judges cannot identify such a rate in the present record.

This is precisely what the Judges accomplish by taking the opportunity cost analysis that results in the $15.5% rate.[114] The Judges further note that Sirius XM did not challenge Professor Willig's "fork in the road" concept, either in cross-examination or in its post-hearing proposed findings and replies to proposed findings.

Accordingly, the Judges find that the 15.5% opportunity-cost derived rate: (1) reflects the offsetting market forces of higher complementary oligopoly rates and lower (zero) opportunity costs attributable to listeners who otherwise would migrate to terrestrial radio; and (2) is consistent with Professor Willig's opinion regarding the need for a consistent treatment of market forces, as described in his "fork in the road" analysis.

This "fork in the road" approach is also consistent with a recognition of the countervailing downstream market power that Sirius XM, the sole SDARS licensee, possesses as a monopolist in that downstream market, narrowly defined as the market for the sale of subscriptions to satellite radio. To be sure, this narrow definition of the market ignores various other forms of music distribution, such as terrestrial radio and all other alternative distribution channels identified in the survey analyses. However, as that survey evidence makes clear, even terrestrial radio, which is free to the listener, cannot attract sufficient listeners to deprive Sirius XM of the substantial profits it realizes from its unique position as the only supplier of satellite radio in the market. Further, Sirius XM is priced higher than interactive (and noninteractive) streaming services. Yet, despite their differentiated features, those services to date have been unable to convince enough Sirius XM subscribers to convert to a new paid subscription service to reduce the revenues and profits realized by Sirius XM. Clearly, Sirius XM's uniquely differentiated service has struck a chord with music listeners—particularly those who listen to Sirius XM in the car. This point was made clearly by Professor Shapiro, who testified:

> Sirius XM spends substantial sums of money on its infrastructure and satellites. In doing so, it creates a unique differentiated service. That is quite valuable to consumers. That's why they are willing to pay for the service and, of course, most of the listening is in the car.

5/4/17 Tr. 2550 (Shapiro).[115]

Correspondingly, Sirius XM bears all the hallmarks of a "natural monopoly." A natural monopoly develops when "it is cheaper for [an] entrepreneur to produce *q* units than it is to have those units produced by two [or more] smaller firms …." A. Schotter, *Microeconomics: A Modern Approach* 416 (2009); *see also* W. Baumol and R. Willig, *Fixed Costs, Sunk Costs, Entry Barriers, and Sustainability of Monopoly*, 96 Q.J.Econ. 405, 409, 418 (1981) ("[A]n industry has been called a natural monopoly if … industry outputs can be produced more cheaply by a single firm than by any combination of several firms. These per unit costs arise from relatively large sunk costs (compared to marginal costs) and those sunk costs act as "barriers to entry [that] …

[114] The Judges' rate is less than the rate proposed by Professor Willig, because the Judges give less probative weight to the Dhar Survey, not because they disagree with Professor Willig's opportunity cost approach.

[115] Sirius XM is both a monopolist, in the sale of satellite radio subscriptions, and a competitor among the various distribution channels more broadly. This is not an inconsistency. Since 1933, economists have recognized that a firm may be a "monopolistic competitor," with the power of a monopoly (as reflected in the downward sloping demand curve it faces) but the restraints of competition (making that demand curve relatively elastic compared to the demand curve for the product of a full-fledged monopolist). *See* E. Chamberlin, *The Theory of Monopolistic Competition* (1933).

impede the establishment of new firms [because] [t]he need to sink money into a new enterprise, whether into physical capital, advertising, or anything else imposes a difference between the incremental cost and the incremental risk that are faced by an entrant and an incumbent"); H. Varian, *Intermediate Economics: A Modern Approach* at 453 ("When there are large fixed costs and small marginal costs, [that] situation is referred to as a natural monopoly."). As a natural monopolist in the satellite radio market, Sirius XM can, and does, realize substantial profits, as demonstrated in fine detail by Professor Lys. The history of Sirius XM bears out this point. When there were only two satellite firms – Sirius and XM – both were on the brink of bankruptcy. *See SDARS II*, 78 Fed. Reg. at 23069. After they merged, they were transformed from two pumpkins into a single coach, as it were, realizing profits across many financial measures. *See* Lys WDT, *passim*.

In the hypothetical market the Judges construct in this proceeding, they identify significant power on both the licensor side and the licensee side. On the licensor side, that power is reflected in the opportunity cost analysis—the "creator contribution" values identified by Professor Willig. Those values embody the complementary oligopoly features that flow from the "must have" nature of the Majors' repertoires. On the licensee side, there are profits that flow from two sources: (1) the highly differentiated nature of Sirius XM's offerings that permits it to attract listeners who otherwise would listen to free terrestrial radio; and (2) the entrepreneurial ability by which Sirius XM has harnessed the natural monopoly structure of satellite radio delivery to its financial benefit.

The Judges find from this record that the hypothetical upstream market negotiations between such economically powerful entities would resemble a bilateral monopoly. Thus, as Professor Willig testified, the record companies would be expected to recover their opportunity costs (inclusive of any complementary oligopoly profits). Through its own market power, Sirius XM could afford to pay those opportunity costs because, as Professor Lys explained,[116] it earns sufficient profits to pay those opportunity costs and still earn a significant profit.

Thus, Professor Willig's "fork in the road" approach, and Sirius XM's capacity to pay the market-based opportunity costs, taken together or separately, are supportive of the 15.5% rate determined by the Judges.

E. The "Efficient Component Pricing Rule"

Professor Willig identified another approach to rate-setting – the Efficient Component Pricing Rule (ECPR). As he described this approach:

> The ECPR rates would be calculated by adding on to the direct cost of providing access the opportunity cost of the competitive entry; *i.e.* the margin on the competitive business that the copyright owners would lose if the entrant won that business away. In short, ECPR prescribes rates for access equal to direct plus competitive opportunity costs.

Willig WDT ¶ 35.

Professor Willig testified that the ECPR could be "somewhat relevant here since the statutory royalty at issue can be construed as the price of access to the copyrights protecting the

[116] Professor Lys's detailed examination of Sirius XM's profitability is discussed later in this Determination.

sound recordings, and since the various modes of distribution of the sound recordings do compete with each other to various extents." Willig WDT ¶ 14. Moreover, Professor Willig noted that "by its very design, ECPR is arguably consistent with the policy objectives (a), (b), and (c) of section 801(b)(1)." *Id*. At first blush, it is puzzling that Professor Willig did not include in his written testimony an *explicit* application of the ECPR model.[117] However, in a colloquy with the Judges, Professor Willig acknowledged that his "opportunity cost" model constituted an application of the ECPR model.[118]

Professor Willig testified that he was reluctant to rely solely on the ECPR approach because it is intended to establish rates that correct for the case in which an owner of an upstream essential ("must have") input *also competes downstream in the retail market* (*i.e.*, a vertically-integrated firm) but refuses to make the essential input available to would-be competitors (*i.e*., the upstream firm engages in what is known as "foreclosure").

The Judges find the Opportunity Cost/ECPR approach to be more applicable here than Professor Willig suggested. Although the Judges do not constitute an "antitrust court," the parties acknowledge that the Judges must establish rates that are effectively competitive, *i.e.*, that adjust or offset sufficiently for any complementary oligopoly power in the benchmark markets or in the markets from which opportunity costs arise. Whereas an "antitrust court" would seek to remedy, *ex post*, pricing that was in excess of an ECPR-derived price, the Judges here are charged with setting a rate, *ex ante*, that reflects an effectively competitive rate. There is no reason why an ECPR rate could not accommodate *ex ante* rate-setting as well provide an *ex post* remedy.[119]

Moreover, a particular limitation of the Opportunity Cost/ECPR approach is expressly accounted for in the present statutory and regulatory structure. That is, some economists have questioned whether the ECPR truly models for an efficient and competitive price, because the opportunity cost of the upstream supplier(s) that must be covered by the rate has embedded within it supracompetitive profits that are not the consequence of more efficient operations. *See generally* C. Decker, *Modern Economic Regulation* 151 (2015) ("[T]he ECPR does not seek to address concerns about monopoly pricing …. [T]he ECPR approach effectively guarantees the pre-entry profits of the incumbent, including any inefficiency associated with its historic activities.").[120] In rate-setting proceedings, when presented with sufficient evidence, the Judges can and do expressly adjust or offset marketplace rates in order to reduce the royalty to a level

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[117] The absence of a more explicit application of the ECPR approach by Professor Willig in his Written Direct Testimony is also somewhat surprising because Professor Willig has been identified by his colleagues as the economist who first developed the ECPR approach, also known as the "parity pricing" principle. *See* W. Baumol, J. Ordover, and R.D. Willig, *Parity Pricing and Its Critics: A Necessary Condition for Efficiency in the Provision of Bottleneck Services to Competitors*, 14 Yale J. Reg. 145, 148 n.4 (1997) ("So far as we have been able to determine, the ECPR proposal stems from Willig's work. Robert D. Willig, *The Theory of Network Access Pricing*, in *Issues in Public Utility Regulation* 109 (1979).").

[118] *See* 5/2/17 Tr. at 2107.

[119] One of Professor Willig's colleagues and frequent co-authors, and a developer of the ECPR approach, the late Professor William Baumol, explicitly noted the appropriateness of applying the ECPR approach to the setting of royalties for licenses in the music industry. W. Baumol, *The Socially Desirable Size of Copyright Fees,* 1 Rev. Econ. Res. on Copyright Issues 83 (2004).

[120] The inefficiently high downstream price is set when, in the usual situation, the vertically-integrated supplier sells at a monopoly retail price. In the present context, the Majors, as complementary oligopolists, price their sound recordings in the unregulated interactive market above even the monopoly level and the retail interactive services must cover their input costs through retail prices higher than they would be in the absence of such inefficiently high input prices. *See Web IV,* 81 Fed. Reg. at 26343.

that better reflects effective competition, rather than simply allowing the rate to incorporate (without a downward adjustment or offset) the full complementary oligopoly effect baked into the opportunity cost.

On balance, the Judges find Professor Willig's discussion of the ECPR approach to be persuasive confirmation of the Judges' finding that his Opportunity Cost approach provides an appropriate basis for setting a reasonable rate when the proper survey data are used as inputs.[121]

F. Professor Willig's Nash Bargaining Solution Approach

Professor Willig asserted that the walk-away opportunity cost he calculated, $2.55 per subscriber per month, represented only the *minimum* that each label would accept in unregulated negotiations with Sirius XM. As he further explained, in an unregulated market, even after receiving the full walk-away opportunity cost, the label would still negotiate with Sirius XM for a portion of the surplus value (revenue over costs) that remained. In order to quantify this surplus, and to calculate and then add the label's share of the surplus to the label's walk-away opportunity cost, Professor Willig applied what is known in game theory and in economics as the "Nash Bargaining Solution," which he described as a type of price discovery engaged in by an "unregulated profit-maximizing firm." Willig WDT at ¶ 38. The Nash Bargaining Solution is an analytic approach that identifies a price agreed to in a bilateral negotiation between one buyer and one seller, in which each party will refuse to accept a value below that which it would receive absent an agreement (referred to as its "threat," "disagreement," or "fallback" point), and each party uses its "bargaining power" to negotiate for itself the greatest share of any surplus value (*i.e.*, value in excess of the sum of both parties' "threat/disagreement" point values). *See id*. Under this model, the surplus that can be created *may* be split evenly between the parties. 5/2/17 Tr. 2116-18 (Willig). A 50:50 split of the surplus assumes the parties have equal bargaining power and means the parties benefit equally by executing the agreement.[122] 5/2/17 Tr. 2110 (Willig).

In this model a record label's fallback point would be its walk-away opportunity cost, which Professor Willig calculated to be $2.55 per subscriber per month. Willig WDT at ¶ 48; 5/2/17 Tr. 2110-11 (Willig). Sirius XM's fallback point would be its projected ARPU in the absence of music programming, less variable costs (*i.e.*, its earnings in a world absent an agreement with the single seller (record company) in this model).[123] Professor Willig computed this amount to be $[[redacted]] per subscriber per month. *See* Willig WDT at ¶ 48.

Professor Willig calculated the total earnings created by Sirius XM's compulsory license (Sirius XM's ARPU less variable costs exclusive of royalties) as $[[redacted]] per subscriber per

[121] As discussed in connection with Factor C in the itemized 801(b)(1) factors, Sirius XM's development of a differentiated product through its satellite-based network constitutes a form of product differentiation that creates value and profits that, under Factor C (and under an appropriate consideration of the ECPR approach) should continue to inure to the benefit of Sirius XM, net of the licensors' opportunity costs..

[122] Importantly, this does *not* mean each party enjoys equal profit. The parties may not profit equally "because their fallback values (opportunity costs) may have been different." 5/2/17 Tr. 2110 (Willig). Even if parties do not possess equal bargaining power, and even if that disparity in bargaining power is incorporated into a Nash model, neither party would be compelled by the assumptions of the model to accept less than its fallback value, *i.e.*, its opportunity cost. *Id*. at 2110-11 (Willig).

[123] Professor Willig based his projection on the finding in the Boedeker Survey that 70% of Sirius subscribers would leave in the absence of music programming. *See* Willig WDT at ¶ 48 & n.22. He computed variable costs as [[redacted]]% of ARPU, based on Professor Lys's testimony. *See id*. at ¶ 48 & n.21.

month. This resulted in a surplus from the agreement of $2.78 per subscriber per month.[124] Assuming that the parties would divide the surplus equally, Professor Willig opined that the record labels would earn from the agreement their opportunity cost of $2.55 plus one-half of the surplus ($1.39) for a total of $3.94 per subscriber per month. *See id*. at ¶ 49. Given a Sirius XM ARPU of $[[redacted]], this per subscriber rate is equivalent to a percent-of-revenue rate of [[redacted]]%.

Based on this alternative approach, SoundExchange concludes that "Professor Willig's Nash Bargaining Solution therefore appropriately *suggests* a rate above the copyright owners' opportunity costs." SEPFF ¶725 (emphasis added). As such, SoundExchange argues that this approach confirms the reasonableness of its even lower $2.55 per month subscriber royalty and the equivalent 23%-of-revenue rate implied by that per-subscriber proposal.

Sirius XM levels two basic criticisms at Professor Willig's Nash Bargaining Solution model. First, it asserts that Professor Willig's Nash Bargaining Solution posited a monopoly seller of sound recording performance licenses, which is antithetical to the requirement that the statutory rate must represent the product of a hypothetical market that is effectively competitive. SXMRPFF ¶196 (and record citations therein).[125] Second, Sirius XM notes that SoundExchange's proposal that the Nash surplus be deemed split 50/50 (rather than in favor of a record company) is irrelevant, because the opportunity cost figure of $2.55 is already inflated by the complementary oligopoly effect in that opportunity cost figure. *See id*. at ¶ 197 (and record citations therein).

As the Judges have held previously, a significant problem with a Nashian analysis is that the bargaining power of the respective parties is speculative and thus the outcome of the bargain is *indeterminate*. *See SDARS I*, 74 Fed. Reg. at 23058; *see also id*. at 23083 (dissenting opinion) (concurring on the indeterminacy of a "surplus-splitting" analysis). In the present case, the Nash Bargaining Solution again was not developed sufficiently in the record for the Judges to rely on that approach as an independent useful tool for setting the statutory rate.

G. Professor Willig's "Ramsey Pricing" Approach

In another pricing approach, Professor Willig applied the economic concept of "Ramsey Pricing." This approach is designed to address the economic issue of "[h]ow to price various products or services whose supply draws on common assets in a fashion that maximizes consumer welfare while also providing enough net revenue to meet an overall financial target." Willig WDT at ¶ 13.[126] In the context of this proceeding the "common assets" are the sound recordings supplied by the record labels. Professor Willig does not look to the Ramsey Pricing approach to recommend an SDARS royalty rate; rather, he uses the Ramsey Pricing approach as "directional"

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[124] Professor Willig computed the surplus as the total earnings from the agreement less the sum of the parties' fallback points. *See* Willig WDT at ¶ 48.

[125] Sirius XM also relies on Professor Farrell's "Nash-in-Nash" model, as a counterpoint to Professor Willig's Nash Bargaining Solution. Professor Farrell injects a second record company to the Nash approach, as contrasted with the single record company assumed by Professor Willig. However, Sirius XM acknowledges that Professor Farrell's "Nash-in-Nash" approach was not intended to provide a separate rate proposal, but rather to demonstrate the fact that the absence of competition would inflate the rate above an effectively competitive rate. *Id.* ¶¶ 198-200 (and record citations therein).

[126] Ramsey pricing 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. Willig WDT at ¶ 13 n.4.

guidance to substantiate his conclusion that the SDARS royalty rate should be higher than the current statutory rate. 5/2/17 Tr. 2086 (Willig).

Ramsey pricing requires that for different modes of distribution of sound recordings, price-cost margins should be inversely proportional to each distributor's own price elasticity of demand. *See* Willig WDT at ¶ 32; *see also* 5/2/17 Tr. 2094 (Willig). 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 (Willig).[127]

When demand for a music service is relatively less sensitive to price, that suggests that the service is relatively more valuable to its users. Willig WDT at ¶ 33. Accordingly, it follows that Ramsey prices should be relatively higher for users of that service, to allow for greater contributions toward compensation to the producers of the recorded music (*i.e.*, the common asset used by all distribution channels). Willig WDT at ¶ 32. Services with relatively lower elasticities of demand will lose relatively less downstream revenue, so higher royalties, even if passed on to subscribers or advertisers, will have less impact on usage decisions made by those distribution modes and their consumers, as compared to services with higher elasticities of demand. *See* Willig WDT at ¶¶ 32-33.

Ramsey pricing reasonably assumes there is a target amount of money that the producers of the common assets need to realize. In the present context, Professor Willig identified that financial target as equal to the monetary value of download sales lost by the labels due to the increase in streaming. Willig WDT at ¶ 31. To identify his Ramsey target, Professor Willig measured the amount of creator compensation lost as a result of the movement toward streaming and away from paid downloads since 2010. Willig WDT at ¶ 22. Based on his econometric analysis, he concluded that substitution of streaming services for downloads has cost the recording industry about $800 million per year from 2010 through 2016. Willig WDT at ¶¶ 22-28, and App. B. Professor Willig concludes that the Ramsey Pricing across distribution channels must be sufficient to offset these shortfalls, and that, specifically, SDARS royalties must be increased.

Professor Willig then estimated the relevant upstream elasticity of Sirius XM's demand for sound recordings, factoring in both downstream and upstream effects. He opined that, at current royalty rates, Sirius XM's upstream demand for sound recordings is much more inelastic than the upstream demand of interactive services. Given this finding, 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. 2099-2100 (Willig). Thus, Professor Willig estimated that Sirius XM could pay a royalty of $[[redacted]] per subscriber per month and still achieve the same margin as the interactive streaming services. Willig WDT ¶ 50. According to Professor Willig the upshot of that conclusion is that Ramsey pricing principles suggest that Sirius XM should pay a substantially higher royalty in order to contribute appropriately (under his Ramsey approach) to meet the Ramsey revenue target. Willig WDT at ¶ 50.

[127] Shorn of economic jargon: for certain distribution channels, subscribers will be relatively less likely to cancel their subscriptions if their subscription charge increases, as compared with other distribution channels.

Sirius XM notes the facial "theoretical attractions" of an appropriately specified Ramsey pricing approach, but finds Professor Willig's approach not to constitute an actual Ramsey pricing analysis. Sirius XM finds two essential elements of the Ramsey pricing approach missing from Professor Willig's analysis. First, he did not identify a financial target sufficient to provide for the creation of the sound recordings. *See* 5/2/17 Tr. 2171-72 (Willig); 4/24/17 Tr. 652 (Farrell); *see also* 5/2/17 Tr. 2176-77 (Willig) (acknowledging no analysis of "how much revenue is actually necessary to fund the recording industry's investment in sound recordings").[128]

Second, Sirius XM asserts that Professor Willig did not identify all users of the common assets and set prices for each that collectively would meet the Ramsey financial target, *i.e.*, cover record industry costs while maximizing consumer welfare. Professor Willig concedes this point. *See* 5/2/17 Tr. 2172 (Willig) (did not "analyze[] all the different modes of distribution that use sound recordings and determine[] the Ramsey prices that would result"); *id.* at 2177-78 (Willig) ("I have not done a formal financial analysis of impacts of royalty rates on either creation or what you just called availability.").

In addition, Sirius XM notes that the analysis takes as its starting point the same measure of opportunity cost used in all of Professor Willig's approaches, the improper $2.55 opportunity cost inflated by complementary oligopoly effects. *See* Farrell WRT at ¶¶ 90-94; *see also* 4/24/17 Tr. 653-54 (Farrell).

The Judges find Professor Willig's implementation of the Ramsey pricing approach unhelpful. Professor Willig ultimately neither derived nor proposed a royalty rate from this analysis.[129] Nor could he do so, given that his analysis does not establish a revenue target, and does not factor in the contribution of other users of the common assets. To the extent Professor Willig's assertion that his Ramsey approach has value in this proceeding because it provides "directional" evidence has any validity, the Judges note that the adoption of the 15.5% rate derived from his opportunity cost analysis is consistent with this directional guidance.

H. Mr. Orszag's Ratio Equivalency Model

SoundExchange also presented expert testimony from Mr. Jonathan Orszag. Mr. Orszag's approach to determining SDARS rates was based upon ratio equivalencies. Specifically, he opined that the royalties in the target market (*i.e.*, those paid by an SDARS) should be set at a rate that makes the ratio between royalties and revenues in that target market equal to the ratio between royalties and revenues in a benchmark market. Mr. Orszag noted that the Judges "found this assumption to be warranted as a matter of economic theory" in *Web IV*. Amended Written Direct Testimony of Jonathan Orszag, Trial Ex. 26, at ¶ 37(Orszag AWDT).

[128] While, (as noted in the text, *supra*) Professor Willig did offer a regression analysis purporting to identify $800 million in annual losses to the record industry over the past several years caused by "streaming" (not simply satellite radio), Willig WDT ¶¶ 22-27, he acknowledged that the figure played no direct role in any of his calculations, including his "Ramsey" analysis. 5/2/17 Tr. 2167:24-2169:18 (Willig).

[129] Professor Willig stated that one reason he declined to propose the $[[redacted]] monthly per subscriber royalty (which the Judges understand to be equivalent to [[redacted]]% of revenue) is that he could not evaluate how such a substantial increase in the royalty rate would increase subscription rates and create a loss of subscribers and subscriber revenue. In economic terms, he could not opine as to whether, assuming that Sirius XM passed through to subscribers such a higher royalty rate, the downstream elasticity at that price point would be so high as to actually reduce Sirius XM's revenue.

Mr. Orszag began his analysis by opining that in this case "[i]t is … appropriate to use current *marketplace* agreements in evaluating the range of reasonable rates for the upcoming licensing period." 4/25/17 Tr. 953 (Orszag) (emphasis added). Marketplace rates are the appropriate starting points, according to Mr. Orszag, because "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," *i.e.*, "[r]ates yielded through … unfettered negotiations …." Orszag AWDT at ¶ 12. Accordingly, Mr. Orszag utilized a marketplace benchmarking approach.

Mr. Orszag's first step was to identify what he found to be comparable benchmark rates that he could adjust, if and as warranted, to determine the rates that would apply in the target market (SDARS) if it were unregulated. Orszag AWDT at ¶ 13. He looked first at royalty rates in the interactive music streaming services for data. Then, he analyzed retail price data for both the interactive and noninteractive music streaming services. In selecting his benchmarks, Mr. Orszag looked for agreements entered into by record companies with streaming services that in his opinion are comparable to satellite radio across pertinent dimensions. Additionally, he considered whether the benchmark evidence permitted him to account for material differences, if any, between the benchmarks and the target market. Orszag AWDT at ¶ 28.

1. Mr. Orszag's Benchmark "Approach One": Ratio Equivalency with the Interactive Market

Applying these considerations, Mr. Orszag identified the market for the licensing of sound recordings by record companies to interactive streaming subscription services as the best available benchmark category for satellite radio, due to what he believed to be "the comparability of the two types of service along key dimensions and the availability of reasonable methodologies with which to adjust for pertinent differences." Orszag AWDT at ¶ 29. More particularly, Mr. Orszag identified the following alleged comparable qualities in the "downstream market"[130] between the target and benchmark markets:

- both categories of services offer a full repertoire of music;
- both categories of services offer subscription-based models, thereby demonstrating that their listeners' have a positive willingness to pay;
- both categories of services face similar downstream elasticities of demand;
- both categories of services offer products that compete with each other;
- consumers in both categories of services receive music digitally;
- consumers in both categories of services obtain unlimited usage;

[130] The "downstream market" is the market in which licensees of sound recordings offer their services to subscribers or other end users/consumers. The "upstream market" is the market in which record companies (a/k/a/ labels), as licensors, license their repertoires to services, as licensees, for ultimate dissemination in the downstream market. *See Web IV*, 81 Fed. Reg. at 26332 n.69.

- both categories of services offer mobile functionality, Sirius XM principally through in-vehicle receivers and interactive streaming through smartphones and other mobile devices; and
- interactive streaming services increasingly offer a "lean-back" [131] functionality (akin to the functionality of Sirius XM listening) through playlists generated by the services, third parties, and subscribers, as well as algorithmic streams.

4/25/17 Tr. 968 (Orszag); Orszag AWDT at ¶ 32.

Mr. Orszag further opined that sound recording performance rights are similarly *indispensable* inputs in the upstream market for both interactive streaming services and Sirius XM. From an economic perspective, he explains that the upstream demand for sound recording rights is what economists call a "derived demand," *i.e.*, upstream demand is derivative of downstream consumer demand. Mr. Orszag further opined that, because of this indispensability, 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. Orszag AWDT at ¶ 31.

To determine the rates actually paid by subscription interactive services, Mr. Orszag reviewed the monthly royalty rates and royalty payments set in 27 current license agreements between three major record labels[132] and nine interactive streaming services,[133] from January 2014 through June 2016. Orszag AWDT at ¶ 45; *see* 4/25/17 Tr. 985 (Orszag) ("So I got the royalty statements from 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.").[134]

The table below presents the actual monthly per-subscriber royalty payments made by the subscription interactive services to each of the Majors. These data produce an average monthly per-subscriber payment of $[[redacted]], weighted by the number of subscribers per service. Orszag AWDT at ¶ 46.

[131] Functionally noninteractive services are generally described in the industry as "lean-back" services, as contrasted with "lean forward" services that have varying degrees of interactivity. *See Web IV*, 81 Fed. Reg. at 26336 n.75.

[132] Sony Music Entertainment (Sony), Universal Music Group (UMG), and Warner Music Group (WMG) are the three major record labels (together, the Majors).

[133] The nine services are listed in the table that follows in the text, *infra*.

[134] The agreements Mr. Orszag studied contain royalty rate provisions that require the services to calculate royalty obligations under separate "prongs": a [[redacted]] metric and a [[redacted]] metric, and in some cases a [[redacted]] metric, and then pay each label its pro rata share of [[redacted]]. A label's pro rata share of the royalty is based on the share of the total performances on the service accounted for by sound recordings controlled by that label. Orszag AWDT at ¶ 45.

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Actual Licensing Fees Per-Subscriber

	Sony			UM			WM		
	2014	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**
Apple Music	-	[redacted]	[redacted]	-	[redacted]	[redacted]	-	[redacted]	[redacted]
Beats	[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]	-
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]

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

Orszag AWDT, Table One at 19.

For the nine subscription interactive services in the above table, over the 2014-2016 period covered, individual subscriptions were offered to consumers at $9.99 per month. At that monthly price, the weighted average monthly per-subscriber payment of $[[redacted]] translates to a royalty equal to approximately [[redacted]]% of the services' revenues ($9.99 x .[[redacted]]). Orszag AWDT at ¶ 47.[135]

Because Mr. Orszag's interactive data were limited to agreements with the Majors, he also considered whether the rates paid by subscription interactive streaming services to the Indies were lower than those paid to the Majors. He determined that, whether the Indies' recordings were distributed by a Major or a Major affiliate, or were distributed by another entity, the terms regarding royalties were "highly similar" to the rates paid to the Majors. Consequently, Mr. Orszag made no adjustment to his interactive benchmark to account for the rates paid by interactive services to independent record labels. Orszag AWDT at ¶¶ 101-105; *see* Written Direct Testimony of Jeremy Sirota, Trial Ex. 36, at 3 (Sirota WDT).

Mr. Orszag utilized the concept of "ratio equivalency" to compare his benchmark rate for the interactive streaming market to the target SDARS market. He applied essentially the same ratio equivalency approach as the Judges applied to the noninteractive subscription market in *Web IV*.[136] Orszag AWDT at ¶ 37. More specifically, Mr. Orszag relied on the following points from

[135] Mr. Orszag did not include in his royalty calculation any non-rate consideration, such as access to the services' user data and user e-mail addresses; the services' marketing and promotional support; and the record companies' right to offer exclusives to services; including the right to "window" certain sound recordings (*i.e.*, to offer an initial, time-limited exclusivity). Because these non-pecuniary items are not available under the statutory license at issue in this proceeding, Mr. Orszag asserts that his omission of these non-monetary benefits renders his calculated royalty payment lower than it otherwise would be, thus reducing the royalty rate derived from his benchmark in favor of Sirius XM. Orszag AWDT at ¶ 106. *See also* SE PFF ¶¶ 119-122 (and record citations therein).

[136] In *Web IV*, the Judges stated that 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." *Web IV*, 81 Fed. Reg. at 26344.

Web IV to identify what he considered necessary conditions for the application of a ratio equivalency approach:

> (1) Revenues in both markets must be derived from subscription revenues and thus be reflective of buyers with a positive willingness to pay (WTP) for streamed music;
>
> (2) Functional convergence and downstream competition for potential listeners must 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
>
> (3) The benchmark market rate must be adjusted downward[137] to eliminate the "complementary oligopoly" effect arising from the presence of multiple "must have" suppliers, thereby establishing a rate that is "effectively competitive."

Id. at ¶ 41 (citing *Web IV*, 81 Fed. Reg. at 26353). Mr. Orszag posited that all three of these *Web IV* conditions are satisfied in this proceeding.

He noted that in both the interactive streaming and SDARS markets revenues are derived from subscribers with a positive WTP. More particularly, subscribers to interactive services typically pay $9.99 per month, Orszag AWDT at ¶ 36, while subscribers to Sirius XM typically pay at least that amount. *Id*. at ¶ 49 & n.40. With regard to the second condition, Mr. Orszag cites record evidence of functional "lean-back" convergence and downstream competition, particularly with regard to the use of playlists and enhanced mobile technology, which have allowed interactive streaming services to gain an increasing share of in-car listening. *See* 4/24/17 Tr. 605 (Farrell); Orszag AWDT at ¶ 39. Finally, Mr. Orszag testified that changes in the interactive market after *Web IV* had obviated the need for a complementary oligopoly adjustment. Nonetheless, he provided three alternative potential steering adjustments in the event the Judges disagreed with his conclusion regarding complementary oligopoly: (1) a [[redacted]]% steering adjustment derived from Sirius XM's direct licenses; (2) a 12% steering adjustment borrowed from *Web IV*; or (3) a [[redacted]]% steering adjustment identified in a comparison of two "Mid-tier" services contracts, one with a prohibition on steering and the other without.[138]

The interactive market benchmark ratio equivalency approach is well-depicted in algebraic form:[139]

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[137] In *Web IV*, the Judges applied a "steering adjustment" to reflect noninteractive services' ability to offset the complementary oligopoly power of the Majors by "steering" listeners to sound recordings licensed from Indies at lower royalty rates.

[138] These potential steering adjustments are discussed in detail *infra*.

[139] The ratios are sometimes expressed reciprocally, with royalties in the denominator and revenues in the numerator. Because royalty rates in this proceeding are expressed as a percent-of-revenue, it is more intuitive to state the ratio as set forth in the text, *supra*.

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$$\begin{array}{ccc} \textbf{Benchmark Ratio} & & \textbf{Target Market Ratio} \\ \\ \dfrac{\begin{array}{c}\textbf{(A)}\\ \text{Royalty Payment (in \$) in}\\ \text{Benchmark Market}\end{array}}{\begin{array}{c}\textbf{(B)}\\ \text{Downstream Revenue (in \$) in}\\ \text{Benchmark Market}\end{array}} & = & \dfrac{\begin{array}{c}\textbf{(C)}\\ \text{Royalty Payment (in \$) in Target}\\ \text{Market}\end{array}}{\begin{array}{c}\textbf{(D)}\\ \text{Downstream Revenue (in \$) in}\\ \text{Target Market}\end{array}} \end{array}$$

(rates and revenues to be calculated on a per-subscriber per month basis).

By inserting the known (*i.e.*, calculable) values for **(A)** and **(B)**, Mr. Orszag was able to calculate a ratio, or percentage, that – under the ratio equivalency approach – he opined would also be applicable to the target market. That is, the royalty payment **(C)** in the Target Market would be the same percent of **(D)** as **(A)** is a percent of **(B)** in the Benchmark Market.

In this, his "Approach One," Mr. Orszag calculates the royalty payments of interactive subscription services as a percentage of their subscription revenues by dividing the effective monthly per-subscriber royalty payment by the monthly consumer subscription price of the benchmark services. Orszag AWDT at ¶ 43. Applying the theory of ratio equivalency, Mr. Orszag then proposes that the record companies receive the same percentage of Sirius XM's subscription revenue as they receive from the interactive services. *See* 4/25/17 Tr. 985-86 (Orszag).

Because Sirius XM provides listeners with both music and non-music content, Mr. Orszag opined that his Benchmark Market Ratio must be adjusted to be comparable to the Target Market Ratio. Relying principally on a survey by Stefan Boedeker, Mr. Orszag determined that the music content on Sirius XM constituted 50% of the value of total content.[140] Orszag AWDT at ¶ 54. Additionally, SoundExchange asserts that the pricing structure reflects Sirius XM's understanding that its customers value music at least as much as non-music content. *Id.* at ¶ 49 & n.40 (discussing Sirius XM monthly pricing of $10.99 for News, Sports & Talk versus $12.52 for Mostly Music). Moreover, as SoundExchange notes, in the previous *SDARS* proceeding, Sirius XM itself took the position that music accounts for more than 55% of Sirius XM's content value. *SDARS II*, 78 Fed. Reg. at 23064-65 (Sirius XM's expert Roger Noll attributed 55% of value to

[140] Mr. Boedeker surveyed subscribers to Sirius satellite radio packages that contain both music and non-music programming, (i) to measure the degree to which these subscribers value the music versus non-music content; (ii) to examine subscribers' willingness to accept a hypothetical Sirius XM package that contains just music programming or just non-music programming; and (iii) to identify the discounts they would demand for such a hypothetical product. Written Direct Testimony of Stefan Boedeker, Trial Ex. 21, at ¶¶ 7, 19 (Boedeker WDT); 5/8/17 Tr. 2933, 2947-49 (Boedeker). Mr. Boedeker concluded from the survey results that Sirius XM subscribers value music content significantly more than non-music content. Boedeker WDT at ¶¶ 14, 97; 5/8/17 Tr. 2933-34, 2963 (Boedeker). More precisely, 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 were no longer offered, while only 32.4% said they would no longer subscribe at their current subscription rates if non-music programming were no longer offered. Boedeker WDT at ¶ 77; 5/8/17 Tr. 2951 (Boedeker). Even if discounts were offered for a non-music service, 42.7% of respondents still would no longer subscribe to their Sirius XM package, compared with only 10.0% of respondents would no longer subscribe to their current package if non-music programming were no longer offered (even with a discount). Boedeker WDT at ¶¶ 83-84; *see also* 5/8/17 Tr. 2952-53 (Boedeker). In a critique of Mr. Boedeker's survey, Professor John Hauser, a Sirius XM expert witness, identified several inconsistencies in Mr. Boedeker's survey results. Nonetheless, it is undisputed by Sirius XM that Mr. Boedeker's results are generally consistent with other available evidence. *See* SEPFF ¶¶ 252-258 (and record citations therein). Thus, Mr. Orszag opined that his use of the 50% figure was conservative, in the sense that it favored Sirius XM rather than the party for whom he testified, SoundExchange. Orszag AWDT at ¶ 54.

music content). Both parties and the Judges agreed on this issue. *See id*. at 23063, 23088 (noting SoundExchange's expert Dr. Ordover conservatively assumed music accounts for at least 50%); *id.* at 23065, 23089 (Judges finding "the success of Sirius XM is dependent upon its access to music" citing testimony of Sirius XM witnesses). The Judges take note that Sirius XM has provided no evidence or argument to support a different position that might place in doubt Mr. Orszag's reliance on the Boedeker survey. Mr. Orszag reasonably and conservatively utilized an assumption that at least 50% of the value of a Sirius XM subscription is derived from music offerings. Applying this assumption, Mr. Orszag divided the benchmark ratio result, [[redacted]]% of revenue, by two to arrive at a proposed percentage-of-revenue rate of [[redacted]]% for Sirius XM. Orszag AWDT at ¶ 54.

Mr. Orszag opined that a benefit of his "Approach One" is that it avoids the need to account explicitly for differences between the target and benchmark services. Rather, he stated that the differences are implicit in the formula and thus revealed by the market. A service's retail (subscription) revenues are a direct function of consumer subscription prices. Those prices should reasonably reflect consumer valuation of the features and functions of the benchmark and target services, respectively. In turn, according to Mr. Orszag, percentage-of-revenue royalty rates should reflect such differences, because the sound recordings performed by the services in the benchmark and target markets are identical. *Id*. at ¶ 55.

As noted, SoundExchange is proposing a greater-of statutory rate with a per-subscriber prong as well as a percent-of-revenue prong. To obtain what Mr. Orszag describes as an equivalent per-subscriber rate, he applies the [[redacted]]% of revenue rate (derived from his benchmark ratio equivalency analysis) to the ARPU. Mr. Orszag adjusts the Sirius XM ARPU of $[[redacted]] (as gross revenue is calculated using the statutory license terms) using the same ratio he applied to reach a percent-of-revenue rate.[141] This results in a per-subscriber rate of $[[redacted]] (*i.e.*, $[[redacted]] x [[redacted]]). *See id*. ¶ 54.

2. Mr. Orszag's "Approach Two": Retail Price Comparison

Mr. Orszag's Approach One implicitly accounted for the different values of interactive and noninteractive services by utilizing retail prices in the denominators that reflected the market-based differences in those values. In "Approach Two," Mr. Orszag applied an alternative methodology designed to account *explicitly* for the absence of interactivity in the target SDARS market. Orszag AWDT at ¶ 56.

In Approach Two, Mr. Orszag continued to use the interactive market as his polestar. In this approach, however, he compared the interactive retail subscription price *not to the target SDARS market*, but to the market for *noninteractive services*, on the assumption that an SDARS functionally is a noninteractive service.[142] In this manner Mr. Orszag is able to isolate explicitly

[141] Mr. Orszag calculated ARPU using Sirius XM's regulatory revenue base for the first six months of 2016. *See* Orszag AWDT ¶¶ 58-60 and Table Three. Professor Shapiro, on behalf of Sirius XM, initially identified a monthly ARPU of $[[redacted]] per subscriber, apparently using Sirius XM's 10-Q filing with the SEC and an internal Sirius XM planning document. *See* Lys WRT at ¶¶ 151-152 nn.174, 177 & Fig. 18. However, the parties apparently reached agreement that, under the current definition of "Gross Revenues," the appropriate monthly ARPU is $[[redacted]]. *See* SX RPFF ¶ 392 ("That $[[redacted]] figure was used directly by economists from both parties to convert monthly per-subscriber fees into proposed percent-of-revenue rates."); *see also* Lys WRT at ¶¶ 149-155.

[142] A noninteractive service is one that meets the statutory definition and pays statutory royalties calculated under 17 U.S.C. § 114(f)(2)(B). An SDARS service may be described as *functionally* a noninteractive service because the

the value of interactivity by comparing the retail prices of interactive and noninteractive subscription services. *See* 4/25/17 Tr. 986 (Orszag). Mr. Orszag opined that this approach is sensible because these two categories of service differ only with respect to the distinguishing feature: interactivity. *See id*.[143]

To determine the monthly retail price in the noninteractive market, Mr. Orszag used the retail prices of three non-interactive subscription services: Pandora One, Rhapsody (Napster) unRadio, and Slacker Radio. He calculated their weighted average monthly retail price to be $4.91. *See* Orszag AWDT at ¶ 56 & Table Two.

As noted before, the monthly retail price for interactive subscription services was $9.99. Accordingly, the ratio of the subscription price from the noninteractive market to the subscription price from the interactive market was $4.91/$9.99, or 0.49. Mr. Orszag then used the ratio of 0.49 to convert the interactive subscription services monthly per-subscriber royalty rate of $[[redacted]] to an equivalent per-subscriber rate for Sirius XM of $[[redacted]] (0.49 x $[[redacted]]). *See id*. at ¶ 57.

The final step in Mr. Orszag's Approach Two is the calculation of a percentage-of-revenue rate that corresponds to this $[[redacted]] per-subscriber rate. Applying the same $[[redacted]] ARPU[144] to the per-subscriber rate of $[[redacted]], Mr. Orszag derived a percentage-of-revenue rate of [[redacted]]%. *See id*. at ¶ 60.

3. Adjustment for Lack of Effective Competition in Benchmark Market

In his attempt to apply the *Web IV* prerequisites for use of a "ratio equivalency" benchmarking approach, Mr. Orszag considered whether to apply a downward adjustment to reflect any alleged lack of "effective competition" in his benchmark interactive market. He acknowledged that in *Web IV* the Judges found that the market for subscription interactive services (*i.e.*, Mr. Orszag's benchmark market here) was *not* effectively competitive. The Judges, therefore, adjusted downward the rate SoundExchange's economic expert calculated using an interactive services benchmark. *Web IV*, 81 Fed. Reg. at 26344.

In this proceeding, however, Mr. Orszag concluded that the record establishes that more recently the market for subscription interactive services has become effectively competitive. Mr. Orszag concluded that he need not adjust to offset a lack of effective competition. Mr. Orszag's opinion is based on:

- The presence in the market of larger interactive streaming services, such as Amazon, Apple, Google, and Spotify, which has injected countervailing "substantial bargaining power and leverage" on the licensee side of the equation, offsetting any relative disproportionate power that the record companies might have previously possessed. Written Rebuttal Testimony of Aaron Harrison, Trial Ex. 49, at ¶¶ 3-5 (Harrison WRT); 5/16/17 Tr. at 3953-57 (Harrison).

listener cannot interact with the service to select, repeat, skip, or cache specific sound recordings. See n.73 and accompanying text, *supra*.

[143] Approach Two avoids the need to adjust for non-music content because streaming services are music-only services. It also avoids any purported need to adjust for the separate value of a satellite network because streaming services are Internet-based. *See* Orszag AWDT at ¶ 56. The Judges address later the question Sirius XM raises relating to whether its satellite network creates an additional value that should reduce the statutory royalty rate.

[144] *See supra* note 141 and accompanying text.

- The increasing importance of interactive services as a revenue source to the record companies, which gives the services leverage strengthen their bargaining position in negotiations for sound recording performance licenses. Written Rebuttal Testimony of David Blackburn, Trial Ex. 39, at ¶¶ 18, 20 (Blackburn WRT).
- The treatment of Spotify's licensing agreement with the Majors when it expired, by not [[redacted]], but rather [[redacted]]. 5/01/17 Tr. 1703-04, 1804-05 (Blackburn).
- The additional bargaining power of individual services because they have differentiated their offerings, based on platform preference ([[redacted]]); catalog size ([[redacted]]); and payment terms ([[redacted]]), meaning that the withdrawal of any differentiated service from the market would result in customer "churn" that would negatively affect record companies financially. 5/16/17 Tr. 3942-45 (Harrison).
- The lack of market evidence of: (1) suppression of the output of recorded music; (2) supracompetitive profits achieved by the record companies; or (3) ready alternatives to which downstream consumers might turn. SEPFF ¶¶ 305-322 (and record citations therein).
- The inability of the Majors to act as price-setters, [[redacted]]. 5/16/17 Tr. 3926-27, 3946-47 (Harrison).
- The Majors' agreements in the Mid-Tier limited interactivity sector to rates as low as [[redacted]]% of revenue when the licensing agreement includes [[redacted]]. SEPFF ¶ 356 (and record citations therein).
- The agreements between Indies and interactive streaming services that [[redacted]]. SEPFF ¶¶ 335-340 (and record citations therein).

Mr. Orszag maintained that the interactive streaming rates reflect an "effectively competitive" market. He nonetheless offered three alternative "steering adjustments" to apply to those benchmark rates, should the Judges find the interactive market to be not effectively competitive. Mr. Orszag first presented a [[redacted]]% steering adjustment, reflecting his calculation of an arguable steering effect arising from Sirius XM's direct licenses with certain Indies.[145] Next, Mr. Orszag proposed a 12% steering adjustment, simply adopting the adjustment the Judges made in *Web IV*. *See Web IV*, 81 Fed. Reg. at 26404-05. Finally, he presented a [[redacted]]% steering adjustment, that reflects the differences in royalty rates in the mid-tier market, depending upon whether the license agreement has a [[redacted]] (and an attendant *lower* rate) or [[redacted]] (with an attendant *higher* royalty rate). *See* 4/25/17 Tr. 1054 (Orszag). The Table below summarizes Mr. Orszag's alternative

[145] These direct licenses are discussed in more detail in the Judges' consideration of Sirius XM's reliance on these licenses as potential benchmarks.

rates based on the absence of a steering adjustment and on all three of the alternative steering adjustments.

	Approach One		Approach Two	
Steering Adj	**% Rev.**	**Per Sub**	**% Rev.**	**Per Sub.**
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]]

SE PFF ¶ 361 (Sirius XM did not dispute the accuracy of this summary table derived from record evidence.).

4. The Mid-tier Agreements as Corroboration

According to Mr. Orszag, the applicability of the theory of ratio equivalency is further supported by agreements between record companies and Mid-tier services. These Mid-tier Agreements" are comprised of recently executed voluntary direct licenses for subscription mid-tier services, between Pandora and iHeart, respectively, as licensees, and the Majors and Merlin, a digital rights agency representing Indie record companies, as licensors.[146]

The Table below provides a breakdown of rates contained in Mid-tier Agreements that were admitted into evidence in this proceeding:[147]

[146] The agreements executed by Pandora and iHeart also cover fully interactive tiers and, in the case of Pandora, an ad-supported tier. *See, e.g.*, Trial Exs. 112-114. For ease of exposition, the Judges use the term "Mid-tier Agreements" to refer to the portion of each agreement that relates to the subscription service offered to consumers for $4.99 and providing limited on-demand functionality.

[147] The agreements in the table were made a part of the record. *See* 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); 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). 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). 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).

[RESTRICTED]
Mid-tier Agreements

	Pandora Plus ($4.99)	Pandora Plus ($4.99)	Pandora Premium ($9.99)	Pandora Premium ($9.99)	iHeart Plus ($4.99)	iHeart Plus ($4.99)	iHeart All Access ($9.99)	iHeart All Access $9.99)
	% of Revenue	*Per Sub*	*% of Revenue*	*Per Sub*	*% of Revenue*	*Per Sub*	*% of Revenue*	*Per Sub*
Sony	[[redacted]]%	$[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]
UMG	[[redacted]]%- [[redacted]]%	$[[redacted]]- $[[redacted]]	[[redacted]]- [[redacted]]%	$[[redacted]]- $[[redacted]]	[[redacted]]%	$[[redacted]]	[[redacted]]%	$[[redacted]]
WMG	[[redacted]]%- [[redacted]]%	$[[redacted]]- $[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]]- $[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]
Merlin	[[redacted]]%	$[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]	[[redacted]]%, [[redacted]]%	$[[redacted]], $[[redacted]]

These Mid-tier Agreements bundled terms for separate tiers offered by Pandora and iHeart, respectively, including the actual mid-tier services identified as Pandora Plus and iHeart Plus, respectively, with limited interactive functionality, and a tier providing fully interactive functionality. Orszag WDT at ¶ 38.

Mr. Orszag found confirmation for his benchmarking approach in the rates at which Pandora and iHeart will license from major and independent record companies, *i.e.*, at rates ranging from $[[redacted]]-$[[redacted]] per subscriber per month. These rates are similar to the per subscriber rates SoundExchange proposes in this proceeding. Trial Exs. 112-114. Mr. Orszag also noted that these Mid-tier Agreements include [[redacted]]. *See* Orszag AWDT at ¶ 38. When these percent-of-revenue rates are halved (as in his Approach One) to reflect that 50% of the value of Sirius XM's service is attributable to non-music content, the percent-of-revenue rates in these Mid-tier Agreements lie in the range of [[redacted]]-[[redacted]]%, "strikingly similar" to the 23% royalty rate SoundExchange has proposed. *See* SXPFF ¶¶ 845-847.

Mr. Orszag found the rates in these Mid-tier Agreements to be instructive and corroborative of SoundExchange's rate proposal. SoundExchange concedes that the mid-tier services of iHeart and Pandora offer some interactivity, whereas Sirius XM's satellite service offers no interactivity. Mr. Orszag opined, however, that it is not plausible that the differential would have a significant impact on consumer valuations and, consequently, on per-subscriber rates. In support of that argument, he noted that subscriptions to the mid-tier services offered by Pandora and iHeart are priced at the same $4.99 per month as Pandora's prior noninteractive offering. *See* Harrison WDT at ¶ 19. Further, Mr. Orszag noted that his highly conservative estimate of the value of music content on Sirius XM, is even higher, at $[[redacted]]. *See* Orszag WRT at ¶ 55 & n.68.

More particularly, Mr. Orszag noted that Pandora's offering of increased skips, rewind capability, and limited caching to convert its noninteractive service into a mid-tier service did not cause Pandora to increase its monthly subscription price above the $4.99 it charged previously for its noninteractive service. Mr. Orszag testified that this suggests that consumers' valuation of the increased functionality is not so high as to allow Pandora to increase its mid-tier retail

md/kw

subscribership price off the $4.99 per month and closer to the $9.99 monthly price for fully interactive services. 4/25/17 Tr. 1063-64 (Orszag). Mr. Orszag concludes that these facts demonstrate that the mid-tier services have a value commensurate with a noninteractive service.

Finally, Mr. Orszag recognized the hypothetical possibility that, because these Mid-tier Agreements bundle fully interactive services, the record companies could have applied their market power in that segment to extract higher rates and better terms in the mid-tier segments. To test that hypothetical, Mr. Orszag reviewed the negotiation documents relating to the Mid-tier Agreements and concluded that they contained no evidence that the Majors used their alleged market power in the fully-interactive services market to obtain concessions on mid-tier terms. Orszag WRT at ¶ 55. To the contrary, the evidence suggests that Merlin obtained rates similar to those negotiated by the Majors in its licensing agreements with [[redacted]]. *Id.* Sirius XM did not proffer any evidence that the record companies leveraged their alleged interactive market power to obtain better terms in the mid-tier market.

5. Evaluating Orszag Ratio Equivalency Benchmarking Approaches

Sirius XM asserts that Mr. Orszag incorrectly emphasized an economically unimportant point, *i.e.*, that "there is no difference between interactive streaming services and satellite radio *in terms of the music content they deliver to subscribers*." *See* 4/26/17 Tr. 1190-91 (Orszag). (emphasis added). According to Sirius XM, similarity "at this high level of generality" is meaningless. SXM RPFF ¶11.

The Judges agree. Although markets in which sound recording performances are licensed (upstream) and delivered (downstream) to subscribers may be *considered* as potential benchmarks for each other, that broad brush of comparability does not indicate whether the benchmark is suitable on the whole. Mr. Orszag was correct that the benchmarking approach can *commence* at a high level of generality, even though that basic level of comparison is by no means probative or dispositive.[148] Not every market in which sound recording performances are licensed could serve as a benchmark for every other sound recording performance market.

Sirius XM argues that the common use of digital transmissions and the allowance of unlimited usage by listeners are not illuminating similarities. SXM PFF ¶ 12. Once again, the Judges agree; these basic points are not probative of the usefulness of the interactive market as a benchmark. Nonetheless, Mr. Orszag's reliance on such common elements is helpful in identifying *and then narrowing* the range of potential benchmarks.

Sirius XM criticizes as superficial Mr. Orszag's assertion that the target and benchmark markets are similar because each offers "mobile functionality." SXM RPFF at 19; Orszag AWDT at ¶ 32. The Judges find this criticism to be without merit.[149] The majority of Sirius XM listening occurs in the car, Meyer WDT at ¶ 21 n.5, and the improved mobile functionality of interactive streaming through "connected cars" and more complete cellular coverage allows listeners to access streaming services in the car. SE PFF ¶¶ 156-159 (and record citations therein). Thus, the Judges do not agree with Sirius XM that Mr. Orszag's reliance on the interactive services' mobile

[148] In fact, a market in which some product *other than music* is delivered could be a useful benchmark market if it is otherwise comparable in terms of economic structure. For example, patents, as a form of intellectual property, may be found to have similar economic characteristics as copyrights, rendering relevant information from the market for patent licenses.

[149] The Judges address the value of Sirius XM mobile functionality elsewhere in this Determination.

functionality is superficial; indeed, the issue of whether their respective mobile functionalities are substitutional for each other bears on the Opportunity Cost/ECPR analysis undertaken by Professor Willig.

Nonetheless, the Judges decline to adopt Mr. Orszag's reliance on evidence he claimed suggested a "growing" use of streaming services, including interactive services, in the car. Orszag AWDT at ¶ 39(C). Although the evidence on which he relied is somewhat supportive of this point, it is not sufficiently persuasive. The Judges are reluctant to adopt or extrapolate from *potential* market trends or rates of change and use them as a basis for a fixed five-year rate. As the Judges have noted on other occasions, the adoption of market *predictions* is a fraught exercise. More probative in the Judges' opinion are the results from the survey experts who have appeared for both parties. These experts have attempted to measure *present* intentions regarding the substitutability of interactive services (and other services) for Sirius XM. While their surveys yield starkly different results when attempting to elicit whether Sirius XM listeners would switch to interactive services if Sirius XM were nonexistent or too expensive, none shows anything close to a 1:1 substitutability of interactive services for Sirius XM.[150]

The survey results highlight a related criticism by Sirius XM of Mr. Orszag's ratio equivalency approaches. Sirius XM correctly argues that the economic rationale that supports a ratio equivalency approach requires "significant competition, or a high cross-elasticity of demand, between Sirius XM and subscription services…. [A] limited degree of head-to-head competition … will not suffice." Shapiro CWRT at 12; *see also Web IV*, 81 Fed. Reg. at 26353; 4/26/17 Tr. 1198 (Orszag).

In *Web IV*, the Judges stated that the ratio equivalency approach might be appropriate if the record reflected that

> 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

81 Fed. Reg. at 26353. In the present case, Mr. Orszag did not provide either qualitative or quantitative evidence of a sufficiently high cross-elasticity. In fact, it is noteworthy that even the survey results reported by SoundExchange's own survey witnesses, Professors Ravi Dhar and Itmar Simonson, indicated that there is no such high substitutability between subscribership to interactive services and to Sirius XM. These survey conclusions negate any complete or overwhelming ratio equivalency Mr. Orszag has posited. Moreover, even Professor Willig, another SoundExchange economic expert, relied on and adopted Professor Dhar's survey, which revealed a substitutability of interactive services for Sirius XM at significantly less than 1:1. *See* Willig WDT at ¶ 41.

Sirius XM also challenges SoundExchange's predicate that there is "increasing convergence of the interactive services and Sirius XM" because of "some 'lean back' functionality" offered by the interactive services (in the form of pre-programmed playlists). Sirius XM notes that Mr. Orszag acknowledged on cross-examination that, if the rate-setting exercise were based solely on his posited convergence, any increased use of playlists by

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[150] The Judges analyze these survey results in detail, *supra*, sections VI.B.1-VI.B.2.

interactive services would suggest that interactive services were becoming more like noninteractive services, rather than *vice versa*. If any purported convergence is in the direction of lean-back service, then interactive services' rates should be falling in an effectively competitive market, rather than noninteractive or satellite services' rates increasing. 4/26/17 Tr. 1191-92 (Orszag).

Sirius XM's criticism in this regard is well-taken. There is insufficient evidence in the record to show that interactive services' royalty rates have fallen in response to any asserted increase in listener use of playlists. Indeed, as Sirius XM correctly notes, [[redacted]]. *See*, *e.g.*, 5/16/17 Tr. at 3939 (Harrison); 5/15/17 Tr. at 3836 (Walker).[151]

Ultimately, the Judges place no weight on the alleged corroboration of the Mid-tier Agreements identified by Mr. Orszag, for several reasons. First, as a SoundExchange industry witness testified, UMG requires [[redacted]] Harrison WDT at ¶ 20 ("Even if mid-tier subscription services succeed in drawing some consumers away from poorly-monetized free ad-supported streaming services, there is also a danger that they could to a degree cannibalize the premium on-demand subscription services. [[redacted]]").

Second, the mid-tier services include interactive features which the record companies recognize are valuable to subscribers. *Id.* Absent evidence in this record of an interactivity adjustment specifically related to the valuable but limited interactive functionality of the mid-tier services, the probative value of the mid-tier rates in this proceeding is compromised.

In sum, the Judges agree with Sirius XM that the record does not provide sufficient evidence to support Mr. Orszag's ratio equivalency approaches to rate-setting in this proceeding.[152]

[151] Playlists *could* engender price competition. As the Judges noted in *Web IV*, services could lower royalty rates with playlist steering. Further, the *possibility* of steering could result in lower industrywide rates without any actual steering taking place. *See Web IV*, 81 Fed. Reg. at 26367. In the present case, there is no evidence of any such price competition through playlist-based steering in the *fully* interactive market.

[152] Therefore, Mr. Orszag's attempted steering adjustments are moot with regard to his approaches. The applicability of those adjustments, *vel non*, is addressed in connection with the establishment of effectively competitive rates elsewhere in this Determination. Also, because Mr. Orszag did not present the mid-tier royalties as benchmarks in their own right, but rather as corroborative evidence supporting his (now rejected) ratio equivalency approach, the Judges do not accept Mr. Orszag's use of mid-tier royalties as corroborative or probative.

VII. SDARS Performance License - Sirius XM Proposal

In its specific proposed rate regulations, Sirius XM advocates for a single royalty fee – 8.1% of "Gross Revenues." *See* Second Amended Proposed Rates and Terms of Sirius XM … at § 382.12(a) (2d APR). However, more broadly, Sirius XM proposes a rate range of 8.1% to 11% of relevant revenue, which it claims is consistent with the evidence. 2d APR at 1. The existing rate, for 2017, is 11%.

Sirius XM's expert witness, Professor Carl Shapiro, analyzed three possible starting points for setting the performance royalty rates in this proceeding. Professor Shapiro began with an analysis of the existing rates. He also analyzed two potential benchmarks: direct licenses negotiated between Sirius XM and 498 Indie record labels and the rates determined by the Judges for noninteractive digital performances over the Internet (webcasting).[153]

A. Current Rates

Professor Shapiro noted that the current statutory rate is 11% of "Gross Revenues," as defined by the relevant regulations. *See* 37 C.F.R. part 382, subpart B. The Judges configured the SDARS rates for the period 2013 to 2017 to increase from 9% to 11% over the five-year period. Before recommending adoption of the extant rate for the ensuing rate period, Professor Shapiro analyzed the state of the music industry to determine whether any changes in the marketplace might warrant a deviation from the current rate. *See* Shapiro WDT at 27. Evidence in this proceeding overwhelmingly supports a finding of increased use of streaming, both interactive and noninteractive, as the preferred method of "consuming" music. Professor Shapiro's testimony is no exception. *Id.* at 28. As Professor Shapiro noted, in 2012, streaming accounted for approximately 12% of record industry revenues; whereas in the first half of 2016, streaming accounted for 43% of record industry revenues.[154] *Id.* Analogously, Sirius XM's subscribership grew from approximately 24.9 million subscribers in 2014 to 28.3 million subscribers in 2015. *Id.* at 29.[155] This growth in subscribers increased satellite radio's share of music industry revenues during the period from [[redacted]]% to [[redacted]]%. *Id.* at 28, Fig. 5.

Professor Shapiro proposed continuing the current percent-of-revenue rate structure. He concluded that, when using percent-of-revenue rates, any increase in Sirius XM's relevant revenue would redound to the benefit of the record companies obviating a need to change the rate. *See* Shapiro WDT at 29-30.

He further argued that the relevant starting consideration for the Judges would be the rate that would emerge in an effectively competitive marketplace. 5/3/17 Tr. 2479-80 (Shapiro).

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[153] Professor Shapiro did not label the existing rate as a "benchmark" *per se*. Rather, he opined that the existing "11 percent of revenue rate that Sirius XM will pay in 2017 can be viewed as an upper bound on the reasonable royalty level for the 2018-2022 period." Shapiro WDT at 34. The Judges consider Professor Shapiro's use of the existing rate as an "upper bound" is functionally similar to a use of that rate as a "benchmark." That is, he is urging a similarity between: (1) the description of the SDARS market as it was presented to the Judges in *SDARS II* in 2012, and the rates that were set in that Determination (the *de facto* benchmark); and (2) the description of the SDARS market (the target market) as it has been presented to the Judges in this 2017 proceeding.

[154] Professor Shapiro defined revenue from streaming services as that derived from subscription and on-demand services as well as webcasting. Music industry revenues included those streaming services, physical sound recording sales, digital downloads, synchronization royalties, and satellite radio. Shapiro WDT at 28.

[155] Sirius XM predicts [[redacted]] during the upcoming rate period from an estimated [[redacted]] million subscribers in 2018 to [[redacted]] million subscribers in 2021. Shapiro WDT at 29.

Professor Shapiro asserted that Sirius XM's overall profits would be irrelevant to the negotiation. Shapiro WRT at 51-52. He opined that, in an effectively competitive market, the negotiating parties would look only to the licensee's "contribution margin"; that is, "the percentage of Sirius XM's receipts from a subscriber … that drops to their bottom line." *Id.* This contribution margin is the measure of sales revenue available for fixed costs and profit after paying variable costs. *See* Lys WDT at ¶ 83. According to Professor Lys, Sirius XM includes in variable costs ["[redacted]"]. *Id.* at ¶ 85. Professor Shapiro and Professor Lys agree that Sirius XM's contribution margin has remained "remarkably consistent" over time. *See id.* at ¶ 87; Shapiro WRT at 5.

Professor Shapiro focused on the stability of the Sirius XM contribution margin to argue for a like stability in royalty rates. Countering that proposition, Professor Lys looked at an economic bargaining model and concluded that with greater overall profitability, Sirius XM and any licensor would negotiate to divide those overall profits, which would result in a higher percentage royalty rate.

Neither expert's opinion in this regard, however, is persuasive. Professor Lys may well be correct that record companies, given their "must have" status, *i.e.*, in the absence of effective competition, would seek in unregulated market negotiations to appropriate a portion of the additional profits (through a rate increase *in addition to* the automatic increase from a larger pool of revenue), notwithstanding that the profits accrued via Sirius XM's scale and growth rather than through an increase in the contribution margin. On the other hand, as discussed elsewhere in this Determination, the growth of Sirius XM's profits allows it to compensate the record companies for the opportunity costs the latter incur when licensing to Sirius XM. But neither of these factors is relevant to the appropriateness of adopting the extant rate in the forthcoming rate period.

SoundExchange opposes reliance on the current, *SDARS II* royalty rates, asserting that the current rates do not capture the effect of the expansion of music streaming on the labels' opportunity cost. SoundExchange contends that Professor Shapiro's analysis of current rates fails to acknowledge or address changes (1) in opportunity cost, (2) in Sirius XM's financial performance, (3) in the upstream market for digital sound recording rights,[156] and (4) in current circumstances as opposed to those prevailing at the time of the *SDARS II* determination.

SoundExchange's arguments regarding opportunity cost rely on the assumption that Sirius XM and streaming services are closely substitutable for one another. However, that assumed close substitutability is contradicted by the survey results as analyzed by the Judges, *supra*, in connection with Professor Willig's opportunity cost analysis. SoundExchange also does not take into account Sirius XM's unique position of being the only satellite radio provider – resulting in a remarkable growth in subscribers – as well as the fact that changes in Sirius XM revenues have resulted from additional factors, *i.e.*, lower non-music content costs and lower royalty rates in negotiated direct licenses.[157] Thus, to the extent discussed above, changes in the overall market do militate against using current rates as an appropriate starting point.

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[156] For this third point of criticism, SoundExchange focuses on the direct licenses Sirius XM has negotiated with Indie labels. The criticism is better directed at the direct license benchmark and the Judges will discuss it in that portion of the Determination, section VII.B.

[157] The Judges do acknowledge Sirius XM's increased profitability in a different context, *i.e.*, whether Sirius XM should contribute to the legitimate opportunity costs incurred by the record companies without disruption that would threaten the viability of Sirius XM. *See infra*, section X.D.

Moreover, the current rates as set in *SDARS II* were a function of the deficiencies in the proffered evidence in that proceeding, evidence that, by comparison, made the then extant rates a relatively superior guide to an appropriate rate.. The Judges were dissatisfied with a benchmark derived from licenses in the interactive streaming business. Further, the Judges found it necessary to allow for a downward adjustment (within the zone of reasonableness) to account for the enormity of Sirius XM's satellite launch and replacement costs. *See SDARS II*, 78 Fed. Reg. at 23069. SoundExchange argues that the "incredible financial success" enjoyed by Sirius XM during the current license period obviates the need for consideration of Sirius XM's costs of doing business for the license period at issue in this proceeding. *See* Lys WRT at ¶56. The Judges agree; in fact, that financial success is a basis for increasing the royalty rate in this proceeding, as indicated above.

For the reasons highlighted by SoundExchange and its experts, the Judges will not use the extant rates as a starting point (or benchmark or upper bound) for determination of appropriate rates for the period 2018 through 2022. The *SDARS II* rates were derived on a record much less robust than the record in this proceeding. The participants in this proceeding have presented sufficient facts and analysis to inform the Judges and to lessen the value of the current rates as a desired starting point for analysis in these changed circumstances.

B. Current Direct Licenses Negotiated by Sirius XM

Professor Shapiro proposed a benchmark derived from direct licenses Sirius XM has negotiated in the market at issue in this proceeding, *i.e.*, the satellite radio music streaming (upstream) market. In 2012, when the Judges established rates for the 2013 through 2017 rate period, direct licensing was in its infancy, with approximately 100 direct licenses executed at the time of the determination. Shapiro WDT at 34. By 2016, Sirius XM had negotiated almost 500 direct licenses with record labels. *Id.* at 35. Because of its direct license effort, Sirius XM has access to approximately 23,000 music catalogs containing as many as 5 million tracks, or 6.4% of the tracks on the Sirius XM playlists. Shapiro WDT at 35 (citing White WDT). Professor Shapiro promoted the direct licenses as ideal benchmarks, asserting that they represent market outcomes involving the same sellers (record labels), the same buyer (Sirius XM), and the same rights (digital performance of sound recordings) and effectively competitive conditions for the negotiations. *Id.* at 37.

Professor Shapiro reasoned that these negotiations reflect an effectively competitive marketplace because Sirius XM controls such a small share of the record industry's overall revenues (approximately [[redacted]]%). *See* Shapiro WDT at 37. Measuring Sirius XM's royalties against the entirety of music industry revenues, however, ignores the fact that Sirius XM dominates the market for paid services that listeners use in a vehicle. As the primary alternative to (non-royalty paying) terrestrial radio in cars, Sirius XM in fact wields tremendous bargaining power, which would tend to drive down the negotiated rates. Professor Shapiro contended that, in fact, direct license rates negotiated in an unregulated market would be lower because based on recent trends, he believes the statutory license rates act as a "magnet" to pull directly negotiated rates up to the statutory rates. *Id.* at 45.

Professor Shapiro's endorsement of direct licenses as a benchmark ignored the difficulties inherent in determining the effective royalty rates the parties negotiated. With the direct licenses, Sirius XM receives the same rights it would under the statutory license and additional benefits, such as a relaxation of the statutory performance complement rule, allowing Sirius XM to rely more heavily on the (lower priced) directly-licensed tracks. *Id.* at 35-36. Licensors also benefit from consideration negotiated in direct licenses that is not available under a statutory license. Licensors might receive more exposure for their recordings, might benefit from direct payment of both recording and artist royalties, and could avoid the SoundExchange administrative fee. No expert in this (or any similar) proceeding has attempted to value the considerations behind the headline percent-of-revenue rates in direct licenses, let alone determine which party enjoys the net benefit.

Looking at the upstream market (record labels to streaming services), Professor Shapiro anticipated more negotiation of direct licenses influenced by the noninteractive streaming services' ability to "steer" listeners to a particular catalog of music. *Id.* at 30. As Professor Shapiro noted, in the webcasting market, the availability of steering resulted in negotiation of direct licenses with headline rates below the statutory rates based on the potential benefits of greater streaming frequency of the labels' music. *Id.* at 30.

SoundExchange is critical of Professor Shapiro's reliance on direct licenses primarily because more recent direct license agreements have omitted steering incentives or have included anti-steering alternatives that recognize the prospect of steering but muddy the analytical waters with regard to the effect steering might have on their negotiated rates. Even Professor Shapiro conceded that he could not "quantify the value of steering." 4/20/17 Tr. 488 (Shapiro). Furthermore, the direct licenses involve exchanges of consideration apart from the headline royalty rate that no party has attempted to value. [158]

The Judges do not accept Sirius XM's direct licenses as sufficiently probative of the relevant market to accept them as a meaningful benchmark. Direct licenses cover only a small portion of the sound recordings on Sirius XM's playlists. They are uninformative of any effect of steering on royalty rates because none of them contain steering guarantees or economic incentives to promote (or avoid) steering. There is no basis for the Judges to segregate consideration in these licenses that is properly attributed to elements that are unavailable under the compulsory license.

C. Web IV Rates

Professor Shapiro offered as a final benchmark the rates established by the Judges in *Web IV*. The Judges used benchmarks in *Web IV*, including direct licenses,[159] and considered interactive market (non-statutory) negotiated direct license rates to determine the *Web IV* rates. *See* Shapiro WDT at 49. Professor Shapiro converted the *Web IV* per-performance rate of $0.0022 to derive a percentage-of-revenue rate applicable in this proceeding of 8.1%. *Id.* at 55.

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[158] The record labels also derive benefit from the direct licenses. *See* Shapiro WDT at 36. Notably, Sirius XM is able to distribute both the label's share and the artists' share of performance royalties directly to the contracting label. Sirius XM provides administration of the royalties without charging the fee that would be payable to SoundExchange under the statutory scheme. Under the direct license agreements with Sirius XM, some licensors also benefit from a more generous methodology for calculating the label's royalty pool. *Id.*

[159] Professor Shapiro opines that the direct licenses, such as the Pandora/Merlin agreement, "reflected the forces of competition at work," namely the leveling power of steering. Shapiro WDT at 49.

Professor Shapiro used a figure of 469 performances per subscriber per month for his conversion. *Id*. at 54.[160]

Anticipating questions regarding whether webcasting and satellite radio are too different to warrant this benchmark, Professor Shapiro analyzed the *Web IV* benchmark to resolve the differences. According to Professor Shapiro, there are two key differences to examine. First is the possible difference between a label's full marginal cost of a Sirius XM satellite performance and a webcast performance. Specifically, Professor Shapiro defined the marginal cost difference, if any, as one of relative promotional or substitutional effects. Second, Professor Shapiro looked at differences in the ability to steer as between Sirius XM and a webcaster. Noting that Sirius XM relies on human programmers while webcasters rely more heavily on algorithms, Professor Shapiro felt Sirius XM might be more able to steer without losing listeners. On the other hand, he noted that webcasters (using Pandora as an example) have the ability to and the practice of allowing listeners to create individualized "stations" giving Pandora greater flexibility to steer without alienating listeners. *See* Shapiro WDT at 56-57.

In the end, Professor Shapiro concluded that Sirius XM and webcasters are "quite comparable along both dimensions." Shapiro WDT at 50. When he combined the favorable comparison of satellite radio and webcasting with the fact that the sellers in both markets are the same, the rights at issue are the same, and that the *Web IV* benchmark accounts for the forces of competition, "it becomes clear that the *Web IV* benchmark is a very good benchmark for rate setting in this proceeding." *Id.*

Sirius XM witness, Steven Blatter, detailed anecdotal evidence of the promotional effects of sound recording plays on Sirius XM. *See* Written Direct Testimony of Steven Blatter, Trial Ex. 5, *passim* (Blatter WDT). Mr. Blatter touted Sirius XM's subscription model as supportive of its ability to broaden the listening (and presumably consumption) habits of its subscribers. Freed of the commercial demands of ad-supported radio, Mr. Blatter contended, Sirius XM can cultivate a broader audience than the "Top-40" stations. Listeners to Sirius XM's curated playlists and niche channels thus discover music that might otherwise have gone unnoticed. *Id.* at ¶ 2. Mr. Blatter recited "thank-you" letters from artists and labels, trade publication reporting and analysis, and sales statistics on selected titles as evidence of Sirius XM's promotional value to licensors. In addition to artist testimonials and press coverage, Mr. Blatter noted that "many musicians and record labels" grant Sirius XM waivers of statutory limitations relating to frequency of play under a statutory license (*i.e.*, the "sound recording performance complement") in order to enjoy the benefits of promotion on Sirius XM. *Id.* at ¶ 36.

Countering Mr. Blatter's assertions, SoundExchange expert, Dr. George Ford, opined that promotional effects of a particular platform are irrelevant to the Judges' task in this proceeding. *See* Written Direct Testimony of George S. Ford, Trial Ex. 23, at 3-4 (Ford WDT). Dr. Ford pointed out most notably that no "broad inter-platform analysis" of promotion and substitution is in evidence. *Id.* Further, he asserted promotional effect is meaningless unless it is net of substitutional effects. In the current music marketplace, Dr. Ford asserted, given the dramatic decline in sales of permanent music media, a streaming service's promotion of CD sales and

[160] In a similar exercise, Professor Willig used a weighted average figure of [[redacted]] performances per subscriber in his calculation of creator compensation cannibalization (opportunity cost). The higher opportunity cost would result in a higher percentage-of-revenue rate. *See* Willig WDT at B-7.

downloads is outdated. *Id.* at 4. Professor Willig actually performed econometric analyses looking at all streaming services (including Sirius XM) and found a net substitutional effect when compared to permanent sales. Willig WDT at ¶¶ 24-27. According to Professor Willig, the substitution of streaming for permanent sales contributed to a dramatic drop in creator compensation, meaning the opportunity cost to artists and labels of streaming is significant. *Id.* at ¶ 30.

Mr. Orszag likewise disputed Professor Shapiro's reasoning relating to the relative ability to steer in satellite radio and webcasting. As Mr. Orszag reasoned, the Judges relied on direct licenses and their steering provisions to make an adjustment to bring the webcasters' marketplace in line with a hypothetical effectively competitive market. *See* Orszag WDT at ¶¶ 64-66. Direct licenses negotiated by Sirius XM are [[redacted]], however. *Id.* ¶ 67. Nor is there any record evidence of *any* actual steering by Sirius XM. As the Judges noted elsewhere in this Determination, [[redacted]].

The most salient criticism of Professor Shapiro's *Web IV* benchmark comes from Professor Willig. Professor Willig discounts use of the *Web IV* rates, specifically the Pandora noninteractive rates, for various reasons, but the most telling is his uncontradicted assertion that not even [[redacted]] uses the statutory rates. After the *Web IV* determination, [[redacted] negotiated direct licenses with [[redacted]. Using the renegotiated rates as a benchmark, Professor Willig calculates the SDARS rate resulting from Professor Shapiro's methodology would be [[redacted]]% of revenue, approximately [[redacted]] the 8.1% of revenue proposed by Professor Shapiro. *See* Willig WRT at ¶ 57.

The Judges are troubled by the implicit assumption in Professor Shapiro's use of the *Web IV* per play rate, given that Sirius XM, as opposed to noninteractive streaming, is listened to predominantly in the car. As Mr. Orszag testified, any per play analysis implicitly starts with the questionable assumption that each play has an equivalent value in both distribution channels. Orszag WRT ¶ 53. Further diminishing the value of a per play analogy, the Judges note that the parties' use of a percent-of-revenue form of royalty is inconsistent with the idea that there is a single per play value that cuts across all distribution channels

Further, the Judges agree with Mr. Orszag that there is no valid reason – and certainly no proof in the record – that would permit the Judges to conclude or presume an equal per play value for a Sirius XM play – usually in the car – and a play of a noninteractive song. In fact, the Judges find that, as a matter of common sense, there is likely greater utility in a sound recording played in an automobile. A driver (in particular) has a limited set of options for entertainment, given his or her need to remain attentive to the road and to traffic. In the car, therefore, radio listening is a scarce form of entertainment and therefore more valuable product than it is elsewhere, where it competes with all other forms of utility and diversion (market and non-market).[161]

[161] Sirius XM asserts that Mr. Orszag did not undertake any empirical analysis in support of this argument. SXM RPFF ¶¶ 273-274. However, Mr. Orszag explained sufficiently that this value is a particular form of "access" value, whereby the driver knows he or she has the option of listening to music on Sirius XM in the car, a particular value given the limited alternatives for entertainment and diversion behind the wheel. *See* SE PFF ¶¶ 1228-1229 (and record citations therein). Moreover, the limited nature of alternatives for entertainment and diversion for a driver are matters of common knowledge, and that point is not dependent upon expert testimony. Further, because Sirius XM advanced the argument that the per play values are equivalent across these two distribution channels, it should have

The participants have not provided evidence sufficient for the Judges to reach any conclusions regarding a conversion of the *Web IV* per-play rates to a Sirius XM percent-of-revenue rate. Even if the parties had provided sufficient evidence to make the conversion, the Judges are unconvinced that the characteristics of webcasting and satellite radio are sufficiently similar to transfer, without adjustment, the royalty rate from one platform to the other.

D. Lenski Survey Data

Sirius XM engaged Mr. Joe Lenski of Edison Research to collect empirical data regarding the sources of Sirius XM satellite radio listeners and to evaluate where those listeners might turn for music consumption if Sirius XM were unavailable. *See* Written Direct Testimony of Joe Lenski, Trial Ex. 7, at 2 (Lenski WDT). Sirius XM also asked Mr. Lenski to develop similar data for Pandora listeners.[162] *See id.* Mr. Lenski conducted a national random digit dial telephone survey, using both landline and cellular telephone contacts (Lenski Survey). He employed a survey methodology "widely recognized as the most reliable form of survey research and … used by most major polling organizations…." *Id.* at 3. The survey queried 983 Sirius XM listeners and 1,323 Pandora listeners. Of the total respondents, 350 identified themselves as listeners to both Sirius XM and Pandora. The surveyors asked respondents in the two groups (Sirius XM and Pandora) separate sets of questions. Respondents identifying as listeners to both Sirius XM and Pandora answered both sets of questions.

A large majority – 62% – of Sirius XM listeners responded that they migrated from terrestrial radio, with 20% of respondents answering that before Sirius XM they listened to "CDs or your own music downloads." *See id.* at 5. Online streaming services, AM/FM stations streaming on the Internet, and interactive streaming services in the aggregate accounted for 7% of Sirius XM's current listeners. *Id.* As for alternatives to Sirius XM, survey respondents indicated they would turn to terrestrial radio (74%), CDs or music downloads (65%), online streaming services (49%) and interactive streaming services (32%).[163] *Id.* Once survey respondents identified all possible alternatives to Sirius XM, the surveyors asked respondents to distribute their possible alternatives by frequency. In this cut, a plurality of respondents' listening time, 40.8%, would be to terrestrial radio. *Id.* at 6. CDs and digital downloads would capture 23.1% of former Sirius XM listening time. In the aggregate, 22.1% of listening time would be to noninteractive (14.3%) and interactive (7.8%) streaming services.

By contrast, Pandora listeners reported migrating slightly more frequently from "CDs or your own music" (35%) than from terrestrial radio (33%).[164] As alternatives, if Pandora were no longer available, survey respondents chose CDs or music downloads (67%), terrestrial radio (59%), interactive streaming services (47%), noninteractive streaming services (46%), and Sirius

proffered evidence to support the assertion that consumers value access and per play values provided by Sirius XM the same as they value such benefits when provided by a noninteractive service, given the greater use of Sirius XM in the car.

[162] At the time of the Lenski Survey, Pandora had not yet launched its fully interactive subscription service. It operated only lean-back or Mid-tier services that were not fully interactive.

[163] At this juncture, listeners could choose more than one potential alternative to Sirius XM; hence the percentages exceed 100%. Notably, 28% of survey respondents answered they would listen to less audio overall if Sirius XM were unavailable. *See* Lenski WDT at 5.

[164] Sixteen percent of Pandora respondents answered that their Pandora listening was new listening time, not diverted from other sources. Lenski WDT at 6-7.

XM (23%).[165] When asked to allocate their time among the alternatives, Pandora listeners allocated their listening time to CDs or music downloads (26.3%), terrestrial radio (24.4%), interactive streaming services (16.6%) and other noninteractive streaming services (11.7%). *Id.* at 7.

These survey results showed that Sirius XM competes most directly with terrestrial radio, whereas Pandora's noninteractive service competes almost equally with CDs and downloads, interactive streaming services, and terrestrial radio. Professor Shapiro applied these conclusions to support his assertion that Sirius XM is mostly substitutional for terrestrial, non-royalty paying, radio. *See* Shapiro WRT at 14. In other words, Sirius XM is not cannibalizing creator compensation from other sources; it is augmenting creator compensation with an alternate source of royalties. *Id.* at 37. Professor Shapiro pointed out that, using the Modified Dhar Survey, Professor Farrell calculated a much lower opportunity cost than Professor Willig, *viz.*, $1.35 per subscriber per month as compared with $2.55 per subscriber per month. *See id.* The Farrell conclusions, he testified are "notably closer" to the results Professor Shapiro obtained using the Lenski Survey. *Id.*

Professor Dhar criticized the Lenski Survey as having "no scientific value." Dhar WRT at ¶ 9. Professor Dhar criticized the methodology, the response order, and the word choices in the Lenski Survey. *See* Dhar WRT *passim.* In essence, Professor Dhar concluded the Lenski Survey could not be of any value in reflecting "marketplace reality." *See, e.g., id.* at ¶ 16. The thrust of the Dhar criticisms revealed the differences in the assignments the parties gave their survey experts. Sirius XM asked Professor Lenski to gather listener preference information, whereas SoundExchange tasked Professor Dhar with looking at a defined, limited marketplace.

Professor Willig acknowledged that the "the structures of these two surveys [Dhar and Lenski] are fundamentally different: they ask fundamentally different questions." Willig WRT at ¶ 41. Professor Willig also criticized the Lenski Survey because it purported to measure listeners' assessments of their use of *time* whereas the Dhar Survey measures listeners' assessment of their *spending*, or more precisely, their willingness to pay. *See* Willig WRT at ¶¶ 13, 46. Professor Willig asserted that the latter would be a more appropriate measure to determine creator compensation cannibalization. *Id.* Professor Willig, at bottom, criticizes Professor Shapiro's reliance on the Lenski Survey data to evaluate relative substitutional effects of webcasting and satellite radio because the Lenski Survey did not give Professor Shapiro a basis to quantify the effects. Professor Shapiro testified in response to that criticism that, nonetheless, "switching behavior that's not price-based is quite useful in terms of how [economists]… see things," yet he cautioned that "I would accept that because Mr. Lenski is asking about where would you move your listening, that could give a different answer than what would you subscribe to if Sirius XM were more expensive." 4/20/17 Tr. 3765-76 (Shapiro).

The Judges accept that the Lenski Survey and the Dhar Survey (and even the Modified Dhar Survey) were not aimed at establishing the same empirical evidence. The Judges do not agree with Professor Dhar's criticism of the Lenski Survey methodology. Without parsing every question in the Lenski Survey for ambiguity or order bias, the Judges also accept that both the Lenski Survey and the Dhar Survey were faulty. Those surveys are, however, sources of

[165] As they did with Sirius XM, the surveyors first established all alternatives (adding to more than 100%) before having respondents allocate their time by preference. *Id.* at 6.

empirical evidence available in this proceeding. The Modified Dhar Survey resulted in adjustment of Professor Willig's analyses and conclusions. The Lenski Survey supported Professor Shapiro's analyses and conclusions. But in addition, the Judges understand the Lenski Survey to be of limited use in comparing the opportunity cost analyses conducted by Professors Willig and Farrell, as discussed *supra*.

VIII. GEO Music Rate Proposals for PSS and SDARS

A. Rate Structures and Proposals

Mr. George D. Johnson testified[166] on behalf of GEO Music and proposed that the Judges bridge what he described as a "gap" in creator compensation. *See* 5/2/17 Tr. at 2203, 2209-10 (Johnson). The premise upon which GEO relied is that *each performance* of a copyrighted work should be compensated. *See* (Corrected) Testimony of George D. Johnson (GEO), Trial Ex. 60, at 24-25 (Johnson CWDT). GEO acknowledged, however, that for some digital services, including the two services seeking licenses in this proceeding, measurement of individual performances might not be possible. Consequently, GEO sought rate structures that could provide

> a livable music royalty rate … [with which creators] can be sure in our royalty payments, real payments, that are guaranteed , at a rate we would get if there were no 'shadow' of a compulsory license ….

Id. at 5; *see id*. at 14 ("to know that they are secure in their royalty income ….").

The solutions GEO proposed appeared to arise from a per-work formula.[167] He began his analysis with reference to the history of "mechanical" royalties paid to license musical works.[168] Mechanical royalties for physical phonorecords and permanent digital downloads have and continue to be structured on a per-unit basis. To capture a value he considered equivalent to a per-unit royalty for streaming services, Mr. Johnson proposed four different rate structures: a per-subscriber rate, a percentage of revenue rate, a per-play rate, and a permanent download rate.

GEO proposed a per-subscriber SDARS rate ranging from $ 4.96 per subscriber per month in 2018 to $ 5.58 per subscriber per month in 2022. GEO would have this rate apply to all subscribers except those that receive channels with no, or incidental, music content and free trial period subscribers (limited to 30 days royalty free). Proposed Rates and Terms of George D. Johnson … at 10 (GEO Rates). GEO proposed PSS per-subscriber rates ranging from $ 0.10 in 2018 to $ 0.20 in 2022. *Id.* at 14.

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[166] As adjuncts to his testimony, Mr. Johnson proffered numerous exhibits. Sirius XM and Music Choice filed objections to GEO's exhibits, citing lack of foundation, hearsay, and relevance objections. The Judges grant those objections in their entirety. The GEO exhibits are not admitted for the truth of the matters asserted therein, but are nonetheless permitted to remain in the record as illustrative of Mr. Johnson's testimony.

[167] Mr. Johnson has advocated in each of his appearances before the CRB a holistic approach to licensing music performances. *See id.* at 2209. In his approach he asked the Judges to take into account royalties for all uses of musical works embodied in sound recordings: royalties for the publishers, songwriters, record companies, and artists.

[168] Section 115 of the Copyright Act creates the compulsory license to make and distribute phonorecords of musical works. *See* 17 U.S.C. § 115; § 106(1) and (3) (exclusive right to reproduce in copies or phonorecords and to distribute reproductions of musical works). The definition of phonorecords has evolved to include digital reproductions of embodied musical works.

GEO proposed a SDARS percentage of revenue rate within a "current marketplace" range of 25% to 40% of "Gross Revenues." He proposed defining "gross revenues" in a manner similar to the current regulations, but to include payments or payments in kind to key executives or shareholders. *See id.* at 12. For PSS, GEO proposed using the same definition of "gross revenues" and calculating the royalty rate at 45% of gross revenues.

For per-play rates for SDARS, GEO relied on "anonymous, but *actual*" Sirius XM royalty rates and adjusted those rates by varying the percent-of-revenue target. *Id.* at 13.

As an additional revenue stream for both the services and the copyright owners, GEO proposed requiring both Sirius XM and Music Choice to create a "BUY button." In this proposal, GEO envisioned listeners acquiring (1) a permanent download to the listener's device of choice, (2) a "cloud locker" stored sound recording, or (3) a permanent download to a purchased content locker or paid locker service.[169] GEO proposed a royalty range of $ 1.00 in 2018 to $ 2.50 in 2022 per purchase. *Id.* at 15.

The economic underpinnings of Mr. Johnson's proposals are that streaming and broadcasting music, *i.e.*, the access models of music consumption, have substituted for ("cannibalized") music sales. With this shift in music consumption, Mr. Johnson opined, users and exploiters of the artists' work have continued to prosper as the artists' revenue streams have declined. *See* Johnson CWDT at 36-40.

Sirius XM did not rebut directly the GEO proposals, but filed replies to GEO's proposed findings and conclusions. *See generally* Sirius XM … Reply to George Johnson's Proposed Findings … (Sirius XM Reply to GEO). With one exception,[170] Sirius XM disputed all of GEO's proposed findings and conclusions. With respect to all other proposed findings and conclusions, Sirius XM did not uniformly dispute the content of GEO's cited material, but argued that the citations were inapposite or irrelevant to the SDARS/PSS rate proceeding or without factual or legal support. *Id., passim.* Sirius XM argued that GEO's proposals conflated with SDARS the rate configurations for different licenses, *e.g.*, Phonorecords and Webcasters, without regard for the differences in rate setting standards for those configurations and without acknowledging the separateness of the record evidence supporting those different rates.

Music Choice addressed directly the GEO proposals. Mr. David Del Beccaro, President and CEO of Music Choice, testified that he could not parse the GEO proposals. *See* Del Beccaro WRT at 65 . Mr. Del Beccaro pointed out that the GEO rate proposals lacked explanation, "benchmark, model, or any other evidence …." *Id.* at 66.

Further, Mr. Del Beccaro took issue with the GEO proposal that Music Choice be required to offer a digital download service. As Mr. Del Beccaro observed, the digital performance sound recording license at issue in this proceeding does not extend to sales of sound recordings—physical or digital. *Id.* Music Choice has not licensed the rights necessary to sell phonorecords. Further, Music Choice provided retail sales of physical phonorecords (CDs), a business that did

[169] GEO did not clarify how a paid locker service or purchased content locker service might be different from a "cloud locker."

[170] Sirius XM did not dispute GEO's Proposed Conclusion of Law number 24, to wit: "George D. Johnson is an individual *pro se* singer/songwriter, music publisher and independent sound recording creator." Sirius XM Reply to GEO at 27.

not require a license from record companies. Ultimately, Music Choice abandoned that service because it was not profitable. *Id.* at 66-67.

The Judges agree with Sirius XM that GEO's proposed rates and terms are unsupported by record evidence. The Judges also agree with the Music Choice criticisms of GEO's presentations. GEO's arguments are primarily policy arguments beyond the scope of this proceeding. The GEO proposed findings, conclusions, and rate proposals are inadequately supported in the record.

B. Statutory and Constitutional Considerations

GEO referred to the constitutional provision giving Congress the power to provide for copyrights.[171] He acknowledged that Congress provided for certain "exclusive rights" for copyright holders in section 106 of the Act. He argued unconvincingly, however, that the statutory licenses inappropriately infringe on the exclusive rights Congress created. He also questioned whether the Judges, or their predecessors whose precedent the Judges consider, were at worst confiscating, or at best marginalizing, copyright owners' rights by failing to provide for fair compensation. *See* Johnson CWDT at 6, 13. GEO asserted that current statutory royalty rates are "extremely low below-market" rates. *Id.* at 13.

GEO made much of the "full independence" of the Judges. *See, e.g.*, Johnson CWDT at 7; 5/3/17 Tr. at 2244 (Johnson). Mr. Johnson appeared to equate judicial independence for the Copyright Royalty Judges with disconnection from the dictates of the law. His arguments failed to analyze the separate licenses created by Congress or the differing standards by which the Judges must set those rates. By focusing unduly on "fair market" considerations, Mr. Johnson ignores the policy factors Congress established for certain licenses in section 801(b)(1) of the Act. Further, in every rate setting or rate adjustment proceeding, the Judges hear testimony from economists and other market experts to determine a fair rate for each license under the circumstances extant at each license period.

Notwithstanding the import of Mr. Johnson's (and other's) evidence of economic imbalances in the present-day music industry, nothing in the Constitution or the Copyright Act empowers the Judges to create new law or fill in legislative "gaps" arising by the course of commerce. Only Congress has that power.

IX. Adjustment for Promotional or Substitutional Effect

Neither SoundExchange nor Sirius XM proposes an adjustment to the rates that they advocate to account for any promotional effect. *Compare* Shapiro WDT at 56 ("good reason" to conclude promotional value from performances on Sirius XM greater than promotional value of performances by webcasters, "I am not able to precisely quantify just how much lower the royalty rate would be, so I make no downward adjustment to the rate) *with* Orszag AWDT at ¶¶ 97-100 (considered whether adjustment was required between target market (Sirius XM) and benchmark market (interactive services) with respect to promotion and concluded no adjustment necessary).

Additionally, as the Judges explained in *Web IV*:

[171] Article I, Section 8, clause 8 of the Constitution gives Congress the power "to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." U.S. Const., Art. I, § 8, cl. 8.

> 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, 81 Fed. Reg. at 26326

The Judges have also repeatedly found that *relative* promotion, not *absolute* promotion/substitution, is the relevant factor in their consideration of statutory rates. *See SDARS II*, 78 Fed. Reg. 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"). Testimony from a SoundExchange economic expert in the present proceeding re-confirmed the logic of these conclusions in more formal economic terms. *See* 5/1/17 Tr. 1827 (Ford); *see generally* Ford WDT; Written Rebuttal Testimony of George Ford, Trial Ex. 41 (Ford WRT). In the present case, the parties' position is consistent with these pronouncements regarding relative promotion, in that they do not propose a rate adjustment on the basis of any *relative* promotional differences.

Accordingly, the Judges do not adjust the rates they establish in this proceeding to reflect any hypothetical, absolute or relative promotional effects arising from performances on Sirius XM.[172]

Further, as discussed elsewhere in this Determination, the substitution effects arising from record company licensing of sound recordings to Sirius XM is a lynchpin for the setting of the rate in this proceeding.

X. The Itemized Section 801(b) Policy Considerations

As detailed in this Determination, the Judges find that the 15.5% of revenue rate arising from the Opportunity Cost approach represents a market-based rate that, in its entirety, mitigates the complementary oligopoly effects of certain positive opportunity costs embedded within it and reflects the parties' existing market power. Further, the record in this proceeding does not support any adjustment to the resulting rate to account for performances on Sirius having a promotional or substitutional effect. Accordingly, the Judges find this 15.5% of revenue rate to be an effectively competitive rate, and therefore a "reasonable rate" under 17 U.S.C. § 801(b)(1) before consideration of the policy factors within that statutory section.

The Judges now analyze each of the itemized 801(b)(1) policy considerations to determine whether they should make any upward or downward adjustment in this proceeding and, if so, the magnitude of any such adjustment. In this and prior proceedings, the Judges have concluded that these four factors cannot necessarily be considered separately from one another. *See, e.g., SDARS I*, 73 Fed. Reg. at 4094. Moreover, in the process of identifying the "reasonable rate" before specifically applying these four itemized factors, the Judges may have already considered issues

[172] There is anecdotal evidence in the record regarding promotional effect. The Judges have previously noted the insufficiency of anecdotal evidence to support a rate adjustment. In this proceeding, however, they find that issue to be moot given that the parties' respective experts have not proposed a rate adjustment to reflect promotional effect.

that overlap with the four factors, such that any further application of the same considerations would constitute improper double-counting of those considerations.

SoundExchange argues that the first three statutory objectives promote policies that are generally advanced through market transactions. According to its economic expert, Mr. Orszag, "market-based rates are consistent with the first three of the 801(b) factors." 4/25/17 Tr. 954 (Orszag). If that were true, then any attempt by the Judges to adjust a market-based rate would be improper or, to the extent the Judges had already considered market principles, a form of double-counting, were they to use those factors again to adjust the rate.

By contrast, Sirius XM asserts that, as a matter of law, "it is well established that reasonable 801(b)(1) rates need not correspond to market rates." SXPFF ¶ 87 (citing *SoundExchange v. Librarian of Congress*, 571 F.3d 1220, 1224 (D.C. Cir. 2009) (any "claim that [section 801(b)] clearly *requires* the use of market rates is simply wrong"); *Recording Indus. Ass'n of Am. v. Librarian of Congress*, 176 F.3d 528, 533 (D.C. Cir. 1999) (same).

Thus, Sirius XM further asserts that in a proceeding governed by the section 801(b)(1) rate standard, "market-approximating rates" *must* be further evaluated against the Section 801(b)(1) policy objectives in order to arrive at "reasonable rates" that comport with the statutory command. *Id.* The Judges do not agree that this construction of their statutory charge is legally mandated or otherwise necessary. The Judges understand that they may establish "reasonable rates," and only thereafter decide whether or how to apply the four itemized factors. If the Judges find that a market-based rate[173] is consistent with a "reasonable rate," they may adopt that rate and apply the four factors to that rate. And, if the record does not support a further adjustment based on an application of the four itemized factors, or any of them individually, then the Judges may allow their market-based reasonable rate to stand as the new statutory rate.

As the foregoing analysis of the parties' proposals makes clear, the Judges have found that the 15.5% rate is a "reasonable rate" derived from a combination of market-based opportunity costs, survey evidence and countervailing considerations. Thus, the Judges do not consider the four itemized factors in § 801(b)(1) as bearing upon the reasonableness of the market-based rate they have already identified as "reasonable." Rather, in this case, the Judges consider whether these four factors, separately or in combination, require any policy-based adjustments of the 15.5% rate and whether the Judges have already incorporated those factors into the analysis that led them to identify the 15.5% rate.

Before embarking on an analysis of the parties' separate factor arguments, the Judges note an overarching theme in many of those discrete arguments. The parties argue broadly that their costs and investments are significant (Factor C issues) and that they are entitled to a "fair" income or return (Factor B issues) that is not disruptive of their businesses (Factor D issues), in order to maximize the distribution of sound recordings to the public (Factor A issues). These arguments echo the historical ambiguity in the creation of the itemized section 801(b)(1) factors and the debate between Messrs. Nathan and Arnold prior to the adoption of those factors, as discussed *supra*.[174] Because the historic antecedent of the factors is the traditional public utility rate-setting process, the Judges cannot easily apply the factors to a determination of rates that is not based on

[173] Although the Judges are *not required* to utilize market-based rates, they surely are *not prohibited* from doing so, as discussed *supra*.

[174] *See supra*, section II.B

a rate of return that accounts for specified costs, invested capital, a delineated rate base and a return on invested capital. Rather, the arguments in this context are by necessity more directional in nature. With this caveat, the Judges examine the parties' evidence regarding the need for any adjustment pursuant to the four itemized factors in section 801(b)(1).

A. Factor A: Maximizing the Availability of Creative Works to the Public

SoundExchange construes Factor A as calling for royalty rates that are sufficiently high to foster the creation of new content, but not so high as to jeopardize the ongoing viability of a licensee-service "that has gained acceptance among consumers in the marketplace." SE PFF ¶1435. Based on this understanding of Factor A, SoundExchange asserts that the market-based rates it has proposed do not require adjustment to satisfy the objectives of Factor A.

In support of this point, SoundExchange first relies on an explanation by Professor Willig as to why Factor A is consistent with his Ramsey Pricing approach. Willig WDT at ¶ 13 ("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."); *see also* 5/2/17 Tr. 1981 (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."). However, because Professor Willig did not identify a proposed rate under his Ramsey pricing approach, the Judges do not find that this approach compels a Factor A adjustment.

Nevertheless, Professor Willig did indicate that his Ramsey Pricing approach generally demonstrated that the statutory rate should increase from the present rate of 11%. Because the reasonable market-based rate identified by the Judges of 15.5% is 41% higher than the present rate, the Judges see no need to make an additional increase in order to be consonant with Professor Willig's directional recommendation arising from his Ramsey pricing approach.

SoundExchange's other economic expert, Mr. Orszag, provided a separate reason why SoundExchange's rate proposal was consistent with the Factor A principles. He stated that rates that are "market-based" meet the Factor A criteria because they cause rates to be "sufficiently high to incentivize copyright holders to create content, as reflected in content distributors' [licensees'] — and by extension consumers' — willingness to pay for sound recordings." Orszag WDT at ¶ 15. In addition, Mr. Orszag opines that the presence of streaming services operating under market-based rates demonstrates that those "market-based rates are not so high as to prevent content distributors from earning economic returns sufficiently attractive to induce 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." *Id*. Thus, he concludes that "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. 956-57 (Orszag).

In support of this argument, SoundExchange notes the many specific costly ways in which labels must invest in their businesses, incurring repeated "sunk costs," in order to provide a continuing flow of recorded music. As SoundExchange notes, the testimony and evidence highlight these specific risky and costly investments incurred to sign artists, create and produce recordings, manufacture product, market and distribute the music, build an audience and fan base, and license the copyrighted content to services such as Sirius XM for listening by end users. *See, e.g.*, Written Direct Testimony of Jason Gallien, Trial Ex. 30, at 2 (Gallien WDT).

In opposition, Sirius XM correctly argues that Mr. Orszag "merely offers truisms," such as that higher revenue encourages record companies to make sound recordings available to the public. However, Sirius XM notes that SoundExchange does not go beyond this truism to "elucidate how properly determined market rates fail to ensure that record companies are fairly compensated." SX RPFF ¶ 340.

The mere (and obvious) fact that record companies incur substantial costs is not illuminating, because that fact simply begs the question whether rates are sufficient in light of those costs. Moreover, the Judges do not acknowledge that SoundExchange's position even rises to the level of a "truism." An increase in the royalty rate will not necessarily result in an increase in revenue, if the increase causes a downstream retail percentage reduction in quantity demanded that is greater than a percentage increase in subscription prices.

The Judges find that a rate properly crafted to reflect an effectively competitive market rate will maximize the availability of creative works to the public by providing appropriate market incentives. Lower rates, *ceteris paribus*, would result in increased distribution but less incentive to produce sound recordings. Higher rates, *ceteris paribus*, would encourage increased production of sound recordings but discourage distribution. Nothing in the record indicates that, on balance, either an increase or a decrease in the reasonable rate of 15.5% would increase the availability to the public of sound recordings.

Further, because the 15.5% rate identified by the Judges is market-based, the Judges are advancing the general proposition asserted by SoundExchange, that the market, properly construed, will balance the interests of producers (licensors) and distributors (licensees), without an increase in that rate under Factor A. *See* 5/2/17 Tr. 1956-57 (Willig) (from economic perspective, factor will "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 … [and] at the same time, … those rates and those terms should motivate … the distribution Services, to distribute those recordings to the public in a way that reflects consumer preferences.").

Sirius XM suggests that the record supports a reduction in the royalty rate below the present 11% rate. In support of that point, it relies on the testimony of Professor Shapiro, who noted that an element of providing proper economic incentives to both the creators of sound recordings and to Sirius XM to make the necessary investments to "maximize the availability of creative works to the public" is the extent to which plays on Sirius XM's satellite radio service promote or substitute for other record label revenue streams. Shapiro WDT at 57-58. The Judges find this argument to be as much a "truism" as SoundExchange's argument emphasizing the incentivizing effect of higher royalty rates, and thus equally unavailing. Moreover, the Judges have already incorporated into their rate analysis survey evidence that demonstrates the substitution patterns between Sirius XM and other distribution channels. In that analysis, the Judges relied on an evidentiary roadmap provided to them *by Sirius XM*, through Professors Hauser and Farrell, for the identification and valuation of the substitutability of other distribution channels for Sirius XM.

Finally with regard to Sirius XM's argument, although Professor Shapiro asserts that a downward adjustment is warranted because Sirius XM is more promotional and less substitutional than non-interactive webcasters for other record label revenue streams, he finds it too difficult to measure the magnitude of such an adjustment. *Id.* at 58 & App. D. Accordingly, he declines to propose such an adjustment. Shapiro WDT at 58. The Judges, therefore, have no evidentiary basis to make such a downward adjustment, even if they had found that a reduction was warranted.

The Judges interpret the "maximize" directive more broadly than either party to this proceeding. SoundExchange interprets maximization as an upstream supply issue while Sirius XM interprets maximization as a downstream distribution issue. The Judges must look at both steps in the process. Aside from the economic issues the parties argued, there is also simply no record evidence that indicates a shortfall in the overall production of sound recordings, or in the dissemination of sound recordings through Sirius XM or other distribution channels. For all these reasons, the Judges find no basis in the record for a policy adjustment to the 15.5% "reasonable rate" based on Factor A.

B. Factor B: Fair Income/Fair Return under Existing Market Conditions

Factor B requires the Judges to balance fair return to licensors and fair income to licensees. There is an inherent tension within this factor. Further, economic analysis cannot identify royalty rates or a division of revenue that is "fair." *See* 4/25/17 Tr. 957 (Orszag) ("Fairness is not a well-defined term in the economics literature."). Economics can, however, provide a framework for a fair process. *Id.* at 958 ("Market-based rates are fair in the sense of, as long as they are being determined in a workably competitive environment, they are going to produce outcomes that are efficient."). Thus, the Judges analyze the Factor B issues with an understanding of the inherent subjectivity of the endeavor, and an appreciation for the nuanced distinction between a "fair outcome" and a "fair process."

Equating the market rate with a rate that provides a fair return, SoundExchange argues that the current rate does not afford a fair return to copyright owners because it is lower than a market rate. Exacerbating this problem, according to SoundExchange, is the decline in sales of downloads and physical products, which have made royalty revenues from Sirius XM (and other services that offer "access" rather than "ownership") even more important than in the past. *See* Gallien WDT at 3-6. To the extent this argument is simply a plea by SoundExchange for rates that subsidize declining business segments, it is rejected. As the Judges have said previously with regard to *services'* business models, rates are not set merely to support a particular business model. *See Web IV*, 81 Fed. Reg. at 26329 (the statute "neither requires nor permits the Judges to protect any given business model proposed or adopted by a market participant"). Likewise in this proceeding, the Judges are not obliged to offset, mitigate, or subsidize a decline in physical or download sales by setting higher royalty rates for satellite radio. Moreover, as Sirius XM correctly argues, in this proceeding there is no record evidence that the decline in revenues from other distribution channels can be laid at the doorstep of Sirius XM and, further, any such decline cannot automatically mean that the current level of income received by the record companies is not "fair." *See* SXM RPFF at ¶ 344.

SoundExchange refines its argument by reformulating its substitution/cross-elasticity argument as a basis to raise rates pursuant to Factor B. More particularly, noting the self-evident fact that consumers have a limited amount of time to listen to music, SoundExchange points out that, when subscribers tune in to Sirius XM, they forego other direct revenue generating services, like Apple Music or Spotify, and that may also diminish their purchases of physical product and downloads because they spend their music-listening time tuned in to Sirius XM. Gallien WDT at 7. The Judges reject this argument as a basis to adjust the rates pursuant to Factor B. In setting the "reasonable rate" of 15.5% for an effectively competitive market, the Judges examined the survey evidence that demonstrated the relevant substitution patterns. The Judges cannot gainfully pursue that same issue a second time by reconfiguring it as a basis for making adjustments under Factor B.

Approaching the Factor B issue from the other side of the ledger, so to speak, SoundExchange argues that "Sirius XM earns far more than a fair income under the current 11% rate, and will continue to do so under SoundExchange's rate proposal." SE PFF at 605. In support of this conclusion SoundExchange points to several facts proffered by Professor Lys that demonstrate how and why Sirius XM has realized substantial and profitable growth:[175]

> (a) At the time of *SDARS I*, Sirius and XM were two separate companies competing for subscribers based on price, and likewise engaged in price competition for non-music content such as sports leagues and talk show personalities. However, in July 2008, Sirius and XM merged, and the merged entity, Sirius XM, became the sole provider of satellite radio in the United States, holding a monopoly in this market segment. Lys CWDT at ¶ 43.
>
> (b) The merger eliminated price competition between the two pre-merger satellite radio services for subscribers and for non-music content, and also allowed the combined company to take advantage of the economies of scale that are central to its business model. Lys CWDT at ¶ 44.
>
> (c) Sirius XM's operating costs are predominantly fixed with respect to subscriber revenue. These fixed costs include programming and content, satellite and transmission, sales and marketing, engineering and design, subscriber acquisition costs, and general and administrative costs.[176] *Id.* at ¶ 45.
>
> (d) Sirius XM's variable operating costs (*i.e.*, costs that *do* vary with subscriber revenue) are small in comparison, and include royalties, customer service, and cost of equipment. *See id* at ¶ 46; *see also id.* at ¶ 46 n.17 (citation omitted).
>
> (e) Because of its largely fixed cost structure and its post-merger market share growth, Sirius XM's profits increased dramatically once its sales reached its "break-even point," *i.e.*, the point at which its fixed costs are covered. *Id.* at ¶ 47.
>
> (f) This growth in profits is reflected in Sirius XM's high contribution margin (*i.e.*, the fraction of each additional revenue dollar that covers fixed costs or increases profits). Specifically, by 2015, Sirius XM achieved a contribution margin of [[redacted]] %, meaning that each additional dollar of revenue increases pre-tax net income and cash flows by $[[redacted]]. *Id.*

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[175] The summary of Professor Lys's exhaustive analysis of Sirius XM's financial success lays out SoundExchange's Factor B analysis and also demonstrates that the 15.5% rate set by the Judges cannot be construed as "unfair." The rate provides the record companies with their opportunity costs, a form of return that Professor Willig acknowledged to be appropriate, while allowing Sirius XM to realize ongoing profits.

[176] Alternatively, these costs are the same whether one person is listening to a Sirius XM broadcast, or millions.

(g) Sirius XM's "free cash flow" (FCF) (a metric commonly used to assess a company's performance and value), captures the amount of cash that is available, after necessary business investment (including satellite investments), that can be used to pay dividends and repurchase shares. In 2012, Sirius XM's FCF was [[redacted]]% of EBITDA,[177] a higher percentage than other large entertainment-media companies. That is, Sirius XM can distribute [[redacted]]% of its EBITDA to its shareholders without affecting its operations.

(h) Looking at FCF over a longer period, over the past decade Sirius XM has generated $2.6 billion in such FCF. Since the merger, starting in 2009 Sirius XM has recorded seven straight years of positive FCF and has over that seven-year period generated $4.91 billion of FCF. Lys CWDT at ¶¶ 91-92. 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. *Id.* at ¶ 55. Cumulatively, from 2006-2015, Sirius XM earned $5.9 billion in operating cash flows. *Id.* at ¶ 90.

(i) Sirius XM's executives trumpet the company's more recent performance as "one of the best growth stories in media," and conclude that its "business is thriving" – a claim confirmed by Professor Lys's analysis. *Id*. at ¶ 52 & nn.24-25.

(j) In the 2009-2015 post-merger period, Sirius XM earned a total of $5.6 billion in EBIT.[178] Similarly, in the period since the merger, Sirius XM has generated over $7 billion in adjusted EBITDA, an increase from negative $690 million in 2006 to positive $1.66 billion in 2015. Lys CWDT at ¶ 54.

(k) Turning from financial to volume metrics, over the past decade, Sirius XM has substantially increased its number of subscribers, even as it has increased the prices and fees it charges. Lys CWDT at ¶ 57; *see also* 4/26/17 Tr. 1323 (Lys) (Sirius XM's historic revenue base). Specifically, over the past decade Sirius XM's subscriber base has grown on average [[redacted]]% per year, more than doubling from [[redacted]] million subscribers in 2006 to [[redacted]] million subscribers at the end of 2015. Lys CWDT at ¶ 59. As of March 2016, Sirius XM had over 30 million subscribers. *Id.* at ¶ 58 & n.34.

(l) Sirius XM's total revenue has grown even faster than the growth in the number of its subscribers – from $1.57 billion in 2006 to $4.57 billion in 2015 – a 12.6 percent compounded annual growth rate (CAGR). Lys CWDT at ¶ 65. This higher revenue growth resulted from Sirius XM's increase in its subscription prices and fee charges that occurred *contemporaneous with the growth of its subscriber base*, allowing Sirius XM to realize a 15.8% increase in its ARPU between 2008 and 2015, corresponding to a compounded annual growth rate of 1.6%. *See id.* at ¶ 66, Fig. 11. The table below presents the increase in the total effective monthly

[177] EBITDA means earnings before interest, taxes, depreciation and amortization.

[178] EBIT means earnings before interest and taxes.

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cost of subscribing to Sirius XM's most popular subscription package, the "Select" package), *i.e.*, combining the subscription fee *and* the U.S. Music Royalty Fee:

Sirius XM historical effective monthly total subscription cost (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%

Id. at ¶ 70, Fig. 12; *see also* Summary of U.S. Music Royalty Fees by Package, Trial Ex. 321 (excerpt from Sirius XM website). 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 $18.21 as of April 2016, corresponding to a total increase of $5.26 or a compounded annual increase of 3.5%. Lys CWDT at ¶ 71.

According to Professor Lys, Sirius XM's pricing increases appear to have had little effect on demand for its services, as evidenced by the essentially non-existent impact of the price increases on subscriber "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"). Sirius XM Holdings, Inc., Proxy Statement & 2015 Annual Report, Trial Ex. 372, at 21 (Sirius XM 2015 Annual Report).[179]

Sirius XM's most recent annual performance has been consistent with its past post-merger growth and profitability, as evidenced by the following points.

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. 3759-60 (Meyer).

In 2016, Sirius XM added more than 1.7 million net subscribers, outperforming expectations. It added 1.66 million "self-pay net subscribers," also exceeding expectations (Sirius XM's original guidance was 1.4 million). Trial Ex. 25, Figs. 43 at 56.

In 2016, Sirius XM's subscriber level increased by 6%, raising its subscribership level to 31.346 million. Lys WRT at ¶ 164.

[179] The only noticeable bump is an increase in churn from 1.8% to 2.0% in 2009 when Sirius XM introduced the U.S. Music Royalty Fee, resulting in the largest percentage increase in the effective subscription price, and coinciding with the 2008-09 recession. Lys CWDT at ¶ 73.

> In 2016, Sirius XM's 2016 revenue grew by 10% compared to 2015, to more than $5 billion; EBITDA grew by 13% to $1.9 billion; FCF per share grew 26% to $0.30; and net income grew 46% to $746 million. Lys WRT at ¶ 166.

In sum, SoundExchange argues that there is abundant and undisputed evidence that Sirius XM's profitability has grown dramatically – and significantly faster than its revenue – indicating an improved ability to monetize the operational gains and scale.

Accordingly, SoundExchange's critical conclusion from Professor Lys's exhaustive analysis is this: Sirius XM has been facing a relatively inelastic demand, enabling it to increase prices to consumers without causing a loss of subscribers. Lys CWDT at ¶ 74.[180]

Sirius XM does not challenge the wealth of evidence demonstrating its economic, market, and financial success. Rather, Sirius XM contends that these measures of Sirius XM's economic position are "entirely irrelevant to the rate-setting task at hand." Shapiro CWRT at 5. More specifically, Sirius XM argues that "Professor Shapiro has demonstrated" through his direct and rebuttal testimony "that Sirius XM's overall profitability would not be among the variables impacting the outcome of a license negotiation *in a workably competitive market*." *See* Shapiro CWRT, App. D., & 24-26.

Professor Shapiro explained that, in his opinion, it is not the *overall* profits that are relevant in a Factor B analysis, but "the *incremental* profit f[rom] additional Sirius XM customers, as measured by the *contribution margin* (which takes into account only *variable* costs) that enters the analysis. Shapiro CWRT at 52 (emphasis added). Sirius XM notes that its "contribution margin" has been essentially unchanged over time, and that even Professor Lys acknowledged that the contribution margin had "remained remarkably consistent over time." *See* Lys WDT at ¶87) (emphasis added).

Sirius XM seeks to impeach Professor Lys with excerpts from his testimony in *Web IV*:

> From the standpoint of economics, a company's ability to pay royalties, while still remaining profitable, and the "willing buyer/willing seller" standard are two very distinct concepts.

See 4/27/17 Tr. 1592-93 (Lys).

> It "is wrong to suggest that [a service's] current or past profitability should be used to determine the royalty rate a willing buyer and a willing seller would agree upon."

See 4/27/17 Tr. 1593 (Lys).

> It was "incorrect" to "suggest[] that Pandora's current profitability and financial performance determine its ability to pay royalties, and that Pandora's ability to pay determines the rates the Judges should adopt."

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[180] Professor Lys also opines that Sirius XM will continue to grow across these metrics for all of 2017 and into the foreseeable future. *See* Lys CWDT at ¶¶ 152-198. As the Judges have stated previously, they are less than sanguine about projections and forecasts given the inherent speculative nature of such a process. However, as Professor Lys pointed out, his projections in *SDARS II* regarding the future financial performance of Sirius XM were accurate, and prior financial forecasts, as well as Sirius XM's own internal forecasts, [[redacted]]. *See id.* These facts suggest that there is no present reason to project a scenario in which Sirius XM's current level of profitability will fall or will not be maintained.

See 4/27/17 Tr. 1592 (Lys).

Sirius XM also points out that its non-music content costs have declined, demonstrating that there is no positive correlation between its profitability and its content costs. *See* Shapiro CWDT at 52-53 & Fig. 4.

In sum, Sirius XM concludes that its potential ability to pay higher royalties out of increasing profits is simply irrelevant to the question whether it is receiving a “fair return” pursuant to Factor B.

The Judges find that Sirius XM’s increased profitability does not provide an independent basis to adjust the 15.5% identified by the Judges. Sirius XM earns sufficient profits, as the only satellite radio provider, to allow it to pay the opportunity costs of its service to the record companies. Those opportunity costs, properly weighted, constitute the building blocks for the 15.5% rate. The evidence, again, as detailed by Professor Lys, makes it abundantly clear that Sirius XM, through its monopoly of the satellite radio distribution channel, has the financial capacity to pay higher rates and still maintain a high level of profitability.

The Judges find no inconsistency with regard to Professor Lys’s *Web IV* testimony and his testimony in this proceeding. If a service were operating at a loss rather than a profit, the record companies would not consider that fact relevant, especially if the service did not add new (*i.e.*, non-cannibalizing) listeners who could be monetized by subscription or advertising revenues. However, when a service is profitable, in an unregulated market, the record companies, empowered by their “must have” status, can and will seek to acquire as much of the surplus (profits) as they can through the bargaining process. As explained in this determination (and in *Web IV*), though, the Judges reject a division of profits based on the “must have” power of the record companies, absent application of an appropriate offsetting factor, such as identified in the steering analysis in *Web IV* or in the opportunity cost analysis in this determination.

Beyond Professor Lys’s financial analysis, SoundExchange makes additional arguments with regard to Factor B that do not aid in the Judges’ analysis. SoundExchange argues essentially that a fair allocation of the revenue attributable to satellite radio will arise either from: (1) a Ramsey pricing approach as described by Professor Willig; or (2) arm’s-length negotiations in a benchmark market such as the interactive market suggested by Mr. Orszag. Neither of these points supports a Factor B analysis. First, Professor Willig did not identify a rate pursuant to his Ramsey pricing approach, and he argued that this approach counseled generally for an increase in the existing rate (which the Judges have found to be appropriate pursuant to their reasonable rate analysis). Mr. Orszag’s assertion that arm’s length negotiations in the interactive market demonstrate a fair process (if not necessarily a fair outcome) is belied by the fact that: (1) the survey results reached by all survey experts demonstrates the inapposite nature of the interactive benchmark; and (2) the interactive benchmark is tainted by a complementary oligopoly effect that cannot be mitigated, on the present record, by a fact-based steering adjustment.

SoundExchange, again relying on Mr. Orszag, cautions that the Judges should not apply Factor B so as to provide an unjustified ceiling on the royalty rate, which could constitute a subsidy to Sirius XM. The Judges’ 15.5% reasonable rate does not constitute an arbitrary ceiling or a subsidy, because it is derived pursuant to the "opportunity cost" approach that, according to Professor Willig, resulted in a reasonable rate.[181]

Sirius XM found no basis under Factor B to change its proposed rate. Shapiro WDT at 58. Of course, the Judges' 15.5% rate is above Sirius XM's proposed rate range that extends to 11% (the current rate). However, Sirius XM has not made any arguments that would support a reduction of the 15.5% rate pursuant to Factor B. *See* Shapiro WDT at 58. Sirius XM limits its Factor B analysis to the bald assertion that its benchmarking analysis (rejected by the Judges) led to a fair return for copyright owners and a fair income for copyright users.

C. Factor C: Relative Roles of the Parties

SoundExchange asserts that, pursuant to Factor C, the statutory rate should be above its proffered benchmark, or at least at the high end of its benchmark range. In support of this argument, SoundExchange points to testimony that record companies and artists make substantial contributions through their search for artistic talent, a process that is long, competitive, and often unsuccessful. *See* 5/11/17 Tr. at 3542-43 (Kushner). More particularly, SoundExchange explains that Artist & Repertoire (A&R) representatives from labels go to clubs and concerts worldwide, listen to thousands of demonstration (demo) recordings, and search the Internet to identify emerging and undiscovered artists. According to SoundExchange, these tasks are labor-intensive, because finding musical talent requires people with sufficient industry knowledge and experience. Gallien WDT at 8. SoundExchange points to a 2015 RIAA study that found the major labels spent $13.4 billion between 2003 and 2012 to find new artists and help them reach an audience. Written Direct Testimony of Michael Kushner, Trial Ex. 34, at ¶ 77 (Kushner WDT).

SoundExchange notes that after record companies incur the foregoing costs, they must also incur costs to shape the artists' music and image in order to maximize their commercial appeal. Those investments can include the costs of dance and vocal lessons, personal stylists, makeup artists, trainers, and media training. Many of those investments do not yield a financial return. *See* 5/11/17 Tr. 3542-43 (Kushner) ("[I]f you look at the totality of the number of artists we sign and the numbers that are successful, clearly the unsuccessful ones outweigh the successful ones").

SoundExchange further notes that recording companies incur substantial additional costs to create recorded works, and to market, manufacture, and distribute recorded music.[182] SoundExchange avers, for example, that in 2015 alone, UMG spent $[[redacted]] million on recording costs, mastering costs, producer and sampling fees, royalty advances, and overhead funding to contracting parties who provide A&R services. Gallien WDT at 8. Mr. Kushner testified for Atlantic Records that, on an album basis, the recording costs for a maiden album from a new artist typically range from $[[redacted]] to $[[redacted]] – and can exceed $[[redacted]] for an established artist. Kushner WDT at ¶ 36. If the record companies cannot recoup these expenditures and

[181] To be sure, Professor Willig calculated a higher rate because he used the diversion ratios in the Dhar Survey, but the Modified Dhar Survey (as corrected), with its superior diversion ratios, applies the same opportunity cost approach advocated by Professor Willig, and even applies his "Creator Contribution" walk-away values.

[182] These costs typically may include the additional expense of a producer's salary, studio rental, hiring a sound engineer, paying musicians to play with the featured artist, and preparing a master recording. *See* Written Direct Testimony of Bruce Iglauer, Trial Ex. 33, at 10-11 (Iglauer WDT); Kushner WDT at ¶¶ 48-50.

advances from sales revenue, they – not the artists or the music services – bear the unrecouped cost and foregone profits.[183]

As to marketing costs, 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]]. *Id.* at ¶ 68. In fiscal year 2015, UMG alone spent $[[redacted]] specifically on gross marketing costs, as well as $[[redacted]] in overhead costs for its various departments that also provided marketing services. For UMG, marketing costs included over $[[redacted]] in advertising, $[[redacted]] in artists' press and TV appearances, over $[[redacted]] in Internet marketing & advertising, over $[[redacted]] in radio promotion, and over $[[redacted]] in video production costs. With specific reference to streaming and playlisting efforts, UMG has also invested in the setup costs and personnel to establish a team dedicated to streaming marketing and playlisting efforts. Gallien WDT at 13-14.

Regarding recording companies' manufacturing and distribution costs, they remain substantial in spite of the industry's transition away from physical media. Because of 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. *Id.* at 14. 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, it 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. *Id.* at 14. 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 $[[redacted]]. *Id.* at 15-16.[184]

In sum, SoundExchange asserts that major labels spend *billions* of dollars finding and developing new artists, helping them reach an audience, and creating and marketing recorded music.

Sirius XM gives short shrift to these lengthy descriptions of the record companies' various expenses. First, Sirius XM claims that SoundExchange's request for an upward adjustment pursuant to Factor C is inconsistent with the latter's prior broad proclamation that the first three itemized 801(b)(1) factors are satisfied by market rates. Second, Sirius XM notes that the categories of costs that SoundExchange has itemized "have long prevailed in the recording industry," and that nothing set forth in SoundExchange's Factor C argument provides specific reasons to suggest that those costs have changed in a manner to support an adjustment upward in

[183] For example, SoundExchange proffered UMG's 2015 income statement, which reflects $[[redacted]] in (1) advances and recording costs for new unproven artist signings and (2) write offs of investments in established artists, net of recoveries. Gallien WDT at 10.

[184] Indies' costs differ in magnitude from those of the Majors, but the categories are similar, according to SoundExchange. Mr. Iglauer provided qualitative testimony stating that his Indie label, Alligator Records, spends substantial 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. Iglauer WDT at 9.

the statutory rate. Third, Sirius XM notes that SoundExchange did not measure "the investments made by the record companies" against "Sirius XM's investments "and thus did not perform the "relative" analysis of costs, risks, and other factors expressly required by the statutory language. In this criticism, Sirius XM also notes parenthetically that SoundExchange did not explain how or why particular portions of the record industry's costs should be allocable to Sirius XM, rather than other distribution channels.

Additionally, relying on Professor Shapiro's testimony, Sirius XM argues that when the emphasis is placed properly on the "relative" contributions of the parties, the record companies' cost of creating sound recordings, "is almost certainly significantly less than the contribution that Sirius XM plans to make over the 2018-2022 license period," including the launching of two new satellites and improving its repeater network." Shapiro WDT at 58. Although he concluded that this relative difference points toward reducing the statutory rate, the relative balancing "does not readily lend itself to quantifying" an appropriate downward adjustment. *Id.*

Sirius XM also claims that it contributes additional value through its "delivery network." As Professor Shapiro argued: "[B]y combining music, non-music, curation, *and a delivery platform* all into one bundle, Sirius XM is creating significant value for consumers, with each piece of the bundle contributing to the overall value of the service." 4/20/17 Tr. 398-99 (Shapiro) (emphasis added).[185]

In response, SoundExchange, through Mr. Orszag, asserts that Sirius XM's "delivery platform" does not add *separate* value, because any value created by that platform flows principally to Sirius XM; that is, even under the SoundExchange proposal the record companies receive only 23% of Sirius XM's revenue. Therefore, he notes, most of the gains flow to Sirius, "but there is a portion that goes to the labels which [provide] a *necessary input*," 4/25/17 Tr. 1034 (Orszag), which is "consistent with sound economics." *Id.* at 1034-35 (Orszag) (emphasis added).

In reply, Sirius XM argues that Mr. Orszag's justification for the labels' sharing of any value added (via revenue) from Sirius XM's unique inputs begs the question as to "what the split should be," and fails to "address whether an adjustment to the [interactive] benchmark is warranted to account for Sirius XM's independent contributions to the value of its service offerings." SXM RPFF ¶ 62.

The Judges agree with Sirius XM that the value of its unique inputs (relative to interactive and other services), such as its expensive satellite and ancillary technical equipment[186] and its use of live "on-air" talent and other specialized personnel,[187] are intended to—and do—create a product that is differentiated from interactive services. However, SoundExchange is correct that inputs do not have independent value *per se*.[188]

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[185] Sirius XM did not address its contribution of this additional network value in its Factor C argument. However, the Judges find that this issue is best considered in the context of Factor C, which broadly addresses relative contributions.

[186] *See, e.g.,* Written Direct Testimony of James E. Meyer, ¶ 12 (Meyer WDT); Written Direct Testimony of Bridget Neville, *passim* (Neville WDT); Written Direct Testimony of Terrence Smith, *passim* (Smith WDT).

[187] *See* Blatter WDT at ¶¶ 9-10.

[188] As Professor Orszag asserted, David Frear, Sirius XM's CFO, conceded this point during the *SDARS II* proceeding: ["[redacted]

Rather, Sirius XM incurs the cost of these inputs to create a differentiated and thus more profitable service. If it succeeds, the benefits will be evidenced by higher revenues (in excess of those input costs) and will, therefore, result in higher profits. A separate accounting of the costs of the Sirius XM satellite radio platform would constitute a clear double-counting of value.

By contrast, if the cost of Sirius XM's investments in its unique inputs failed to differentiate its output (*i.e.*, its service) from, say, interactive services, then there would be no justification for Sirius XM to obtain any recompense for its investments, either through an adjustment to the revenue (royalty) base or to the royalty rate. As the Judges noted previously, a party is not entitled to a rate simply to preserve its particular business model. *See, e.g.*, *Web IV*, 81 Fed. Reg. at 26329 ("the statute neither requires nor permits the Judges to protect any given business model proposed or adopted by a market participant."). If Sirius XM's unique and expensive inputs have marketplace value, those inputs will differentiate its service in an attractive manner, resulting in relatively low cross-elasticities and own-elasticities, lower opportunity costs for the labels in licensing to Sirius XM, and higher profits for Sirius XM. It is through this economic transmission mechanism that Sirius XM may extract value from its unique inputs – not from a separate valuation of the inputs.

This argument does not fully address Mr. Orszag's point that the labels, as providers of a "necessary input" would, in an unregulated market, command a portion of the value created by these unique Sirius XM inputs. Again, Mr. Orszag concludes that such "sharing" is simply "sound economics." However, that reasoning is "sound" only to the extent the Judges would find it appropriate to reject Professor Willig's opportunity cost approach and adopt instead his Nash Bargaining Solution model. For the reasons set forth at length *supra*, the Judges have done precisely the opposite: accepting his opportunity cost approach and rejecting his Nash Bargaining Solution approach.[189]

D. Factor D: Minimizing Disruptive Impact on Structure of the Industries Involved and Generally Prevailing Industry Practices

The Judges long-standing test for whether a rate is "disruptive" pursuant to Factor D provides that a rate change would 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 Fed. Reg. at 23069 (quoting *SDARS I*, 73 Fed. Reg. at 4097). Accordingly, the Judges apply this

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[redacted]"] *See* Orszag WRT at ¶ 53 n.65.

[189] The Judges' finding appears consistent with Sirius XM's position: "SoundExchange's attempt to expropriate a portion of the value that Sirius XM alone creates is entirely at odds with the § 801(b) factors." SXM RPFF ¶ 64. However, Sirius XM's claim of *expropriation* is hyperbolic. By its logic, Sirius XM's use of the labels' music likewise would constitute expropriation – of the sound recording value that the labels created. The difficult issue is the application of the statutory and economic factors to allocate the value of the output created by a production function (containing sound recordings and a delivery network) that utilizes these separate inputs in combination, to cover all costs (including opportunity costs) while rewarding the investment in technology that leads to innovative product differentiation. The Judges' 15.5% rate addresses these various and competing factors in a reasonable manner.

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standard to the 15.5% rate they have found to be reasonable in this proceeding to determine whether the 15.5% rate would be disruptive.[190]

SoundExchange relies on the testimony of Professor Lys, who demonstrates that Sirius XM would still earn substantial returns (compared to other companies in closely-related industry sectors), even if the Judges were to increase the statutory royalty rate to 24%. *See* 4/26/16 Tr. 1321-23 (Lys).[191] First, Professor Lys calculated that the pre-tax incremental impact of even a 24% royalty payment (based on 2015 figures available to him when preparing his direct testimony) was $[[redacted]] million and the net after-tax impact would be $[[redacted]] million. Lys CWDT at ¶¶ 129-30. At those levels, Sirius XM would obtain the following financial results:

Sirius XM 2015 performance metrics under 24% royalty rate vs. SIC 483

Performance Metric	SXM(@24% royalty)	Avg. for SIC 483 Broadcast Radio/TV
Return on Assets	5.5%	3.0%
EBITDA Margin	27.4%	19.9%
Free Cash Flow Margin	23.0%	6.1%

Lys CWDT at ¶¶ 132-42 & Fig. 33; *see* 4/26/17 Tr. 1321-22 (Lys).

Professor Lys also analyzed Sirius XM's forecasted performance, again assuming arguendo that the Judges set the statutory rate at 24% of revenue. His analysis shows that, at that rate, the incremental after-tax impact on Sirius XM would range between $[[redacted]] million in 2018 and $[[redacted]] million in 2021. Professor Lys noted that Sirius XM is expecting to perform so well in the future that it could easily absorb this higher rate for the *SDARS III* period, 2018 through 2022. Lys WRT at ¶ 219. More particularly, under this scenario, Professor Lys testified that Sirius XM:

Would earn between $[[redacted]] and $[[redacted]] in EBITDA in every year of the forecast, and would continue growing. *Id.* at ¶ 220.

Would earn over $[[redacted]] in net income each year of the forecast, and would continue growing. *Id.* at ¶ 221.

Would generate over $[[redacted]] in free cash flow almost every year of the forecast and would continue growing. *Id.* at ¶ 222.

Professor Lys further noted that, even under Sirius XM's own internal forecasts, with a royalty rate of 24%, it would remain extremely profitable throughout the *SDARS III* term (2018-22), earning $[[redacted]] in EBITDA, $[[redacted]] in net income, and $[[redacted]] in free

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[190] Nothing in the record indicates that the reasonable rate of 15.5% identified by the Judges (a 41% rate increase from 11% to 15.5%) would be disruptive to the record companies, even though it is below the 23% rate sought by SoundExchange. *See* Shapiro WDT at Fig. 5 and p. 59 (noting industry data showing that Sirius XM accounted for only about 4% of overall record industry revenue in 2016). Given the 4% figure identified by Professor Shapiro, 23% of that percentage equals .9%, and 15% of that 4% equals .6%. The difference in revenue to SoundExchange between its percent-of-revenue proposal and the rate set in this Determination therefore is approximately .3% of overall record industry revenue, and thus not disruptive within the applicable standard. Accordingly, the Judges focus on whether this increase would be disruptive for Sirius XM.

[191] The Judges provide this detailed summary of Professor Lys's exhaustive analysis of Sirius XM's financial picture not only to demonstrate the proper application of an itemized factor, but also to underscore that Sirius XM can easily afford to pay the market-based reasonable rate of 15.5% crafted by the Judges.

cash flow. *Id.* at ¶ 223. Additionally, Sirius XM's 2016 [[redacted]] indicates that, at the end of the forecasted period (2022), it would have a strong balance sheet, with $[[redacted] in cash and equivalents, total assets of $[[redacted]], and shareholder equity of $[[redacted]]. *Id.* at ¶ 224.[192]

For these reasons, SoundExchange argues that Sirius XM can comfortably afford a rate increase from the current 11% to its proposed 23% of revenue. As Professor Lys colorfully and emphatically opined: [redacted] 4/27/17 Tr. 1391-92 (Lys).

Professor Lys also examined in great detail Sirius XM's growth in equity value compared to broader market metrics such as the S&P 500 and the Dow Jones Industrial Average, and noted that Sirius XM far outpaces those indices. He further noted that Sirius XM outperforms other firms in the noninteractive markets. From these facts, Professor Lys concluded that Sirius XM enjoys an "unfair advantage over competing digital music services that pay higher royalty rates." SE PFF at ¶ 1584; *see* Lys CWDT at ¶¶ 117- 124.

To provide yet another perspective on the financial success of Sirius XM, Professor Lys calculated how its performance would have changed in 2015 if the statutory rate had been increased above the 10% applicable in that year. His 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 …, $909.5 million …, or $1.037 billion …, 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), would have only equated Sirius XM's performance with its industry peers' EBITDA profitability levels.

Lys CWDT at ¶ 136.

> 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.

Id. at ¶ 138.

> 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.

Id. at ¶ 142.

In sum, SoundExchange makes a compelling case that an increase in rates far greater than the 15.5% identified as a reasonable rate by the Judges would be easily sustainable for Sirius XM,

[192] The Judges place much less emphasis on projections compared with current facts, absent additional proof that the entity making the projection has a track record that makes its projection credible. However, the Judges note that these projections are consistent with [[redacted]].

and therefore not disruptive under the Factor D standard as quoted *supra*. Moreover, Sirius XM has not provided any evidence sufficient to question Professor Lys's analysis, which indicated that Sirius XM could afford a much larger rate increase. Accordingly, the Judges find that, *a fortiori*, Professor Lys's analysis indicates that Sirius XM could also afford a smaller increase, to the 15.5% rate determined by the Judges.[193]

XI. Terms

Besides seeking a revision of the royalty rates for the 2018-22 rate period, the participants proposed certain additional changes to the extant regulations. The final regulations appended to this determination reflect the Judges' decisions on points that were in controversy. For the reasons detailed below,[194] the Judges adopted some of the proposed changes and declined to adopt others, as indicated in the final regulatory language.

A. Generally Applicable Terms

1. Advance Payment and 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)). SE PFF 85. SoundExchange seeks to designate the $100,000 annual advance payment as the minimum fee for use of the section 112 Ephemeral License by SDARS and PSS. Under SoundExchange's proposal, the advance payment would be applied first to section 112 royalties due, and the balance, if any, would be nonrefundable and not applicable to a subsequent year's license. Music Choice argues rightly that section 114 does not provide for a minimum fee for SDARS or PSS. *Compare* 17 U.S.C. § 114 (f)(1)(A) *with* § 114(f)(2)(A).[195] Section 112 does, however, require the Judges to set a minimum fee for "each type of service offered by transmitting organizations" using the ephemeral license. *See* 17 U.S.C. § 112(e)(3).

By agreement of the parties and in conformity with prior rate periods, the section 112 ephemeral license royalty fee is set at a five percent portion of the total bundled royalty for both section 112 and section 114 and is included in that bundled royalty payment. Music Choice contends that in *SDARS II*, SoundExchange and Music Choice stipulated to advance payment language that would have allowed the full advance payment to be creditable to the PSS's entire royalty payment, rather than to its ephemeral payment only. MC PFF at ¶ 554. According to Music Choice, the stipulated language was changed in the final rule (*i.e.*, the advance payment is creditable only to the ephemeral royalty payment) with no explanation or justification. Music Choice asserts that the language SoundExchange and Music Choice stipulated to in *SDARS II*

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[193] SoundExchange also asserts that Sirius XM has paid less than an appropriate rate in previous rate terms. *See* SEPFF ¶¶ 1598-1606 (and record citations therein). However, the Judges do not conclude that, as a matter of law, they can set rates for a forthcoming period that reimburse a licensor for any alleged underpayments caused by a purported error in the statutory rate for a past rate period

[194] The Judges do not provide narrative discussion about every detail of the regulatory changes; rather, they concentrate on the areas of legally significant controversy.

[195] The extant regulation setting the PSS advance payment does not mention a "minimum fee" but it does limit application of the advance payment to ephemeral license royalties and prohibit rollover of any portion of the advance payment to subsequent royalty years. *See* 37 C.F.R. § 382.3(b) (2016). Perversely, the current regulation establishing the $100,000 advance payment by SDARS is entitled "Ephemeral Recordings Minimum Fee." *See* 37 C.F.R. §382.12(c) (2016). Nothing in the subsection mentions a minimum fee, however. *Id.*

should be adopted and SoundExchange provides no rationale for retaining the current language. MC PFF at ¶¶ 556-57. SoundExchange does not appear to dispute Music Choice's assessment that the extant recoupment provision differs from what the parties had stipulated to and has not provided a compelling reason to retain the current offset provision for PSSs. *See, e.g.*, 5/10/17 Tr. 3308-13 (Bender). Therefore, the Judges adopt the minimum fee language Music Choice proposes.

It would seem incongruous to require an advance payment for section 114 and section 112 royalties in the aggregate but to require the entirety of that payment to be applied as a "minimum fee" for the ephemeral license. No participant objects to the $100,000 advance royalty payment. The Judges have no basis upon which they could allocate 100% of that payment to the ephemeral license.

To comply with the statutory requirement that they set a minimum fee for use of the section 112 ephemeral license by transmission services, *viz.*, SDARS and PSS, the Judges set the section 112 minimum fee at five percent of the advance payment, or $5,000, for each type of SDARS or PSS service for which the Judges establish a different section 114 performance royalty. SoundExchange must, thereafter, apply the remaining amount of the advance payment, after application of $5,000 per type of service to ephemeral licenses, to section 114 royalties.

2. Definitions

Music Choice objects to the placement of "Definitions" at the end of each subpart of the regulations. The Judges agree with Music Choice that the placement seems counterintuitive. Definitions will migrate to the beginning of each subpart. In addition, Gross Revenues calculations will migrate from the Definitions section to the services' respective subparts.

a. GAAP

The parties are in essential agreement regarding imposing a U.S. geographical limitation in the definition of GAAP. Sirius XM asks the Judges to apply a temporal element to the definition requiring application of the version of GAAP in effect "during the month when the performances giving rise to a Licensee's royalty payment obligation were transmitted." SoundExchange counters that a more definite time limit would be preferable, *viz.*, "on the last day of the accounting period to which the subject payment relates" or "the date payment [was] due." The Judges adopt the definitive date for choosing GAAP principles as the date payment was due.

b. Qualified Auditor

In prior iterations of royalty rate regulations relating to various licenses, the Judges noted the repetition of the phrase "independent and qualified auditor." In their *Web IV* determination, the Judges cut the verbiage by 50% by defining a Qualified Auditor to be one that is independent. In this proceeding, the parties have proposed language to assure both the qualification and the independence of any auditor working to verify royalty payment and distribution.

In a slight departure from the *Web IV* language, the Judges eliminate the *Web IV* requirement for an auditor to be licensed in the state in which the audit is conducted. In this proceeding, the Judges accept that Certified Public Accountants are governed by a code of ethics that permits them the "mobility" to practice across state lines. To remove any doubt, the Judges refer to the Code of Professional Conduct adopted by the American Institute of Certified Public Accountants.

c. Additional Definitions

On their own motion, the Judges added "Payor" and "Verifying Entity" as defined terms. These terms were added during the revamping of regulations following the *Web IV* proceeding because they clarified that auditing rights did not reside exclusively in the Collective. In this iteration, the Judges clarify the terms they added to convey this reciprocal audit right.

The Judges also amended SoundExchange's proposed definition of "Licensee" for clarity.

3. Regulatory Terms

a. Section 382.3(a)[196] – Payment to the Collective

In general, any due date in federal litigation that falls on a Saturday, Sunday, or federal holiday is tolled until the next following business day. The Judges regulations currently adopt this convention as a general procedural rule when discussing litigation filing deadlines. *See* 37 C.F.R. § 350.5. The Judges see no reason not to adopt the suggestion of Sirius XM to enunciate the same rule when referring to royalty payment due dates.

b. Section 382.4(a)(3) – Signature

In updating the royalty regulations after the *Web IV* proceeding, the Judges clarified the capacity of signers of Statements of Account. Music Choice objected to reconfiguration of the *Web IV* language suggested by SoundExchange. The Judges agree with Music Choice that the language in the *Web IV* regulation is more appropriate for these participants.[197]

c. Section 382.5(a)(2) – Best Efforts

SoundExchange is obliged to use "best efforts" to locate Copyright Owners and Performers entitled to receive a distribution of royalty payments. The Judges' regulations need not specify the specifics of those "best efforts."

d. Section 382.5(b) – Unclaimed Funds

At the conclusion of the *Web IV* proceeding, the Judges adopted language proposed by one of the Licensees directing SoundExchange to treat unclaimed funds in accordance with federal, state, or state common law. SoundExchange argues against this provision seeking to retain permission to apply unclaimed funds to administrative expenses. The Judges conclude that governance of applicable law will provide more transparency regarding the disposition of unclaimed funds.

e. Section 382.6(c)(3) – Outside Counsel

SoundExchange proposed a change to the rule regarding dissemination and use of confidential information relating to royalty collection and distribution. Music Choice objected to the additional language SoundExchange proposed and the Judges agree with Music Choice. SoundExchange is required to use and analyze sensitive business information in its administration

[196] Section references are to the *new* numbering system that results from reorganizing the regulations in part 382.

[197] The Judges are not swayed by Music Choice's plaint that it could not have an authorized signer because Music Choice is a partnership made up of corporations. Music Choice's sophisticated representatives can figure out how the partnership may designate an authorized signer.

of royalty collection and distribution. On occasion, SoundExchange might employ consultants or experts to assist in that effort or in the auditing of the administrative systems.

SoundExchange seeks to allow outside counsel access to confidential information "for the purpose of performing their duties during the ordinary course of their work." This dissemination of confidential information is not sufficiently constrained to limit it to collection and distribution of royalty payments. The notion of outside counsel obtaining the sensitive information "in the ordinary course of their work" is too broad. The Judges will not grant that privilege. Outside counsel has express authority to see confidential information when acting on behalf of the Collective for "verification of a … statement of account" or on behalf of a Copyright Owner or Performer for purposes of "verification of royalty distributions …." This permission is sufficient.[198]

f. Section 382.7(c) – Notice of Intent to Audit

SoundExchange requested that the Judges change the requirement that a Verifying Entity "deliver" a copy of its filed Notice of Intent to Audit to the Payor to a requirement that the Verifying Entity "send" the notice. Music Choice defends the term "delivery" because it provides "protections" to the PSS. *See* MCRFF at 323. The Judges conclude that this language issue is a solution in search of a problem. The language will remain unchanged.

g. Section 382.7(d) – The audit

Music Choice and SoundExchange disagree regarding language SoundExchange seeks to add to the provision that permits a licensee to perform its own, independent audit.[199] SoundExchange asks the Judges to add the qualifier "with respect to the information that is within the scope of the audit" to describe an acceptable "defensive audit." This qualifying language is in the current regulation relating to audits of SDARS and webcasters. The Judges see no reason not to make it equally applicable to PSS. A report of a Qualified Auditor will include a description of the scope of the audit and if the scope of the defensive audit is too narrow to meet the specific needs of SoundExchange, then SoundExchange should be permitted to round out the findings with its own audit, limited to the points omitted from the scope of the defensive audit.

h. Section 382.7(f) – Issuance of Audit Report

On their own motion, the Judges change the word "rendering" to the word "issuing" for clarity.

i. Section 382.7(g) – Interest on Underpayments Discovered by Audit

The current regulations do not provide for a specific interest accrual on underpayments discovered by audit. Sirius XM requests that the Judges add a provision setting interest on underpayments discovered by audit at the federal post-judgment rate in 28 U.S.C. § 1961. SoundExchange urges applying the late payment interest rate of 1.5% per month, compounded monthly. Sirius XM requests that the federal post-judgment rate that it seeks to be applied to late payments also be applied to underpayments and overpayments discovered by audit. However, Sirius XM opposes as punitive the use of SoundExchange's proposed 1.5% per month interest

[198] Further, in a litigated rate proceeding, outside counsel are entitled to obtain confidential information without signing a non-disclosure agreement pursuant to a Protective Order specific to each proceeding.

[199] Music Choice uses the term "defensive audit" for this procedure.

rate, noting that audits may be delayed by up to three years, while interest accrues. Barry WDT at ¶8.

The proposed regulations the Judges adopt in this proceeding utilize the federal post-judgment rate rather than the more punitive 1.5% per month rate. Audits can uncover good faith errors as well as bad faith manipulations, and the Judges do not find that a punitive interest rate, spanning up to three years on underpayments, is appropriate in such a circumstance.

j. Section 382.7(h) – Cost Shifting

Current SDARS/PSS regulations provide that the Verifying Entity bears the cost of an audit, unless the auditor finds an underpayment of sufficient magnitude to justify shifting responsibility for payment to the Payor. For PSS, the underpayment that triggers cost-shifting currently is 5 %. For SDARS, the underpayment that triggers cost-shifting is 10 %.[200] Music Choice seeks to equalize the cost-shifting threshold, making all services liable if an audit discrepancy reaches 10%. SoundExchange argues that cost-shifting should occur when an auditor discovers underpayment of 5% for PSS or SDARS. The rationale is that the absolute value of SDARS royalty payments justifies reducing the trigger.

The Judges are unconvinced that absolute payment amounts are a sufficient basis to change the cost-shifting trigger. Further, the Judges can find no evidentiary basis to change the cost-shifting threshold when all participants in this proceeding indicate that cost-shifting has yet to occur at the current thresholds.

k. Sections 382.23(a) and (b)

SoundExchange proposes changes to the methodology for Sirius XM to calculate the direct license share and the pre-1972 license share. Besides inserting language relating to Aggregate Tuning Hours (ATH) data, SoundExchange seeks to impose a requirement on Sirius XM to report that usage data for every eligible track it claims as a directly licensed or pre-1972 sound recording for which Sirius XM seeks a royalty adjustment. Sirius XM contends that current reporting requirements, based on Reference Channel metrics are sufficient to support the royalty adjustments it takes for these exempt sound recordings.

As the Judges decline to adopt the additional ATH language requested by SoundExchange, they see no basis to impose the additional reporting requirements on Sirius XM at this time.

l. Proposed Section – Distribution of SDARS Royalties

SoundExchange proposes a new section 382.22 adding language to the regulations that would permit it to adjust its distribution model by reference to ATH if and when Sirius XM becomes able to track listener usage of its satellite radio service. Sirius XM counters that it anticipates offering next-generation technology within the rate period at issue, but that this developing technology will not be sufficiently reliable or have sufficient market saturation to make any reports of its usage reliable. *See* 5/17/17 Tr. 4358 (Barry).

[200] For Webcasters, the costs of the audit shift to the Payor when an underpayment equals 10% or more.

Given the contingent nature of both the launch and the saturation of Sirius XM's anticipated technological advances, the Judges decline to adopt contingency regulations at this time.

m. Proposed Section – Finality of Audit Results

Sirius XM proposes an additional subsection for the audit provisions to establish the finality of disputed audit reports. Sirius XM seeks to establish a two-year statute of limitations for disputed audit findings after which the Licensee's calculations would be deemed binding and final, unless the Collective initiated a legal action before the running of that proposed limitations period.

SoundExchange objects to the creation of this statute of limitations, asserting that the change Sirius XM requests would have the effect of overriding the three-year statute of limitations provided for in the Copyright Act. As SoundExchange argues, the Judges do not have the authority to overrule a statutory provision by regulation.

The Judges see no reason to establish a statute of limitations in the context of rate setting proceedings where the Act does not provide for one. Further, any pursuit of remedies relating to audit findings would be outside the Judges' jurisdiction and the Judges would be overstepping to attempt to impose a limitation of actions over which they have no authority.

B. Gross Revenues

In this proceeding, SoundExchange proposes a per-subscriber rate structure for PSS and proffers PSS regulations consistent with its proposed rate structure. Accordingly, SoundExchange proposes to place its definition of "Gross Revenues" only in "Subpart C," the subpart regarding SDARS. The Judges have determined that PSS rates shall continue to be calculated on a percent-of-revenue basis. Because the business models of SDARS and PSS are different, however, the Judges maintain separate elements for the calculation of the respective Gross Revenues bases for PSS and SDARS.

Neither Music Choice nor SoundExchange proposes a change to the current definition of Gross Revenues applicable to PSS. The Judges adopt that term to describe the method of calculating PSS royalties for the 2018 to 2022 period.

Sirius XM and SoundExchange propose essentially the same definition to establish the SDARS base for Gross Revenues. Their substantive differences arise in the nature and explication of permissible exclusions from that base.[201] In adopting the definition applicable to the license period at issue in this proceeding, the Judges modified SoundExchange's proposed language to eliminate ambiguity[202] and to effect the decisions detailed below.

[201] Both SoundExchange and Sirius XM present proposals to resolve long-standing controversies that were brought into focus by the primary jurisdiction referral of the questions from the D.C. District Court. The need for the referral arose in *SoundExchange v. Sirius XM*, 65 F. Supp. 3d 150 (D.D.C. 2014). In September 2017, the Judges issued their amended ruling on the referred questions. *See* Amended Restricted Ruling on Regulatory Interpretation Referred by the United States District Court for the District of Columbia, No. 2006-1 CRB DSTRA (20017-12) (Sept. 11, 2017). (*Ruling on Referred Questions*). The Judges resolve the same controversies in this proceeding in conformity with that Ruling.

[202] In constructing its proposed definition of Gross Revenues, SoundExchange began with a limited definition of what to include in the base: subscription revenues and ad revenues including those categories of revenues if they were paid to a parent, subsidiary, or division of the Licensee. SoundExchange then listed types of revenue that should be

SoundExchange proposes to amend the definition of "Gross Revenues" currently found in 37 C.F.R. at current § 382.11 to confirm that revenue from non-music offerings "offered for a separate charge" shall be excludable only when those offerings are "provided on a standalone basis." Bender WDT at 22. SoundExchange does not view this new proposed language as a substantive deviation from the existing regulations, but rather makes the proposal "[p]urely [as] a clarification to language that we had previously thought was sufficient." 5/10/17 Tr. 3184 (Bender).

SoundExchange recounts that, since *SDARS I*, it has consistently understood that the references to a "separate charge" in current paragraph (3)(vi)(A) and (B) were unambiguous. *See SDARS I*, 73 Fed. Reg. at 4087 (explaining that the "gross revenues" definition "excludes monies attributable to premium channels of nonmusic programming that are offered for a charge separate from the general subscription charge for the service."). *See id.* at 4081 (noting that, with regard to "data services," 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."). Additionally, SoundExchange points out that, in *SDARS II*, the Judges reiterated the necessity of a "separate charge," "stress[ing] 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 Fed. Reg. at 23072 n.45.[203]

Subsequent to 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." *Amended Restricted Ruling on Regulatory Interpretation Referred by the United States District Court for the District of Columbia* at 17, No. 2006-1 CRB DSTRA (2007-12) (*Ruling on Referred Questions*). Given that decision, SoundExchange notes that its proposed clarification may be unnecessary. Nonetheless, in the interest of clarity, SoundExchange urges the Judges to "confirm again" their position as to the meaning of the regulatory language concerning exclusions to gross revenues. Bender WDT at 22.

Sirius XM, conversely, criticizes the current regulatory language that limits the exclusion to revenue recognized for the provision of data services and non-music channels, programming, products and/or other services to those instances in which the subject programming is offered for a "separate charge." Sirius XM proposes to strike the longstanding "separate charge" requirement and add to current new language to the Gross Revenues definition allowing allocation of all bundle revenue regardless of whether the components of the bundle are offered for a separate charge. That proposed language specifies that the exclusion to be taken in the case of any bundle

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excluded from the base "to the extent otherwise included" in the definition of the base. The result is in the nature of a double- negative configuration. For example, equipment sales income is NOT included in the revenue base, but the exclusion of equipment sales revenues would apply only "to the extent [those equipment sales revenues were] otherwise included" in the base. The better approach is to retain the current regulatory language, which states simply, "Gross Revenues shall exclude …."

[203] SoundExchange asserts that its auditor alerted it to the fact that, throughout the *SDARS I* period (at least), Sirius XM was [[redacted]]. Trial Ex. 101 at 5-6, Schedule 3. As of the time SoundExchange filed its direct case in the present proceeding, Sirius XM continued to assert that the "separate charge" language permitted deduction of an allocated part of its Premiere package. Ruling on Referred Questions at 17.

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 (Feb. 17, 2017); 5/17/17 Tr. 4342-48 (Barry); Barry WRT at ¶ 21.

Sirius XM has no choice but to acknowledge that its proposal fails to address the "economic indeterminacy" of its bundling approach. In the *Ruling on Referred Questions*, the Judges held that – to use Sirius XM's own words – "the difference between the larger bundle price and the Select package price may not in all cases reliably measure the economic value of the additional programming to consumers, at least absent some objective evidence of the market value of that additional programming." SXM PFF at ¶ 440.

Sirius XM seeks to minimize the importance of this acknowledged economic indeterminacy by noting the importance of bundling to Sirius XM's business model and by pointing out the ubiquity of bundling by many major businesses. Barry WRT at ¶¶ 12-18 & n.6. The Judges recognize the importance of product bundling as described by Mr. Barry, both for Sirius XM and numerous retailers of multiple products. As the Judges explained at length in the *Ruling on Referred Questions*, such bundling is a common form of price discrimination that increases revenue. That is, sellers can induce buyers/subscribers to reveal their Willingness to Pay (WTP) and pay more through bundling.

In a context in which the retailers pay for their inputs on a per unit basis, bundled retail pricing is benign, because input suppliers would be indifferent to downstream pricing and bundling. However, when the input suppler, as here, is paid as a percent of retail revenue, and the bundled revenue consists of some revenue attributable to the royalty base and other revenue excluded from the royalty base, the economic indeterminacy of the revenue attributable to each bucket creates a measurement problem, absent further information regarding the WTP of buyers/subscribers to the bundle.

Nonetheless, Sirius XM urges that the "practical benefits" of its proposal outweigh such economic indeterminacy. The Judges disagree and reaffirm their conclusions in the *Ruling on Referred Questions* arising from the *SDARS I* proceeding. As Mr. Barry makes clear, such bundling was undertaken to increase Sirius XM's revenues and it would be reasonable to assume that Sirius XM has information relevant to the economic allocation of the bundled revenue. However, Sirius XM presented no such evidence at the hearing. Sirius XM must bear the burden of providing evidence that might mitigate the acknowledged "economic indeterminacy" problem inherent in bundling, because any such evidence would be in its possession, not in the possession of SoundExchange or the record companies. If Sirius XM lacks allocation information and prices its bundles without that data, it cannot assert "practical benefits" as grounds for subjecting licensors to the acknowledged economic indeterminacy of the revenue split.

For all of the reasons stated, and based upon the Judges' analysis in the *Ruling on Referred Questions*, the Judges reject Sirius XM's attempts to rewrite the regulations to reach a contrary result. Because the Judges are reaffirming here their *Ruling on Referred Questions*, which confirmed the meaning of the present regulatory definition of Gross Revenues, they find (as SoundExchange itself anticipated) no need to amend the text of the regulatory definition.

Accordingly, SoundExchange's request for a change in that definitional language is rejected as moot.

Finally, Sirius XM proposes a change to the prefatory language in the exclusion from "Revenues recognized by Licensee for the provision of" to the simpler "Licensee revenues for the provision of." (That language is set forth in forthcoming § 382.22(b)(7)). As Mr. Barry explained, this is not meant to imply that Sirius XM can exclude revenues that have not been recognized. Rather, it is merely intended to avoid SoundExchange's perpetuating the argument (as addressed and rejected by the Judges in the recent litigation regarding the *SDARS I* period) that Sirius XM could not exclude revenue for portions of a bundle because those items were not separate units of accounting under GAAP (and the revenue for those items therefore was not "recognized"). Barry WRT at ¶ 20 n.8.

SoundExchange argues that there is no reason to delete the reference to "[r]evenues recognized" in the preamble, and some risk in doing so. SE Response to SXM PFF ¶ 442. However, SoundExchange does not to cite to the record for this assertion of risk, nor does it identify that alleged risk. SoundExchange also notes that, at the hearing, Mr. Barry acknowledged his understanding that revenue would need to be "recognized" to be excluded. 5/17/17 Tr. 4401-02 (Barry). Thus, SoundExchange concludes that deleting the reference to revenue recognition would create the implication that is not the case.

The Judges find that these differences can be bridged. The language at 382.22(b)(7) will read, "Revenues recognized by Licensee (or otherwise received by Licensee if no GAAP "recognition" principles are applicable) for the provision of …."

C. Ephemeral License Terms

The participants in the present proceeding raised two issues relating to the section 112 Ephemeral Recordings license. The first issue is raised by Music Choice regarding the valuation of the ephemeral license. The second controversy between SoundExchange and Music Choice comes to light in response to SoundExchange's proposed revisions to §§ 382.3(b) and 382.12(c) regarding advance payments and minimum payments and is discussed *supra*, section XI.A.1. SoundExchange contends that the record in the proceeding "unanimously" supports SoundExchange's proposal of a bundled rate for both the Section 112(e) and 114 rights, 5% of which should be allocated as the Section 112(e) royalty for the making of ephemeral copies and the remaining 95% of which should be allocated as the Section 114 performance royalty. SoundExchange states that "[t]he parties agree in substance concerning this matter." SX PFFCL at ¶ 2369. SoundExchange contends that "it appears that both SoundExchange and Music Choice agree that the Judges should set some kind of an overall royalty payment and allocate it 95%/5%." SX PFFCL at ¶ 2373.

Sirius XM mirrors SoundExchange's proposal. *See* SXM PFFCL at 1. Music Choice argues, however, that SoundExchange has not demonstrated that ephemeral copies have any independent value. *See* Del Beccaro WDT at 46-47 ("I am unaware of any marketplace context in which the record labels seek, or get, a separate payment just for ephemeral copies."). Nevertheless, Music Choice acknowledges that the ephemeral license has been and can be bundled with the sound recording performance license, and takes no position on SoundExchange's proposal to continue the current apportionment between the performance and ephemeral copying license. MC PFF at ¶ 551.

SoundExchange, Sirius XM, and Music Choice agree that a portion of the overall PSS royalties should be attributed to the ephemeral copying license. None of them suggests that the overall PSS royalty rate should be increased to account for ephemeral copying royalties. SoundExchange and Sirius XM propose that the current 5% allocation of overall royalties to the section 112(e) license should continue in the upcoming rate period, and Music Choice takes no position on the allocation. The only apparent issue concerning the ephemeral reproduction license is that Music Choice asserts that that license has no "*independent* value," MC PFF at ¶ 550 (emphasis added), while SoundExchange contends that ephemeral copies do "have economic value …." Designated *Web III* Written Direct Testimony of Dr. George S. Ford, Trial Ex. 51, at 9 (Ford *Web III* WDT). Music Choice does not contend that the ephemeral copies have no economic value—only that they ephemeral copies have no economic value *independent of the Section 114 license*. Music Choice's position is inconsistent with neither SoundExchange's contention that the ephemeral copying does have economic value, nor a bundled rate allocated between the two licenses.

To support both the bundled rate and the proposed 5% allocation to the ephemeral license, SoundExchange relies on the designated testimony of Dr. George Ford from the *Web III* proceeding. *See generally* Ford *Web III* WDT; *see also Web III*, 76 Fed. Reg. at 13042 ("The testimony offered by SoundExchange supports this proposal and we adopt it."). According to Dr. Ford, "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." Ford *Web III* WDT at 9. Dr. Ford notes 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 Section 112 and 114." *Id*. at 9-10.

As to the specific allocation between the two licenses, Dr. Ford noted that it is not the services, but the "[r]ecord companies and artists [who] care about what portion of royalty payments are allocated to ephemerals because the higher the portion allocated to ephemerals, the lower the portion paid directly to artists per the terms of the Section 114 license." *Id*. at 4. Dr. Ford concluded that, in light of the purported disinterest by the willing buyer (or licensee) in the allocation between the Section 112(e) and 114 licenses, an agreement between the artists and the copyright owners (*i.e.*, the licensors) is the best measure of how a willing buyer and willing seller would allocate royalties between the performance and ephemeral licenses. *Id*. at 10. As evidence of such an agreement, Dr. Ford was informed that "the 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." *Id*. at 15. He concluded that "that appears to be a reasonable proposal." *Id*. Upon examination in *Web III*, Dr. Ford clarified that he was informed by counsel for SoundExchange that the SoundExchange board, which includes representatives from record labels and artists, had approved a recommendation that 5% of royalties should be allocated to the ephemeral license. Designated Hearing Testimony of George S. Ford, Trial Ex. 51, at 434 (Ford *Web III* Hrg. Test.).[204]

[204] Dr. Ford represented that he reviewed the minutes of the board meeting that referenced the agreement, and it appears that the Judges in *Web III* admitted the board minutes into evidence. Ford *Web III* Hrg. Test. at 434, 438. Those minutes were not introduced into evidence in the current proceeding, rendering hearsay Dr. Ford's testimony concerning the agreement between artists and record companies. The Judges exercise their discretion under 37 C.F.R. § 351.10(a) to admit Professor Ford's hearsay testimony.

The Judges find SoundExchange's proposals concerning the bundling of performance and ephemeral Royalties, as well as the 95%/5% allocation of royalties between the two licenses, to be reasonable and supported by the evidence, and therefore adopt them for both PSS and SDARS.

XII. Conclusion

For all of the foregoing reasons, the Judges issue this Determination of Rates and Terms in the captioned proceeding. Participants in the proceeding have 15 days from the date of issuance to request a discretionary rehearing by the Judges. Concurrently with issuance of the Restricted Initial Determination to participants and pursuant to section 802(f)(1)(D) of the Act, the Judges shall forward it to the Register of Copyrights for a review of legal conclusions contained in the Determination.

_______/s/__________________	________/s/_________________	_______/s/__________________
Suzanne M. Barnett	Jesse M. Feder	David R. Strickler
Chief Copyright Royalty Judge	Copyright Royalty Judge	Copyright Royalty Judge

DATED: December 14, 2017

md/kw

APPENDIX A

Regulatory Terms

PART 382---RATES AND TERMS FOR TRANSMISSIONS OF SOUND RECORDINGS BY PREEXISTING SUBSCRIPTION SERVICES AND PREEXISTING SATELLITE DIGITAL AUDIO RADIO SERVICES AND FOR THE MAKING OF EPHEMERAL REPRODUCTIONS TO FACILITATE THOSE TRANSMISSIONS

Subpart A—Regulations of General Application

§ 382.1 Definitions.

Collective means the collection and distribution organization that is designated by the Copyright Royalty Judges.

Copyright Owners means sound recording copyright owners who are entitled to royalty payments made under part 382 pursuant to the statutory licenses under 17 U.S.C. 112(e) and 114.

Digital Audio Transmission has the same meaning as in 17 U.S.C. 114(j)(5).

Eligible Transmission means a Digital Audio Transmission made by a Licensee that is subject to licensing under 17 U.S.C. 114(d)(2) and the payment of royalties under 37 C.F.R. part 382.

Ephemeral Recording has the same meaning as in 17 U.S.C. 112.

GAAP means generally accepted accounting principles in effect in the United States on the date payment is due.

Licensee means the provider of an Satellite Digital Audio Radio Service (SDARS) or Preexisting Subscription Service (PSS) that has obtained a license under 17 U.S.C. 114 to make eligible transmissions and a license under 17 U.S.C. 112(e) to make Ephemeral Recordings to facilitate those Eligible Transmissions.

Payor means the entity required to make royalty payments to the Collective or the entity required to distribute royalty fees collected, depending on context. The Payor is (1) a Licensee, in relation to the Collective and (2) the Collective in relation to a Copyright Owner or Performer.

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).

Preexisting Subscription Service (*PSS)* has the same meaning as in 17 U.S.C. 114(j)(11). A service's offering on the Internet that is available to a subscriber outside the subscriber's residence is not a Preexisting Subscription Service for purposes of this part.

Qualified Auditor means a Certified Public Accountant independent within the meaning of the American Institute Certified Public Accountants Code of Professional Conduct.

Satellite Digital Audio Radio Service (*SDARS)* means the preexisting satellite digital audio radio services as defined in 17 U.S.C. 114(j)(10).

Transmission has the same meaning as in 17 U.S.C. 114(j)(15).

Verifying Entity means the party requesting an audit and giving notice of intent to audit. For audits of SDARS and PSS, the Verifying Entity is SoundExchange, Inc. For audits of SoundExchange, Inc. the Verifying Entity is any Copyright Owner or its authorized representative.

§382.2 Scope and Compliance.

(a) Scope. This part 382 codifies rates and terms of royalty payments for the public performance of sound recordings in certain Digital Audio Transmissions by certain Licensees in accordance with applicable provisions of 17 U.S.C. 114 and for the making of Ephemeral Recordings by those Licensees in accordance with the provisions of 17 U.S.C. 112(e), during the period January 1, 2018, through December 31, 2022.

(b) Legal compliance. Licensees relying upon the statutory licenses set forth in 17 U.S.C. 112(e) and 114 must comply with the requirements of 17 U.S.C. 112(e) and 114, this part 382 and any other applicable regulations.

(c) Voluntary agreements. Notwithstanding the royalty rates and terms established in any subparts of this part 382, the rates and terms of any license agreements entered into by Copyright Owners and Licensees may apply in lieu of these rates and terms.

§ 382.3 Making payment of royalty fees.

(a) Payment to the Collective. A Licensee must make the royalty payments due under subparts B and C of this part to SoundExchange, Inc., which is the Collective designated by the Copyright Royalty Board to collect and distribute royalties under this part 382. If any payment due date is a weekend or a federal holiday, then the payment is due on the first business day thereafter.

(b) Advance Payment. Licensees must pay the Collective an annual advance payment of $100,000 by January 31 of each year. The Collective must credit 5% of the advance payment as payment of the minimum fee for Ephemeral Recordings and credit the remaining 95% to section 114 royalties. The funds are nonrefundable. Any uncredited portion of the funds shall not carry over into a subsequent year.

(c) Minimum payments. A Licensee must make any minimum annual payment due under subpart B or C of this part by January 31 of the applicable license year.

(d) Monthly payments. A Licensee must make royalty payments on a monthly basis. Payments are due on or before the 45th day after the end of the month in which the Licensee made Eligible Transmissions.

(e) Late fees. A Licensee must pay a late fee for each payment and each Statement of Account that the Collective receives after the due date. The late fee is 1.5% (or the highest lawful rate, whichever is lower) of the late payment amount per month. The late fee for a late Statement of Account is 1.5% of the payment amount associated with the Statement of Account. Late fees accrue from the due date until the date that the Collective receives the late payment or late Statement of Account.

(1) Waiver of late fees. The Collective may waive or lower late fees for immaterial or inadvertent failures of a Licensee to make a timely payment or submit a timely Statement of Account.

(2) Notice regarding noncompliant Statements of Account. If it is reasonably evident to the Collective that a timely-provided Statement of Account is materially noncompliant, the Collective must notify the Licensee within 90 days of discovery of the noncompliance.

§ 382.4 Delivering statements of account.

(a) Statements of Account. Any payment due under this part 382 must be accompanied by a corresponding Statement of Account that must contain the following information:

(1) Information as is necessary to calculate the accompanying royalty payment;

(2) The name, address, business title, telephone number, facsimile number (if any), electronic mail address (if any) 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:

(i) the Licensee or a duly authorized agent of the Licensee;

(ii) a partner or delegate if the Licensee is a partnership; or

(iii) an officer of the corporation if the Licensee is a corporation;

(4) The printed or typewritten name of the person signing the Statement of Account;

(5) If the Licensee is a partnership or corporation, the title or official position held in the partnership or corporation by the person signing the Statement of Account;

(6) A certification of the capacity of the person signing;

(7) The date of signature; and

(8) An attestation to the following effect:

> I, the undersigned owner/officer/partner/agent 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 and that it fairly presents, in all material respects, the liabilities of the Licensee pursuant to 17 U.S.C. 112(e) and 114 and applicable regulations adopted under those sections.

(b) Certification. Licensee's Chief Financial Officer or, if Licensee does not have a Chief Financial Officer, a person authorized to sign Statements of Account for the Licensee, must submit a signed certification on an annual basis attesting that Licensee's royalty statements for the prior year represent a true and accurate determination of the royalties due and that any method of allocation employed by Licensee was applied in good faith and in accordance with U.S. GAAP.

§ 382.5 Distributing royalty fees.

(a) Distribution of royalties.

(1) The Collective must promptly distribute royalties received from Licensees to Copyright Owners and Performers that are entitled thereto, or to their designated agents. The Collective shall only be responsible for making distributions to those who provide the Collective with information necessary to identify and pay the correct recipient. The Collective must 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 pursuant to § 370.3 or 370.4 of this chapter, as applicable, and pursuant to this part 382.

(2) Identification of Copyright Owners. The Collective must use its best efforts to identify and locate copyright owners and featured artists to distribute royalties payable to them under § 112(e) or 114(d)(2) of title 17, United States Code, or both. Such efforts must include, but are not limited to, searches in Copyright Office public records and published directories of sound recording copyright owners when consulting those records and directories is likely to be helpful.

(b) Unclaimed funds. If the Collective is unable to identify or locate a Copyright Owner or Performer who is entitled to receive a royalty distribution under this part 382, the Collective must retain the required payment in a segregated trust account for a period of three years from the date of the first distribution of royalties from the relevant payment by a Licensee. No claim to distribution shall be valid after the expiration of the three-year period. After expiration of this period, the Collective must handle unclaimed funds in accordance with applicable federal, state, or common law.

(c) Retention of records. Licensees and the Collective shall keep books and records relating to payments and distributions of royalties for a period of not less than the prior three calendar years.

(d) Designation of the Collective.

(1) The Judges designate SoundExchange, Inc., as the Collective to receive Statements of Account and royalty payments from Licensees and to distribute royalty payments to each Copyright Owner and Performer (or their respective designated agents) entitled to receive royalties under 17 U.S.C. 112(e) or 114(g).

(2) If SoundExchange, Inc. should dissolve or cease to be governed by a board consisting of equal numbers of representatives of Copyright Owners and Performers, it shall be replaced for the applicable royalty period by a successor Collective according to the following procedure:

(i) The nine Copyright Owner representatives and the nine Performer representatives on the SoundExchange board as of the last day preceding SoundExchange's cessation or dissolution shall vote by a majority to recommend that the Copyright Royalty Judges designate a successor and must file a petition with the Copyright Royalty Judges requesting that the Judges designate the named successor and setting forth the reasons therefor.

(ii) Within 30 days of receiving the petition, the Copyright Royalty Judges must issue an order designating the recommended Collective, unless the Judges find good cause not to make and publish the designation in the *Federal Register*.

§ 382.6 Handling Confidential Information.

(a) Definition. For purposes of this part 382, "Confidential Information" means the Statements of Account and any information contained therein, including the amount of royalty payments and any information pertaining to the Statements of Account reasonably designated as confidential by the party submitting the statement. Confidential Information does not include documents or information that at the time of delivery to the Collective is public knowledge. The party seeking information from the Collective based on a claim that the information sought is a matter of public knowledge shall have the burden of proving to the Collective that the requested information is in the public domain.

(b) Use of Confidential Information. The Collective may not use any Confidential Information for any purpose other than royalty collection and distribution and activities related directly thereto.

(c) Disclosure of Confidential Information. The Collective shall limit access to Confidential Information to:

(1) Employees, agents, consultants, and independent contractors of the Collective, subject to an appropriate written confidentiality agreement, who are engaged in the collection and distribution of royalty payments hereunder and activities related directly thereto who require access to the Confidential Information for the purpose of performing their duties during the ordinary course of their work;

(2) A Qualified Auditor or outside counsel who is authorized to act on behalf of:

(i) The Collective with respect to verification of a Licensee's statement of account pursuant to this part 382; or

(ii) A Copyright Owner or Performer with respect to the verification of royalty distributions pursuant to this part 382;

(3) Copyright Owners and Performers, including their designated agents, whose works a Licensee 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, subject to an appropriate written confidentiality agreement, and including those employees, agents, consultants, and independent contractors of such Copyright Owners and Performers and their designated agents, subject to an appropriate written confidentiality agreement, who require access to the Confidential Information to perform their duties during the ordinary course of their work;

(4) Attorneys and other authorized agents of parties to proceedings under 17 U.S.C. 112 or 114, acting under an appropriate protective order.

(d) Safeguarding Confidential Information. The Collective and any person authorized to receive Confidential Information from the Collective must implement procedures to safeguard against unauthorized access to or dissemination of Confidential Information using a reasonable standard of care, but no less than the same degree of security that the recipient uses to protect its own Confidential Information or similarly sensitive information.

§ 382.7 Auditing payments and distributions.

(a) General. This section prescribes procedures by which any entity entitled to receive payment or distribution of royalties may verify those payments or distributions with an independent audit. The Collective may audit a Licensee's payments of royalties to the Collective and a Copyright Owner or Performer may audit the Collective's distributions of royalties to the Copyright Owners or Performers. Nothing in this section shall preclude a Verifying Entity and the Payor under audit from agreeing to verification methods in addition to or different from those set forth in this section.

(b) Frequency of auditing. A Verifying Entity may conduct an audit of each Payor only once a year and the audit may cover any or all of the prior three calendar years. A Verifying Entity may not audit records for any calendar year more than once.

(c) Notice of intent to audit. The Verifying Entity must file with the Copyright Royalty Judges a notice of intent to audit the Payor, which notice the Judges must publish in the Federal Register within 30 days of the filing of the notice. Simultaneously with the filing of the notice, the Verifying Entity must send a copy to the Payor.

(d) The audit. The audit must be conducted during regular business hours by a Qualified Auditor who is not retained on a contingency fee basis and is identified in the notice. The auditor shall determine the accuracy of royalty payments or distributions, including whether the Payor made an underpayment or overpayment of royalties. An audit of books and records, including underlying paperwork, performed in the ordinary course of business according to generally accepted auditing standards by a Qualified Auditor, shall serve as an acceptable verification procedure for all parties with respect to the information that is within the scope of the audit.

(e) Access to third-party records for audit purposes. The Payor under audit must use commercially reasonable efforts to obtain or to provide access to any relevant books and records maintained by third parties for the purpose of the audit.

(f) Duty of auditor to consult. The auditor must produce a written report to the Verifying Entity. Before issuing the report, unless the auditor has a reasonable basis to suspect fraud on the part of the Payor, the disclosure of which would, in the reasonable opinion of the auditor, prejudice any investigation of the suspected fraud. The auditor must review tentative written findings of the audit with the appropriate agent or employee of the Payor in order to remedy any factual errors and clarify any issues relating to the audit; provided that an appropriate agent or employee of the Payor reasonably cooperates with the auditor to remedy promptly any factual error[s] or clarify any issue raised by the audit. The auditor must include in the written report information concerning the cooperation or the lack thereof of the employee or agent.

(g) Audit results; underpayment or overpayment of royalties. If the auditor determines the Payor underpaid royalties, the Payor shall remit the amount of any underpayment determined by the auditor to the Verifying Entity, together with interest at the post-judgment rate specified in 28 U.S.C. 1961, accrued from and after the date the payment was originally due. In the absence of mutually-agreed payment terms, which may, but need not, include installment payments, the Payor shall remit promptly to the Verifying Entity the entire amount of the underpayment determined by the auditor. If the auditor determines the Payor overpaid royalties, however, the Verifying Entity shall not be required to remit the amount of any overpayment to the Payor, and the Payor shall not seek by any means to recoup, offset, or take a credit for the overpayment, unless the Payor and the Verifying Entity have agreed otherwise.

(h) Paying the costs of the audit. The Verifying Entity must pay the cost of the audit, unless the auditor determines that there was an underpayment of 10 % or more, in which case the Payor must bear the reasonable costs of the audit, in addition to paying or distributing the amount of any underpayment.

(i) Retention of audit report. The Verifying Entity must retain the report of the audit for a period of not less than three years from the date of issuance.

Subpart B—Preexisting Subscription Services (PSS)

§382.10 Royalty fees for the digital performance of sound recordings and the making of ephemeral recordings by preexisting subscription services.

(a) Royalty fees. Commencing January 1, 2018, and continuing through December 31, 2022, Licensees must pay royalty fees for all Eligible Transmissions of sound recordings at the rate of 7.5 percent of Gross Revenues.

(b) Ephemeral recordings royalty fee.

(1) 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 that are necessary and commercially reasonable for making noninteractive Digital Audio Transmission as a PSS are included in the 5%.

(2) The minimum fee is $5000 per year.

§382.11 Calculation of Gross Revenues for PSS.

(a) Gross revenues are monies derived from the operation of the programming service of the Licensee and are comprised of the following:

(1) Monies received by Licensee from Licensee's carriers and directly from residential U.S. subscribers for Licensee's programming service;

(2) 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;

(3) Monies received for the provision of time on the programming service to any third party;

(4) Monies received from the sale of time to providers of paid programming such as infomercials;

(5) Where merchandise, service, or anything of value is received by 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;

(6) 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;

(7) Monies or other consideration received for any references to or inclusion of any product or service on the programming service; and

(8) Bad debts recovered regarding paragraphs (1) through (7) of this definition.

(9) Revenues described in (1)-(8) above 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.

(b) Gross Revenues exclude affiliate revenue returned during the reporting period and bad debts actually written off during reporting period.

Subpart C—Preexisting Satellite Digital Audio Radio Services (SDARS)

§ 382.20 Definitions.

Directly-Licensed Recording means a sound recording for which the Licensee has previously obtained a license of all relevant rights from the sound recording Copyright Owner.

Pre-1972 Recording means a sound recording fixed before February 15, 1972, that is not a restored work as defined in 17 U.S.C. 104A(h)(6) or otherwise subject to protection under title 17, United States Code.

Reference Channels means Internet webcast channels offered by the Licensee that directly correspond to channels offered on the Licensee’s SDARS that are capable of being received on all models of Sirius radio, all models of XM radio or both, and on which the programming consists primarily of music.

§382.21 Royalty fees for the public performance of sound recordings and the making of ephemeral recordings by SDARS.

(a) Royalty fees. Commencing January 1, 2018, and continuing through December 31, 2022, Licensees must pay royalty fees for all Eligible Transmissions of sound recordings at the rate of 15.5% of Gross Revenues.

(b) Ephemeral recordings royalty fees.

(1) 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 that are necessary and commercially reasonable for making noninteractive Digital Audio Transmissions as an SDARS are included in the 5%.

(2) The minimum fee is $5000 per year.

§382.22 Calculation of Gross Revenues for SDARS.

(a) Gross Revenues are:

(1) Revenue recognized by the Licensee in accordance with GAAP from the operation of an SDARS and comprised of the following:

(i) Subscription revenue recognized by Licensee directly from U.S. subscribers for licensee's SDARS; and

(ii) Licensee's advertising revenues, or other monies received from sponsors, if any, attributable to advertising on channels other than those that use only incidental performances of sound recordings, less advertising agency and sales commissions.

(2) Revenues set forth above to which Licensee is entitled but which are paid to a parent, wholly-owned subsidiary, or division of Licensee.

(b) Gross Revenues exclude:

(1) Monies or other consideration attributable to the sale and/or license of equipment and/or other technology, including but not limited to bandwidth, sales of devices that receive the Licensee's SDARS and any shipping and handling fees therefor;

(2) Royalties paid to Licensee for intellectual property rights;

(3) Monies or other consideration received by Licensee from the sale of phonorecords and digital phonorecord deliveries;

(4) Sales and use taxes;

(5) Credit card, invoice, activation, swap and early termination fees charged to subscribers and reasonably related to the Licensee's expenses to which they pertain;

(6) Bad debt expense; and

(7) Revenues recognized by Licensee (or otherwise received by Licensee if no GAAP “recognition” principles are applicable) for the provision of:

(i) Current and future data services offered for a separate charge (e.g., weather, traffic, destination information, messaging, sports scores, stock ticker information, extended program associated data, video and photographic images, and such other telematics and/or data services as may exist from time to time);

(ii) Channels, programming, products and/or other services offered for a separate charge where such channels use only incidental performances of sound recordings;

(iii) Channels, programming, products and/or other services provided outside of the United States; and

(iv) Channels, programming, products and/or other services for which the performance of sound recordings and/or the making of Ephemeral Recordings is exempt from any license requirement or is separately licensed, including by a statutory license and, for the avoidance of doubt, webcasting, audio services bundled with television programming, interactive services, and transmissions to business establishments.

§382.23 Adjustments to royalty fee.

(a) Reduction for Direct License Share. The royalty fee specified in § 382.21(a) may be reduced by the percentage of Eligible Transmissions comprising the Direct License Share.

(1) The Direct License Share reduction is available to a Licensee only if—

(i) The Reference Channels constitute a large majority of and are generally representative of the music channels offered on the Licensee’s SDARS; and

(ii) The Licensee provides the Collective, by no later than the due date for the relevant payment under § 382.3(d), a list of each Copyright Owner from which the Licensee claims to have a direct license of rights to Directly-Licensed Recordings that is in effect for the month for which the payment is made and of each sound recording for which the Licensee takes the reduction, identified by featured artist name, sound recording title, and International Standard Recording Code (ISRC) number or, alternatively to the ISRC, album title and copyright owner name. Notwithstanding § 382.6, the Collective may disclose such information as reasonably necessary for it to confirm whether a claimed direct license exists and claimed sound recordings are properly excludable.

(2) To arrive at the percentage allocable to the Direct License Share for each month, the Licensee shall divide the Internet Performances of Directly-Licensed Recordings on the Reference Channels by the total number of Internet Performances of all sound recordings on the Reference Channels. In no event shall the Direct License Share be an amount greater than the

result of dividing the number of plays of Directly-Licensed Recordings on the SDARS by the total number of plays of all sound recordings on the SDARS.

(3) The Licensee may not credit use of a Directly-Licensed Recording under this paragraph if that use is credited as a use of a Pre-1972 Sound Recording for purposes of claiming the Pre-1972 Recording Share reduction to the royalty fee.

(b) Reduction for Pre-1972 Recording Share. The royalty fee specified in § 382.21(a) may be reduced by the percentage of Eligible Transmissions comprising the Pre-1972 Recording Share.

(1) A Pre-1972 Recording Share reduction is available to a Licensee only if—

(i)The Reference Channels constitute a large majority of and are generally representative of the music channels offered on the Licensee's SDARS; and

(ii) The Licensee provides to the Collective, by no later than the due date for the relevant payment under § 382.3(d), a list of Pre-1972 Recordings for which the Licensee takes the reduction, identified by featured artist name, sound recording title, and International Standard Recording Code (ISRC) number or, alternatively to the ISRC, album title and copyright owner name.

(2) To arrive at the percentage allocable to the Pre-1972 Recording Share for each month, the Licensee shall divide the Internet Performances of Pre-1972 Sound Recordings on the Reference Channels by the total number of Internet Performances of all sound recordings on the Reference Channels.

(c) Definition of Performance. For purposes of §382.23, Performance means:

(1) Except as discussed in paragraph (2) of this definition, a Performance is an instance in which any portion of a sound recording is publicly performed to a listener within the United States by means of a Digital Audio Transmission (*e.g.*, the delivery of any portion of a single track from a compact disc to one listener).

(2) An instance in which a portion of a sound recording is publicly performed to a listener within the United States by means of a Digital Audio Transmission is not a Performance if it both :

(i) Makes no more than incidental use of sound recordings including, but not limited to, brief musical transitions in and out of commercials or program segments, brief use during news, talk and sports programming, brief background use during disk jockey announcements, brief use during commercials of sixty seconds or less in duration, or brief use during sporting or other public events; and

(ii) Does not contain an entire sound recording and does not feature a particular sound recording of more than thirty seconds (as in the case of a sound recording used as a theme song), except for ambient music that is background at a public event.