Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
THE LIBRARY OF CONGRESS
Washington, D.C.

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

PANDORA MEDIA, INC.'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

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June 19, 2015

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INTRODUCTION

Pandora Media, Inc. (hereinafter, "Pandora") is pleased to present its Proposed Findings of Fact and Conclusions of Law for consideration by the Copyright Royalty Judges (the "Judges"). Pandora proposes rates within the following range for subscription and nonsubscription commercial webcasters operating under Section 112 and 114 statutory licenses for the period January, 1, 2016 through December 31, 2020. These rates and accompanying proposed terms are included in Pandora's Second Amended Proposed Rates and Terms, which Pandora is submitting concurrently with its Proposed Findings and Conclusions.

A. Low End of Proposed Range[1]

A royalty equal to the greater of (i) or (ii) below:

(i) A usage-based royalty computed on a per-performance basis as follows:

YEAR	PER NONSUBSCRIPTION PERFORMANCE	PER SUBSCRIPTION PERFORMANCE
2016	$0.00110	$0.00215
2017	$0.00112	$0.00218
2018	$0.00114	$0.00222
2019	$0.00116	$0.00226
2020	$0.00118	$0.00230

(ii) 25% of Revenue from Eligible Transmissions.

B. High End of Proposed Range

A royalty equal to the greater of (i) or (ii) below:

(i) A usage-based royalty computed on a per-performance basis as follows:

YEAR	PER NONSUBSCRIPTION PERFORMANCE	PER SUBSCRIPTION PERFORMANCE
2016	$0.00120	$0.00224

[1] The low and high ends of the proposed range correspond to levels of overspinning (or "steering") of Merlin-member tracks under Pandora's benchmark agreement. The calculations are described in Section III.B, *infra*.

YEAR	PER NONSUBSCRIPTION PERFORMANCE	PER SUBSCRIPTION PERFORMANCE
2017	$0.00123	$0.00228
2018	$0.00125	$0.00232
2019	$0.00127	$0.00236
2020	$0.00129	$0.00240

(ii) 25% of Revenue from Eligible Transmissions.

Pandora proposes that the combined Section 112/114 royalty described above be allocated 5% to Section 112 and 95% to Section 114, in the manner presently set forth in 37 C.F.R. § 380.3(c).

Pandora's Proposed Findings of Fact and Conclusions of Law are organized as follows:

Section I: The Genesis of Pandora, Its Product Offering, and the Nature of the Marketplace in Which It Operates

This section, drawn primarily from the testimony of Tim Westergren and Simon Fleming-Wood, briefly describes Pandora's founding and early history, the development of the Music Genome Project, the Pandora user experience, and Pandora's position in the market. It draws upon the full hearing record that establishes that Pandora – as distinct from interactive (or "on-demand") services – is a form of radio that competes primarily against terrestrial radio stations and other internet radio services.

Section II: The Willing Buyer/Willing Seller Rate-Setting Standard, the Requirement of Effective Competition, and the Implications for the Parties' Respective Benchmarks in this Proceeding

This section – the first part of which constitutes Pandora's Proposed Conclusions of Law – discusses the "willing buyer/willing seller" rate standard governing this proceeding. It demonstrates that that standard requires the rates set here (and the markets from which benchmarks are drawn) to reflect the forces of effective competition. The section goes on to demonstrate that SoundExchange's interactive service benchmark – by the admission of SoundExchange, its chief economist, its counsel, and its record company witnesses – completely

fails this test, while Pandora's Merlin benchmark (as well as iHeartMedia's benchmarks) reveal the forces of competition at work. This section also addresses the proper treatment to be accorded the two specifically identified factors warranting consideration under Sections 112(e) and 114(f)(2)(B). Governing precedent establishes that such factors do not constitute separate inquiries requiring further adjustment to willing seller/willing buyer rates, and are typically already reflected in the rates agreed to by parties to otherwise probative willing buyer/willing seller transactions.

Section III: Pandora's Direct License with Merlin: An Optimal Benchmark Reflecting the Workings of Effective Competition

This section presents Pandora's primary benchmark – Pandora's direct license agreement with Merlin, to which thousands of independent record labels have subscribed (the "Merlin Agreement") – and summarizes, from the testimony of Professor Carl Shapiro and Pandora's fact witnesses Dr. Stephan McBride and Michael Herring, among others, why it represents compelling evidence of rates for the precise rights here involved negotiated by a willing buyer and willing sellers in a competitive market. Most notably, the Merlin Agreement provides that as Pandora increases its performances of covered recordings – *i.e.*, as Pandora "steers" toward directly-licensed Merlin-label recordings and away from competing recordings – its effective per-play rate drops. As Professor Shapiro explains, this feature embodies a hallmark of competition: suppliers willing to offer a lower price in an attempt to gain volume. This section also sets forth how Professor Shapiro calculated the statutory rates that are implied by use of the Merlin Agreement as a rate-setting benchmark and the rationale for those calculations. This section also corroborates the reasonableness of the rates derived from the Merlin Agreement by reference to the direct license that Pandora entered into with Naxos in January 2015, as well as

the rates established by the Judges in the *Satellite II* proceeding (with appropriate adjustments), which set the royalty rates paid by Sirius XM – a competitor to Pandora.

Section IV: The Impropriety of Reliance Upon SoundExchange's Benchmark Drawn from the Non-Competitive Interactive Services Licensing Market

Section IV addresses the fundamental flaws in SoundExchange's preferred interactive services benchmark, including SoundExchange's attempt to corroborate that benchmark with agreements between Apple and certain major record companies and to justify the rates it seeks with faulty arguments regarding "convergence" between service types and statutory webcasting's alleged role in the record industry's shrinking sales. These topics are addressed in the following subsections:

Subsection IV.A marshals the record evidence revealing that the "upstream" market for licensing sound recording rights to interactive services is infected with the monopoly power of the major record companies (the "Majors"), thereby rendering SoundExchange's benchmark entirely uninformative to the task at hand—approximating rates that would emerge in a *competitive* market. Drawing from the admissions of SoundExchange's own counsel and witnesses – both expert and fact – this subsection details how the interactive market is even less competitive than a single-seller monopolized market. These admissions – new evidence before the CRB – attest to a market in which the repertories of the Majors are complements of, not substitutes for, on-demand services, thereby eliminating the need on the Majors' part to engage in competition with one another for more plays on such services. What is more, the record demonstrates, the Majors have assured the perpetuation of the current non-competitive environment [redacted]. This subsection concludes by revealing the various glaring flaws

in Professor Rubinfeld's belated efforts to demonstrate that the rates that are generated in the interactive service market are still somehow consistent with those that would emerge in a competitive market.

Subsection IV.B critiques a number of additional, fundamental flaws in Professor Rubinfeld's analysis of the interactive benchmark, including: (i) his complete failure to account for the significant differences between the interactive and non-interactive services as buyers of sound recording performance rights; and (ii) his failure to properly account for the differences in rights acquired by interactive services as compared to the rights granted by the statutory license. Accounting for just those errors made by Professor Rubinfeld that are readily quantifiable – and putting to one side the overarching monopoly power problem – leads to rates that are drastically lower than those proposed by Professor Rubinfeld. Indeed, these partially corrected rates are far more consistent with rates proposed by Pandora than those proposed by SoundExchange.

Subsection IV.C summarizes the evidence discrediting SoundExchange's argument that the markets for interactive and non-interactive services are allegedly "converging." This subsection first explains that the "convergence" theory is entirely disconnected from the rate-setting exercise, as it focuses entirely on alleged competition between interactive and non-interactive services in the "downstream" consumer market. Accordingly, it offers no insight into the respective *upstream* markets in which interactive and non-interactive services secure sound recording performance rights licenses from record labels. Additionally, this subsection details the utter dearth of evidence to support SoundExchange's convergence thesis. To the contrary, the evidence reveals, there are fundamental differences in functionality and target markets that continue to separate interactive services (where the user chooses the exact songs he or she wants

to listen to and when) from statutory webcasters such as Pandora (which pick songs *for* their users).

Subsection IV.D recounts the evidence demonstrating that the agreements between Apple and the Majors, which grant Apple the right to perform sound recordings on its iTunes Radio service, do not "corroborate" SoundExchange's fee proposal. The record reveals that Professor Rubinfeld's analysis of these agreements is riddled with fundamental errors, rendering his analysis entirely uninformative. Among other flaws, Professor Rubinfeld failed to account for the complex web of interconnected agreements between Apple and the Majors and also made several crippling methodological and computational errors—most significant among them a complete failure to examine the parties' expectations at the time the agreements were entered into. When properly evaluated, these Apple agreements are far more supportive of the rates proposed by Pandora than those proposed by SoundExchange.

Subsection IV.E responds to SoundExchange's contention that revenues from statutory webcasters must make up for the record industry's diminished revenue from CD and download sales, even though there is simply no evidence that such losses were *caused* by statutory webcasting. As this subsection demonstrates, SoundExchange's supposed evidence on this point does not even show correlation, let alone causation. In fact, numerous factors predating and unrelated to the advent and increasing popularity of streaming are responsible for the steep decline in record industry revenue since the late 1990s.

Section V: Pandora's Steering Experiments and Music Sales Experiments

This section details the record evidence concerning the steering and music sales experiments conducted by Pandora's Dr. McBride and his team of data scientists, which are referenced at various points throughout Pandora's proposed findings.

Section VI: Pandora's Proposed Regulations

This section details Pandora's proposed revisions to the Section 380 regulations governing statutory webcasters and provides the reasons why the proposed adjustments should be adopted by the Judges. The changes largely conform the Rates and Terms in that Section to Pandora's rate proposal (and to Professor Shapiro's underlying analysis) and make certain other technical changes, including with respect to the definitions of "Revenue" and "Performance"; per performance fee vs. Percent-of-Revenue; direct license credit; ephemeral record fee; late payment fee; statement of account signature; and unclaimed funds.

I. THE GENESIS OF PANDORA, ITS PRODUCT OFFERING, AND THE NATURE OF THE MARKETPLACE IN WHICH IT OPERATES

A. Pandora's Early History and the Development of the Music Genome Project

1. Pandora's internet radio service traces its origins to the work of Pandora's founder, Tim Westergren, and his composition of music for films. Westergren WDT ¶¶ 4-6. Finding that many film directors lacked the vocabulary or frame of reference to articulate the type of music they wanted for their films, Westergren developed a form of musical interview in which directors could listen to certain songs and provide their feedback. *Id.* at ¶ 5. Westergren then translated their feedback into musicological information and used it to compose music that reflected their preferences. *Id.* Those efforts in film composing inspired Westergren to develop a broader taxonomy for music recommendation – one that could help listeners discover music they would love based on musical similarity. *Id.* at ¶ 6. Westergren's idea was that once a song's characteristics (or "genes") were mapped, and expressed as numerical values, the recommendation tool could use mathematical algorithms to identify other songs with similar musical "DNA" to those a user already knew and liked. *Id.* This idea grew into what is now

known as the Music Genome Project ("MGP"), a popularity-blind method of making music recommendations. *Id.*

2. In 2000, Westergren and two partners started Savage Beast Technologies ("Savage Beast"), the company that would later become Pandora. *Id*. at ¶ 7. With the help of Stanford musicologist Dr. Nolan Gasser, Savage Beast developed five separate "genomes": Pop/Rock, Jazz, Hip-Hop/Electronica, World Music, and Classical. *Id.* Each genome contained a set of hundreds of individual "genes" or traits typically present in that genre of music, including details on instrumentation, tempo, form, melody, harmonic structure and lyrical content of the works. *Id.* at ¶ 8; *see also* 5/27/15 Tr. 6131:20-6132:11 (Fleming-Wood). Savage Beast also developed a standardized process of analyzing each recording (listening and assigning a score to each gene based on its role in the work), and trained a team of music analysts to begin building the MGP catalog. Westergren WDT ¶ 8.

3. Savage Beast's initial strategy was to market the MGP as a tool that music retailers and music websites could use to drive new music sales and consumption. *Id*. at ¶ 10. One of the company's early products was software for Internet-enabled kiosks located in "brick-and-mortar" retailers; customers could listen to music at these kiosks, and, with the assistance of the MGP, discover new music that shared characteristics of the songs they enjoyed. *Id.* According to Savage Beast's retail partners at the time, these systems had a demonstrated success rate: for example, Borders reported that stores using the kiosks sold 15% more music than stores that did not. *Id.*

4. Nonetheless, Savage Beast struggled financially from 2000 to 2003, and the founding team took on substantial personal debt to keep the business alive. *Id*. at ¶ 11. In 2004, after hundreds of pitches to investors, Savage Beast finally raised a second round of financing,

hired a new executive team, and began considering ways to use the company's most valuable asset – the MGP – outside the music retail business. *Id*. at ¶¶ 12-13.

5. One such strategy, proposed in a September 2004 presentation, was "one-click custom radio." *Id*. at ¶ 13. The Savage Beast team believed they could develop a successful personalized radio product, using the MGP to introduce listeners to a broader range of songs and artists than those played on terrestrial radio. *Id*. at ¶¶ 14-16. In addition to connecting audiences and artists, Pandora's team set out to build a legal business that would offer a constructive alternative to piracy in the digital music space, pay royalties, and thereby further supporting a healthy music ecosystem. *Id*. at ¶ 17. Savage Beast repurposed its recommendation technology into a playlist engine, renamed the company Pandora Media, and set about creating a consumer-facing product and brand. *Id*. at ¶ 15.

6. Pandora Radio launched in the fall of 2005. *Id*. at ¶ 18. The company began with a subscription model that allowed for ten free listening hours, after which users were required to subscribe at a rate of $36 per year. *Id*. at ¶ 18. In November 2005, Pandora launched a free, ad-supported version of Pandora Radio and began to hire a sales team to sell advertising. *Id.*

7. Since then, Pandora has grown into a very successful consumer product almost entirely by word of mouth. *Id*. at ¶ 19. In its most recent Form 10-k filing with the SEC, Pandora reported 81.5 million Americans (nearly one out of every three Americans over the age of 13) tuned into Pandora on its various platforms, for an average of [redacted] hours per month and a total of 20 billion listening hours during 2014. SX Ex. 158 p. 44; 5/13/15 Tr. 3440:22-25 (Herring). Pandora also receives thousands of monthly submissions directly from artists and record labels looking to be played on Pandora in order gain a wider audience for their music;

approximately [redacted] tracks were submitted to Pandora in 2013 alone, and Pandora now plays songs from more than 120,000 artists each month. Westergren WDT ¶¶ 19-20.

8. Pandora continues to invest heavily in the software, data, infrastructure, and content management necessary to maintain and grow its music classification "engine" – the MGP – that lies at the heart of its service. *Id*. at ¶¶ 20-28. Unlike some of Pandora's competitors (whose custom radio products rely solely on computer-driven song selection models), the MGP coding process relies extensively on input from expert music curators and analysts. *Id.* at ¶ 24. Pandora has spent approximately [redacted] hours developing and improving the MGP at a cost of more than [redacted]. *Id.* at ¶ 30. The database that Pandora started with has expanded to include approximately [redacted] analyzed tracks. *Id.* at ¶ 20.

B. <u>Pandora's Playlist Technology</u>

9. Coding songs for the MGP is only the first step in determining what Pandora users eventually hear; Pandora must also arrange those songs into playlists for each of its users. Pandora uses three different components to create playlists from the songs included in its database: (1) the MGP algorithm; (2) collective intelligence; and (3) collaborative filtering. Westergren WDT ¶ 29. Across these components, Pandora uses as many as 50 different algorithms at any given moment to select the next song that plays for each listener. 5/27/15 Tr. 6132:12-6133:19 (Fleming-Wood). This process allows Pandora to create personalized playlists for its listeners while delivering a radio-like "lean back" listening experience. Westergren WDT ¶ 29; 5/27/15 Tr. 6132:12-6133:19 (Fleming-Wood).

10. <u>The Music Genome Project Algorithm</u>. As discussed in the preceding section, the MGP algorithm utilizes data compiled as part of the MGP to find songs with similar musical thumbprints or "DNA." Westergren WDT ¶ 30. In brief, if a listener selects an artist or genre to "seed" a station, the MGP's patented song-matching technology identifies songs that share

similar characteristics with the seed. *Id*. The MGP's song-matching technology is entirely blind to the popularity of a given song. *Id*. at ¶ 31. A listener may be presented with tracks sharing similar musical DNA that are from disparate time periods, relatively unknown artists, or even different genres or cultures. *Id.* The vast majority of the artists played on Pandora – some 80% – are independent, working musicians whose recordings receive no airplay at all on terrestrial radio. *Id.* ¶ 20.

11. Collective Intelligence. As discussed in the written testimony of Tim Westergren, Pandora's "collective intelligence" strategy uses the feedback provided by its listeners to further refine their playlists and to identify musical trends. Westergren WDT ¶ 33. Over time, Pandora has collected more than [redacted] combined thumbs-up, thumbs-down, and track skips that listeners have provided during their listening experience. *Id.* Using this data, Pandora can correct instances where the MGP matches two songs with similar traits that, for some reason, do not appeal to the same audience. *Id.*

12. Collaborative Filtering. The third category of algorithm Pandora employs involves looking at the feedback an individual listener has provided on each of his or her stations to create or improve playlists. *Id*. at ¶ 34. After a listener indicates a thumbs-up or down for a song, Pandora uses the listener's individual preferences to influence not only the playlists of that listener, but also those of other listeners who have expressed similar preferences. *Id.*

13. Experimentation. In addition to these playlist algorithms, Pandora is constantly experimenting with ways to improve the mix of songs presented to listeners. *Id*. at ¶ 35. In the ordinary course of business, when there is a new idea for improving playlist quality, that idea will be tested on a small but statistically significant group of listeners. *Id.* The results are evaluated to test listener satisfaction, including whether the listener changed the amount of time

he or she spent listening to Pandora, or whether the listener changed the rates at which he or she returned to Pandora to listen. *Id.* As discussed in Section V below, Pandora uses this testing capability to ensure that increased plays of directly licensed songs (which, like all other tracks, must "pass" through the above-described algorithms before they are considered for inclusion on a playlist) do not negatively affect the user listening experience.

C. The Pandora Listener Experience

14. To begin using Pandora, a listener need only create a profile, log into the service (via website or mobile/smartphone application), select or "seed" a station, and then enjoy the music. Fleming-Wood WDT ¶ 5; *see also* 5/27/15 Tr. 6126:22-6131:1 (Fleming-Wood); PAN Ex. 5003 (video demonstration).

15. Creating a Profile. The first time a listener accesses the Pandora platform, she is prompted to create a listener profile using her email address, password, date of birth, zip code, and gender. Fleming-Wood WDT ¶ 6; 5/27/15 Tr. 6127:5-6128:6 (Fleming-Wood); PAN Ex. 5003 (video demonstration). Once registered, the listener can log into her account from a computer, mobile phone, or any other Pandora-enabled device for a seamless experience that accesses all of her previously-created stations. Fleming-Wood WDT ¶ 6; 5/27/15 Tr. 6127:5-6128:6 (Fleming-Wood); PAN Ex. 5003 (video demonstration).

16. Listener Interface. After logging in, the listener can create a new station, select from previously saved stations, or select from 690 pre-populated genre stations. Fleming-Wood WDT ¶ 7. As the music plays, information about the currently-playing song will be displayed, including song title, artist name, and album title. *Id.*; PAN Ex. 5003 (video demonstration). For many songs, Pandora also displays biographical information about the artist, song lyrics, album cover art, and a recommended list of similar artists that the listener may enjoy. Fleming-Wood WDT ¶ 7; 5/27/15 Tr. 6128:16-19 (Fleming-Wood); PAN Ex. 5003 (video demonstration).

17. Selecting a Station. Pandora has two types of stations: personalized stations and genre stations. Fleming-Wood WDT ¶ 8. To create a personalized station, the listener simply types in the name of an artist, composer (for classical music), genre, or song title to serve as the starting point or "seed" for the station. *Id.*; 5/27/15 Tr. 6127:24-6128:1 (Fleming-Wood); PAN Ex. 5003 (video demonstration). Pandora then automatically creates a station centered around that seed. Fleming-Wood WDT ¶ 8; 5/27/15 Tr. 6128:1-6128:6 (Fleming-Wood); PAN Ex. 5003 (video demonstration). Genre stations, for their part, are pre-programmed collections of songs that reflect a certain musical style or preference. Fleming-Wood WDT ¶ 8. Each genre station is populated with songs that are hand-selected by Pandora's music curation team to reflect that musical genre or style. *Id.* Although each listener may create up to 100 stations, the majority of Pandora's active users listen to six stations or fewer. *Id.*

18. Using Pandora. Pandora also features a feedback system, whereby listeners can further indicate their music preferences by pressing a "thumbs up" or "thumbs down" icon while a song is playing. Fleming-Wood WDT ¶ 9; 5/27/15 Tr. 6128:7-15 (Fleming-Wood); PAN Ex. 5003 (video demonstration). In addition to storing the feedback, Pandora skips "thumbed-down" songs (within certain limits per hour). *Id.* Pandora records this listener feedback and uses it to shape future playlists generated for that particular listener and for other listeners who listen to similar music. *Id.*; 5/27/15 Tr. 6128:7-15 (Fleming-Wood). Just over half of Pandora listeners choose to use the "thumb" feature; approximately [redacted] do not use it on a consistent basis. Fleming-Wood WDT ¶ 9. A listener can also "skip" a song, rather than using the "thumbs down" button (again within hourly limits on skips). *Id.*; 5/27/15 Tr. 6130:7-6131:1 (Fleming-Wood); PAN Ex. 5003 (video demonstration).

19. Buy Button. The Pandora player also includes a "Buy" button, which directs listeners to iTunes or Amazon.com, where they can purchase the songs they enjoy. Fleming-Wood WDT ¶ 11.

D. Pandora's Position in the Digital Music Ecosystem

20. There are two broad categories of music streaming services available to consumers: interactive services, which allow individual listeners to select the particular songs they wish to hear; and non-interactive services, which, like traditional radio, retain control over the particular tracks being performed at any given moment As the Judges have previously noted:

> The major difference between the [interactive and non-interactive] markets is the role of the ultimate consumer in selecting the sound recordings for listening. In the interactive market (as the adjective connotes), the ultimate consumer essentially decides which sound recordings he or she will receive. By contrast, in the noninteractive market (as the adjective again connotes), the consumer plays a more passive role, and the webcaster offers the consumer music that the webcaster anticipates the listener might enjoy (much like radio).

Determination of Royalty Rates for Digital Performance Right in Sound Recordings and Ephemeral Recordings, 79 Fed. Reg. 23102, 23115 (Apr. 25, 2014) ("*Web III Remand*") (footnote omitted).

21. The distinction between interactive and non-interactive streaming services is captured by the commonly noted distinction between "lean in" (or "lean forward") and "lean back" forms of listening. "Lean forward" involves the listener "actually pick[ing] the individual songs that he or she will be listening to," and includes interactive streaming services such as Spotify, Rhapsody, and YouTube as well as listening to CDs and downloads. 5/8/15 Tr. 2617:9-2619:6 (Shapiro); Shapiro WRT p. 8 & Fig. 1; *see also* 5/13/15 Tr. 3397:1-10 (Herring); 5/29/15 Tr. 6801:2-6 (Butler); Fleming-Wood WDT ¶ 18; PAN Ex. 5048 p. 44 (Bain consumer research presentation). "Lean back" services provide a more passive, radio-like experience in which the

listener allows the service to select the individual songs. 5/18/15 Tr. 2617:9-2619:6 (Shapiro); *see also* 5/13/15 Tr. 3397:1-10 (Herring); 5/29/15 Tr. 6801:7-10 (Butler).

22. Pandora – like other internet, satellite, and terrestrial radio providers – is a non-interactive streaming service that offers a "lean-back" experience to its listeners: Pandora, *not* the listener, ultimately chooses which artist and which song is being played. 5/13/15 Tr. 3444:25-3447:15 (Herring); Westergren WDT ¶ 29; Herring AWRT ¶ 9; 5/8/15 Tr. 2618:23-2619:6 (Shapiro); Shapiro WRT p. 8 & Fig. 1.

23. Section IV.C below details the fundamental functional differences between lean-back Internet radio services like Pandora and iHeartRadio and lean-in, on-demand services like Spotify and Rhapsody – differences conceded by nearly every SoundExchange witness. That testimony is captured best in the words of SoundExchange's president, Michael Huppe, who put it simply: "Pandora is a type of radio." 4/29/15 Tr. 767:23-25 (Huppe). By contrast, interactive services, which allow the listener to access any song on demand, are not "radio." 4/29/15 Tr. 769:8-19 (Huppe) ("I don't personally think of that as radio."). Mr. Huppe further explained:

> Radio . . . may be curated. It may be customized. It may involve something you request. . . . So I don't want to imply that, you know, all radio means there's no involvement. But the concept of things being provided to you on a lean-back experience, perhaps based on some of your input, that's what I think of as radio.

Id. at 770:12-22 (Huppe); s*ee also* 5/7/15 Tr. 2408:17-2409:4 (Wilcox) ("[redacted]") (discussing IHM Ex. 3118 p. 12); 4/30/15 Tr. 1123:19-20 (Harrison) ("[redacted]").

24. Lean-back listening accounts for nearly 80% of all music consumption in the United States today (including terrestrial radio), while lean-forward listening represents the remaining approximately 20%. Herring AWRT ¶ 9 & Fig. 2; 5/13/15 Tr. 3397:18-22 (Herring); 5/27/15 Tr. 6138:9-23 (Fleming-Wood). Pandora competes primarily with terrestrial radio,

satellite radio, and other webcasters for market share within the 80% of all listening that is lean-back; other music providers (such as interactive streaming services) compete for the 20% of listening that is lean-forward. 5/13/15 Tr. 3398:6-3399:6 (Herring); Herring AWRT ¶¶ 9-11 & Fig. 2; 5/27/15 Tr. 6139:13-6140:3 (Fleming-Wood).

25. Consistent with its radio-like listener experience, Pandora's closest competitor in attracting listeners is terrestrial radio. 5/27/15 Tr. 6138:2-23 (Fleming-Wood); Fleming-Wood WDT ¶¶ 17-20. Pandora presently commands approximately 10% of the total U.S. market for lean-back "radio" listening (when defined to include all terrestrial radio, satellite radio, and Internet radio), as measured in hours listened. 5/12/15 Tr. 3346:13-20 (Herring); 5/13/15 Tr. 3368:24-3369:13 (Herring). The intensity of Pandora's competition with terrestrial radio should only increase as Pandora's service becomes increasingly available in automobiles, where FM radio has traditionally dominated the market. 5/27/15 Tr. 6137:4-14, 6138:24-6139:12 (Fleming-Wood); 4/30/15 Tr. 1118:4-15 (Harrison); Shapiro WRT pp. 57-60.

26. Given its radio-like functionality, Pandora serves as a complement to interactive services. Pandora provides listeners with the opportunity to discover new music, and if the listener wishes to hear a specific song again later, she can either download the song from a site like iTunes, or listen on-demand through streaming services like Spotify. Fleming-Wood WDT ¶ 18; *see also* 5/27/15 Tr. 6139:15-6140:3 (Fleming-Wood) ("We actually see [on-demand services] as highly complementary to Pandora, and we're aware of many, many users who use both services on a daily basis."). In this way, Pandora fills the traditional role of radio, and the on-demand streaming services fill the traditional role of record stores, or replacement of a personal music collection. Fleming-Wood WDT ¶ 19.

27. Pandora pays hundreds of millions of dollars annually – more than [redacted] in 2014 alone – in royalties to SoundExchange, making it the single largest payor of statutory sound-recording royalties. Herring AWRT ¶ 53; 4/29/15 Tr. 713:22-714:10 (Huppe); 5/1/15 Tr. 1410:17-23 (Harleston). Because Pandora draws most of its listener-hours from time that consumers would have spent listening to terrestrial radio, or listening to pirated music, or not listening to any music at all, *see* ¶¶ 326, 339, *infra*, most of these royalties are earnings that the artists and record labels could not have received but for Pandora's performance of their music.

II. THE WILLING BUYER/WILLING SELLER RATE-SETTING STANDARD, THE REQUIREMENT OF EFFECTIVE COMPETITION, AND THE IMPLICATIONS FOR THE PARTIES' RESPECTIVE BENCHMARKS IN THIS PROCEEDING[2]

28. Under the governing provisions of Sections 801-805 and 114, the Judges are required to:

> . . . establish rates and terms that most clearly represent the rates and terms that would have been negotiated in the marketplace between a willing buyer and a willing seller. In determining such rates and terms, the Copyright Royalty Judges shall base their decision on economic, competitive and programming information presented by the parties, including—
>
> (i) whether use of the service may substitute for or may promote the sales of phonorecords or otherwise may interfere with or may enhance the sound recording copyright owner's other streams of revenue from its sound recordings; and
>
> (ii) the relative roles of the copyright owner and the transmitting entity in the copyrighted work and the service made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, and risk.
>
> In establishing such rates and terms, the Copyright Royalty Judges may consider the rates and terms for comparable types of digital audio transmission services and comparable circumstances under voluntary license agreements negotiated under subparagraph (A).

[2] Pursuant to 37 C.F.R. § 351.14(c), paragraphs 28-30 (introduction), 31-34 (§ II.A.1), and 45-53 (§ II.A.3-II.B) constitute proposed conclusions of law.

17 U.S.C. § 114(f)(2)(B).

29. Section 112(e)(4) of the Copyright Act, addressing ephemeral copies, likewise requires the Judges to "establish rates that most clearly represent the fees that would have been negotiated in the marketplace between a willing buyer and a willing seller."

30. The willing buyers in the hypothetical market the Judges are tasked with replicating are non-interactive streaming services with features that qualify them for the statutory license (although the hypothetical market presumes no such statutory license exists). The willing sellers in the hypothetical market are the various record companies offering licenses to their complete repertories. *Web III Remand*, 79 Fed. Reg. at 23110; Shapiro WDT pp. 3-4.

A. The Hypothetical Market – and the Benchmarks Used To Guide the Judges' Analysis – Must Reflect Effective Competition

1. Prior Decisions of the Copyright Royalty Judges and Librarian of Congress, as well as the Legislative History, Require Rates that Reflect Effective Competition[3]

31. It is well established, and undisputed between the parties, that the rates and terms established by the Judges must be those that would prevail in a hypothetical *competitive* market.

32. That the "willing buyer willing seller" standard as used in Sections 114(f) and 112(e) is designed to approximate rates and terms that a willing buyer and a willing seller would agree to in a competitive market was most recently affirmed in *Web III Remand*, where the current Judges stated: "[A]s the Librarian of Congress held in *Web I*, the 'willing seller/willing buyer' standard calls for rates that would have been set in a '*competitive* marketplace.'" 79 Fed. Reg. at 23114 n.37 (quoting *Web I*, 67 Fed. Reg. 45240, 45244-45 (July 8, 2002)) (emphasis in

[3] Pursuant to 37 C.F.R. § 351.14(c), this subsection constitutes proposed conclusions of law.

original).[4] The Judges went on to cite the *Web II* Determination (itself drawing from the *Web I* Determination) as requiring an "*effectively* competitive market" *Id.* (emphasis in original). Such a market "is one in which super-competitive prices or below-market prices cannot be extracted by sellers or buyers." *Digital Performance Right in Sound Recordings and Ephemeral Recordings*, 72 Fed. Reg. 24084, 24091 (May 1, 2007) ("*Web II*").

33. The legislative history of Section 114 comports with this understanding. An early version of the antitrust immunity provision contained in Section 114(e) would have shielded collective fee negotiations by the record companies with digital services from antitrust scrutiny. The United States Department of Justice ("DOJ") expressed concern that the proposed provision, "by allowing license negotiations by a common agent, would authorize formation of a cartel by performance rights holders." 141 Cong. Rec. S11945-04, S11962 (1995), 1995 WL 467219 (Letter from Acting Assistant Attorney General Kent Markus to Sen. Leahy). As Senator Leahy explained, the proposed provision "could be read to provide statutory authority to record companies to form a licensing cartel. In light of the concentration of the record industry in which six major companies account for 80 to 85 percent of the U.S. market, this could, in the words of the Justice Department, 'cause great mischief by allowing the formation of a cartel immune from antitrust scrutiny.'" *Id.* at S11961 (Statement of Sen. Leahy). The DOJ recommended deleting Section 114 altogether, arguing that record companies cannot "form a federally authorized cartel to set *higher-than-competitive* prices." *Id.* at S11962 (Letter from Acting Assistant Attorney General K. Markus to Sen. Leahy) (emphasis added).

[4] The statute expressly requires the Judges to follow the Librarian of Congress's prior interpretations. *See* 17 U.S.C. § 803(a)(1) (requiring Judges to act "on the basis of . . . prior determinations and interpretations of the . . . Librarian of Congress").

34. The DOJ ultimately acceded to a more limited antitrust exemption, recognizing that the review of rates and terms by rate-setting arbitrators (and now Judges) would operate as a check on the supra-competitive rates that otherwise would be attained by the centralized licensing authority – *i.e.*, that "any impasse on license fees, terms and conditions can be resolved by the rate panel, if necessary." *Id.* at S11962-63 (Letter from Assistant Attorney General A. Fois to Sen. Leahy).

2. Basic Economic Principles Require Effective Competition in the Hypothetical and Benchmark Markets

35. Approximating market pricing that reflects effective competition not only comports with the governing legal test; it also serves fundamentally sound economic principles. Effective or "workable" competition efficiently allocates scarce resources and maximizes overall consumer welfare, while promoting innovation, variety, and improved product and service quality. Katz WDT ¶¶ 21-23. Prices arising from effectively competitive markets guide consumers and firms to the point at which society's benefits are maximized, while allowing suppliers to cover their average costs. *Id.* ¶¶ 27, 30-31.

36. Absent this critical grounding in competitive market conditions, the governing willing buyer/willing seller test would lack practical meaning: any transaction between a buyer and seller that was not literally coerced would suffice to meet the test. Accordingly, a transaction between a monopoly seller and buyers willing to pay the monopoly price can be characterized as "willing" in some sense, and some buyers may be willing to pay even higher than monopoly rates. *Id.* ¶¶ 15-16; 5/8/15 Tr. 2650:22-2652:17 (Shapiro) (explaining that even monopolists negotiate, but that does not blunt their monopoly power). If the role of the Judges were reduced merely to confirming that proposed benchmark transactions met so rudimentary a test, there would be little left to adjudicate: by implication, such a porous screening test would

validate virtually any rates that the record companies could negotiate with licensee music services.

37. This plainly was not the intent of Congress in establishing the existing statutory license framework. Indeed, it would be irrational to envision that Congress legislated a massively costly statutory license mechanism to protect a class of webcasters from being left to the workings of an unregulated marketplace for sound recording performance rights, only to have invited adjudicated outcomes adopting rates derived from that market regardless of its being (as we show below to be the case as to SoundExchange's chosen benchmark) completely devoid of price competition.[5] *See generally* Katz WDT ¶ 16; Shapiro WRT p. 47; 5/18/15 Tr. 4475:16-4476:7 (Shapiro).

38. As Professors Shapiro and Katz testified, the hallmark of a competitive market is the ability of a buyer to substitute the product of one seller for that of another – buyer choice – thereby inducing sellers to offer better prices and/or higher quality than one another to obtain the buyer's business. Shapiro WDT pp. 10-11; Katz WDT ¶¶ 23-25, 32-34, 42; *id.* at 32 ("[B]uyer choice is the essence of competition. Specifically, competition arises *only* when buyers have the ability to substitute the offerings of one seller for those of another."); *see also* Shapiro WDT p. 10 ("In markets for recorded music, competition from record companies would take the form of price reductions (discounted royalty rates) in exchange for greater market share (more plays by music services).").

39. Professor Shapiro's testimony further elucidated this basic principle of buyer choice with respect to intermediaries or "aggregators" – including internet radio services – which

[5] In the instant setting, such a result effectively would cause statutory services to be treated the same as interactive services that require voluntary licenses, despite a clearly contrary statutory intent. *See* 17 U.S.C. § 114(d)(2)(A)(i) (denying statutory license to interactive services and requiring them to seek voluntary licenses).

combine the products of a number of different suppliers into an aggregated offering to end consumers, and generate consumer value by choosing, combining, and presenting the products in a way that those consumers find valuable. Shapiro WDT p. 8. The more easily an aggregator can shift its demand to products from other suppliers without losing the patronage of its own customers, the closer to marginal cost will a supplier set its prices. *Id.* Said slightly differently, the more the aggregator can "steer" its product mix towards a lesser priced supplier and away from a higher priced supplier, the higher the elasticity of demand for the product of the higher-priced supplier and the greater the incentive on that supplier to offer a lower (*i.e.*, more competitive) price lest it lose the business. *Id.* at 8-9 ("the ability or inability of a webcaster to steer listeners toward or away from the music of a given record company is fundamental to the licensing negotiations that would take place in the absence of a compulsory license").

40. By comparison, where there is a single monopoly seller, where the suppliers tacitly collude, or where the sellers' products are *necessary complements* rather than *substitutes*, prices will almost certainly be higher than competitive levels. In none of these situations can a buyer shift purchases among competing suppliers. Katz WDT ¶ 36; Shapiro WDT p. 11 ("[I]f the leading suppliers have settled into some form of coordinated interaction, e.g., by refraining from competing actively to poach each other's customers, the market will fail to be workably competitive."); *see also* Shapiro WRT pp. 13-14 (discussing the anticompetitive effects and lack of buyer choice where there are "must-have" suppliers). Indeed, firms offering complementary "must-have" products tend to set prices even higher than would a monopoly seller of the same group of products. Katz WDT ¶¶ 41-43 (discussing Cournot complements).

41. Much as they would have preferred the record to remain silent on this issue, SoundExchange and its primary expert economist, Professor Rubinfeld, ultimately did not

dispute the proposition that the statutory rates to be set here must reflect the workings of effective competition. This concession finally appears on Page 26 of his written *rebuttal* testimony,[6] prompted by the need to respond to the Services' experts' own detailed written direct testimony concerning the central relevance of the presence or absence of effective competition in the market from which benchmark agreements have been drawn. *See* Rubinfeld CWRT ¶¶ 111-12 (referencing Shapiro and Katz discussion of effective competition and stating, "I understand that the 'willing seller/willing buyer' standard calls for rates that would have been set in a 'competitive marketplace'") (internal quotation omitted).[7] This belated recognition on the part of SoundExchange comports with the testimony of SoundExchange's economist Janusz Ordover in the *Satellite I* proceeding, where he testified that the "fundamental objective in a rate setting proceeding . . . should be to 'mimic' what an effectively competitive marketplace accomplishes in an unregulated setting." Katz WDT ¶ 17 (quoting Testimony of Ordover, *Adjustment of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, Oct. 30, 2006).

42. The Judges' observations in *Web III Remand* align with these basic economic principles. There, the Judges observed that "[i]f it was sufficient for webcasters to obtain only the licenses for one (or less than all four) of the major record companies" – in other words, if the repertoires of the major labels were *substitutes* for one another – "then separate negotiations with

[6] Professor Rubinfeld later rationalized his failure to address the competition element of the willing buyer/willing seller test in his written direct testimony on the basis that he simply took the issue of competition in the interactive market "for granted" and that he "just didn't know it would become debatable in this proceeding." *See* 5/5/15 Tr. 1922:11-1924:22 (Rubinfeld).

[7] SoundExchange's and Professor Rubinfeld's similarly belated efforts to demonstrate that the interactive services market from which SoundExchange's rate proposal derives actually *meets* the effective competition test fell woefully short. *See* Section II(C), *infra*.

individual record companies (absent collusion, tacit or otherwise) could lead to competitively lower royalty rates." 79 Fed. Reg. at 23114.

43. By contrast, the Judges observed that

> [i]f the repertoires of all four major record companies were each required by webcasters (*i.e.*, if the repertoires were necessary *complements*) and webcasters were required to negotiate with each record company individually, then each record company would have an incentive to charge a monopoly price to maximize its profits without concern for the market writ large. That is, while these higher prices would constitute profits for the record company receiving them, they would constitute higher monopoly costs (incurred four times – paid by webcasters to each of the four record companies).

Id. at 23114 (emphasis added).[8]

44. A significant portion of the record developed by the Services in this proceeding compares and contrasts the interactive services and non-interactive services markets along precisely these dimensions, as we summarize more fully in subparts C and D below.

3. In an Analogous Setting, the ASCAP and BMI Rate Courts Have Interpreted "Reasonable" Rates to Signify Those that Would Prevail in a Competitive Marketplace[9]

45. The existing law in the closely related context of setting fees for the musical work performance rights further confirms that the statutory willing buyer/willing seller standard is best understood as requiring rates that would have been negotiated in a competitive marketplace. Pursuant to antitrust consent decrees, the two major performing rights organizations ("PROs") responsible for licensing musical works to music users such as the webcaster participants in this proceeding, ASCAP and BMI, must license their respective repertories at "reasonable" rates; should voluntary negotiations fail, the courts that supervise the ASCAP and BMI antitrust

[8] This conclusion echoes the statement of the CARP in *Web I* that "a showing that the record companies themselves, or even the majors, could exert oligopolistic power" would induce it to reject the market evidence proffered by SoundExchange in favor of a more competitive marketplace. CARP Report at 23.

[9] Pursuant to 37 C.F.R. § 351.14(c), this subsection constitutes proposed conclusions of law.

consent decrees perform a similar rate-setting function to the task before the Copyright Royalty Judges here.[10] In performing their rate-setting function, the ASCAP and BMI rate courts have long interpreted the phrase "reasonable" rates – the same phrase used in the legislative history of the willing buyer/willing seller standard[11] – as connoting those that would result from willing buyers transacting with willing sellers in a competitive market.

46. The Second Circuit Court of Appeals thus has made clear that "[f]undamental to the concept of reasonableness is a determination of what an applicant would pay in a competitive market, taking into account the fact that the PRO, as a monopolist, exercises disproportionate power over the market for music rights." *Broadcast Music, Inc. v. DMX Inc.*, 683 F.3d 32, 45 (2d Cir. 2012) (quoting *United States v. ASCAP*, 627 F.3d 64, 76 (2d Cir. 2010) and *United States v. BMI*, 426 F.3d 91 (2d. Cir. 2005) ("*Music Choice*") (internal quotation marks omitted). "In assessing whether another agreement provides a valid benchmark, the district court must consider whether the other agreement dealt with a comparable right, whether it involved similar parties in similar economic circumstances, and whether it arose in a sufficiently competitive market." *Id.; see also Music Choice*, 426 F.3d at 95 (rate court must consider "the degree to which the assertedly analogous market under examination reflects an adequate degree of competition to justify reliance on agreements that it has spawned"). *Cf.* Shapiro WDT pp. 18-19 (discussing nuances of benchmark approach to rate-setting).

[10] The ASCAP and BMI "rate courts" are in the United States District Court for the Southern District of New York, and their decisions are reviewed by the Second Circuit Court of Appeals.

[11] The DMCA Conference Report, which is the only committee report concerning the DMCA amendments to Section 114 (where the "willing buyer/willing seller" standard was introduced into section 114), states that "consistent with existing law, a copyright arbitration proceeding should be empaneled to determine *reasonable rates and terms*." H.R. Rep. No. 105-796, at 86 (1998) (Conf. Rep.) (emphasis added).

47. Consistent with this competitive marketplace requirement, the ASCAP and BMI rate courts have made absolutely clear that prior agreements proffered as benchmarks must have been negotiated in a competitive environment in order for them to serve as useful benchmarks, and those courts reject prior negotiated agreements proffered as benchmarks where they reflect the exercise of significant market power by the party negotiating the agreement. *See, e.g.*, *ASCAP v. Showtime/The Movie Channel, Inc.*, 912 F.2d 563, 578-82, 586 (2d Cir. 1990) (reprinting rate court decision of Dolinger, M.J.) (rejecting agreements proffered by ASCAP as benchmarks due to ASCAP's significantly greater bargaining leverage and because "although they resulted from so-called 'arms' length' negotiations, they do not necessarily reflect rates that have a discernible relationship to what a competitive – or even a partially competitive – market would produce"). In reasoning that resonates here, the *Showtime* Court aptly observed: "Though the rate court's existence does not mean that ASCAP has violated the antitrust law, the court need not conduct itself without regard to the context in which it was created. . . . The disinfectant need not be a placebo." *Id.* at 570.

B. The Enumerated Statutory Factors Do Not Constitute Additional or Exclusive Considerations Separate From the Willing Buyer/Willing Seller Inquiry

48. Sections 112(e)(4) and 114(f)(2)(B) provide that "the copyright arbitration royalty panel shall establish rates and terms that most clearly represent the rates and terms that would have been negotiated in the marketplace between a willing buyer and a willing seller," and enumerate two factors that the panel shall consider (among other information presented by the parties) in making its decisions:

> (i) whether use of the service may substitute for or may promote the sales of phonorecords or otherwise may interfere with or may enhance the sound recording copyright owner's other streams of revenue from its sound recordings; and

> (ii) the relative roles of the copyright owner and the transmitting entity in the copyrighted work and the service made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, and risk.

49. As an initial matter, this standard should be distinguished from the so-called "801(b)" standard that governs the preexisting satellite digital audio radio services (Sirius XM) and preexisting subscription services (Music Choice). *See* 17 U.S.C. § 801(b)(1). That policy-driven standard requires that the Judges separately consider each of the four enumerated factors and determine whether rates (including rates taken from marketplace benchmarks) should be adjusted upward or downward so as to satisfy each factor. Even where marketplace agreements are used as benchmarks, the rates selected by the Judges ultimately must "achieve" the four 801(b)(1) "objectives" – fidelity to those factors, even where they require "divergence" from market rates, is the statutory command. *Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, 78 Fed. Reg. 23054, 23055, 23066 (Apr. 17, 2013) ("*Satellite II*"); *Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, 73 Fed. Reg. 4080, 4082-84 (Jan. 24, 2008) ("*Satellite I*") (surveying prior 801(b) determinations and adopting approach whereby rates adopted from market benchmarks are measured against each enumerated statutory factor); *Recording Industry Ass'n of America, Inc. v. Librarian of Congress*, 176 F.3d 528, 534 (D.C. Cir. 1999) (rejecting RIAA argument that 801(b)(1) required market rates and affirming Librarian's view that "reasonable" rates under the statute are "those that are calculated with reference to the four statutory criteria").

50. By contrast, the Register of Copyrights has determined that the "willing buyer/willing seller" standard is the single standard governing this proceeding. *See* Order of the Register, Docket No. 2000-9 CARP DTRA 1 & 2, at 5 (July 16, 2001) (Register's Order"). The

Register explained that neither of the enumerated factors "defines the standard for setting the rates"; rather, they are non-exclusive considerations that may, along with other evidence presented by the parties, go to the question of what a willing buyer and willing seller would negotiate.[12] *Id.*

51. In applying the Register's Order, the *Web I* CARP explained that "[t]he two factors enumerated in the statute do *not* constitute additional standards or policy considerations. Nor are the factors to be used *after* determining the willing buyer/willing seller rate as bases to adjust that determination upward or downward. The statutory factors are merely factors to be considered, along with any other relevant factors, in *determining* rates under the willing buyer/willing seller standard." *In re Rate Setting for Digital Performance Right in Sound Recordings and Ephemeral Recordings*, No. 2000-9 CARP DTRA, 21 (Feb. 20, 2002) ("CARP Report"). The Librarian of Congress affirmed these conclusions, explaining that the "willing buyer-willing seller" standard is "strictly fair market value." *Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings and Ephemeral Recordings*, 67 Fed. Reg. 45240, 45244 (July 8, 2002) ("*Web I*"). The Librarian explained that arms' length negotiations will typically reflect the parties' consideration of the enumerated factors without need for a separate or additional adjustment. With respect to the first factor, for example, the Librarian concluded:

> More importantly, though, the Panel correctly found that promotional value . . . does not constitute an additional standard or policy consideration to be used after rates are set to adjust a base rate upwards or downwards. Therefore, *the effect of*

[12] These conclusions were, at the record companies' urging, supported by reference to the Copyright Office's prior interpretation of the fair market value standard in the Section 119 statutory license. In that case, the Librarian determined that that the fair market value standard represented what a willing buyer and willing seller would negotiate, and the several listed categories of information for consideration in establishing a fair market rate were merely examples of the types of factors that should be considered in identifying the willing buyer/willing seller rate. *Id.* at 2.

> *any promotional value attributable to a radio retransmission would already be reflected in the rates for these transmissions reached through arms' length negotiations in the marketplace. . . .*

Id. at 45243-44 (July 8, 2002) (citations omitted) (emphasis added). Similarly, with respect to the second factor, the Librarian again concluded that no separate analysis was required, concluding,

> As for the second factor, the Panel found that both copyright owners and licensees made significant creative, technological and financial contributions. It concluded, however, that it was not necessary to gauge with specificity the value of these contributions in the case where actual agreements voluntarily negotiated in the marketplace existed, since such considerations, including any significant promotional value of the transmissions, would already have been factored into the agreed upon price.

Id. (emphasis added). According to the Librarian, the Panel was correct in finding that the rates and terms contained in proffered benchmarks already reflected the business judgments of licensors and licensees regarding the two factors enumerated in Sections 112(e)(4) and 114(f)(2)(B).

52. This recognition has carried through the ensuing Webcasting proceedings. In the *Web II* proceeding, the Judges concluded that, "[b]ecause we adopt a benchmark approach to determining the rates, we agree with Webcaster I that such considerations 'would have already been factored into the negotiated price' in the benchmark agreements." *Web II*, 72 Fed. Reg. at 24092, 24095 (quoting *Web I*, 67 Fed. Reg. at 45244).[13]

53. Similarly, in *Web III Remand*, the Judges observed that, "as a general principle, espoused in both *Web II* and *Web I*, and absent evidence to the contrary, these statutory considerations are deemed to have been addressed implicitly within the participant's proposed

[13] The Judges did note that it could be appropriate to adjust for any differences between the benchmark and target markets with respect to the enumerated factors, *e.g.*, if statutory services were more net promotional of record sales than interactive services. *Id.*

rate structure." *Web III Remand*, 79 Fed. Reg. at 23110 (citing *Web II*, 72 Fed. Reg. at 24095 and *Web I*, 67 Fed Reg. at 45244).

C. SoundExchange's Interactive Service Benchmarks Fail the Most Basic Requirement of Reflecting the Workings of an Effectively Competitive Market and Should Be Rejected on that Basis Alone

54. The interactive service agreements upon which SoundExchange's case is founded are not the product of an effectively competitive market. As numerous SoundExchange witnesses conceded, the licenses between record labels and on-demand services are the product of a market utterly devoid of *any* price competition between record companies to secure more airplay on on-demand services. Failing to meet this basic statutory criterion, those agreements are not reliable benchmarks for rate-setting here and should be rejected.

55. At the most basic level, the essence of on-demand services is that *users*, not the services, choose the artists, albums and tracks to which they want to listen, as well as when and how often they want to hear them. Because the decision as to which tracks are performed rests in the hands of users, and not the service, the nature of the on-demand product fundamentally limits the ability of an on-demand service to steer performances away from higher-priced labels and toward lower-cost providers. *See* Shapiro WRT p. 23; *see also Web III Remand*, 79 Fed. Reg. at 23115. The nature of their product also requires the on-demand services to provide access to the repertoires of nearly every label (and certainly every major and significant independent label), lest subscribers are unable to listen to the music of their choice. These constraints on on-demand services' flexibility in their music offerings distinguish them from internet radio services like Pandora that choose tracks on behalf of their users, and thus enjoy much more flexibility in steering towards or away from particular repertoires.

1. By Their Own Admission, the Majors Control "Must Have" Repertoires for Interactive Services and are Economic Complements Rather than Substitutes

56. The record is unequivocally clear as to the absence of meaningful buyer choice in the selection and degree of usage of the repertories of the Majors on the part of interactive services. *See, e.g.*, Shapiro WRT pp. 15-17, 22-25; PAN Ex. 2025 pp. 2, 18; PAN Ex. 5349 pp. 1, 17-18; NAB Ex. 4129 pp. 40-21, 44; PAN Ex. 5345 p. 2. This places the Majors in the driver's seat in licensing their sound recordings to such services. Rather than attempting to induce on-demand services to play more of their artists' works in place of those of their competitors in return for more favorable pricing, the Majors' conceded "must have" status for the interactive services and refusal to discount for increased play-share forecloses any such competition. In the parlance of economics, these market circumstances make the Majors' repertories *necessary complements* rather than *substitutes*.

57. This recognition is critical for assessing the weight to be given the interactive service benchmark, on which SoundExchange's case centrally depends. While SoundExchange appears to have hoped that the Judges would simply take the presence of competitive conditions in the market for licensing on-demand services "for granted" (to use the words of Professor Rubinfeld, *see* 5/5/15 Tr. 1922:9-14) – and resisted discovery going to the heart of the matter – that tactic proved unavailing. The fact record overwhelmingly demonstrates the non-competitive state of the market for licensing sound recording rights to interactive services, a conclusion which on its own disqualifies rates derived from that market from serving as benchmarks here.

58. A compelling portrait of the non-competitive state of the interactive services licensing market has been provided out of the mouths of SoundExchange's own principal advocates here. Documents whose production was compelled by the Judges (over staunch

resistance from SoundExchange)[14] reveal Universal Music Group's ("UMG") 2012 advocacy before U.S. and European regulatory authorities in support of UMG's proposed merger of its recorded music business with that of EMI. Professor Rubinfeld acted as economic advisor to UMG and EMI in relation to that transaction, and Mr. Pomerantz acted as UMG's counsel. 5/5/15 Tr. 1942:23-1943:1, 1950:21-1951:13 (Rubinfeld); PAN Ex. 5345 p. 1.

59. In its July 23, 2012 White Paper to the FTC in support of the merger, UMG stated:

[redacted].

PAN Ex. 5349 pp. 1-2.

60. In the same White Paper, UMG went on to state explicitly that "[redacted]." PAN Ex. 5349 p. 17.

61. Along similar lines, Mr. Pomerantz wrote the FTC:

[redacted]

PAN Ex. 5025 p. 18; *see also id.* at 2 ("[redacted].").

62. Professor Rubinfeld also made this same point to the FTC. In a May 10, 2012 presentation in support of the merger, he stated that "[redacted]

[14] Order Granting in Part and Denying in Part Services' Omnibus Motion to Compel SoundExchange to Produce Documents, Docket No. 14-CRB-0001-WR (2016-20), 2-3, 6 (Jan. 15, 2015).

[redacted]." NAB Ex. 4129 p. 41. He also stated of the Majors: "[redacted]." *Id.* at 42; *see also* 5/5/15 Tr. 1947:15-19 (Rubinfeld) ("[redacted]")

63. UMG, in Mr. Pomerantz's letter to the FTC, went a step further and explicitly stated that [redacted].

[redacted]

PAN Ex. 5025 p. 21.

64. In that same letter, Mr. Pomerantz went on to note that "[redacted]" PAN Ex. 5025 p. 18.

65. Professor Rubinfeld similarly agreed [redacted]. In his presentation to the FTC, he concluded that [redacted]." NAB Ex. 4129; *see also* 5/5/15 Tr. 1956:22-1958:17, 1946:24-1947:14

(Rubinfeld) (quoting PAN Ex. 5345 (June 22 letter)) [redacted] .").

66. [redacted]:

[redacted]

PAN Ex. 5349 p. 17 (emphasis in original). Mr. Pomerantz's June 22, 2012 letter echoed this sentiment in slightly different terms, noting that [redacted] PAN Ex. 5025 p. 16. "[redacted]." *Id.*

67. [redacted]. NAB Ex. 4129 p. 42 ("[redacted]."); 5/5/15 Tr. 1960:20-1961:22 (Rubinfeld).

68. The FTC was convinced by the foregoing advocacy, allowing the merger in part based on the finding that "[b]ecause each Major currently controls recorded music necessary for [interactive] streaming services, the music is more complementary than substitutable in this context, leading to limited direct competition between Universal and EMI." Shapiro WDT p. 12

(quoting Statement of Bureau of Competition Director Richard Feinstein, September 21, 2012, *available at* http://www.ftc.gov/sites/default/files/documents/ closingletters/proposed-acquisition-vivendi-s.a.emi-recordedmusic/120921emifeinstein statement.pdf).

69. Why would UMG voluntarily make arguments to the FTC [redacted]? Very simply, because the standard for evaluating a merger under the Clayton Act is whether it risks a *lessening* of competition. *See* 15 U.S.C. § 18. [redacted] *See* Shapiro WRT pp. 13-23 [redacted].

70. In short, the market for licensing interactive services features multiple "must have" suppliers that have all or nearly all of the bargaining power in their negotiations with interactive services. As Professor Shapiro put it, under such circumstances, this market not only fails to be competitive, but is *even worse than a market controlled by a single monopoly supplier*. Shapiro WRT p. 18. SoundExchange's *post hoc* efforts to re-characterize these prior admissions, and to portray the interactive-service licensing market as "sufficiently" competitive to meet the requirements of Section 114, ring hollow.

2. Admissions from the Major Record Company Representatives, Coupled with Contractual Undertakings, Underscore the Absence of Effective Competition in the Licensing of Sound Recording Performance Rights in the Interactive Services Market

71. In his rebuttal testimony and on the witness stand, Professor Rubinfeld gamely attempted to take the sting out of his FTC advocacy by speculating that there does, in fact, exist meaningful competition in the licensing of performance rights to on-demand services. However, he was completely unable to back up his assertion by pointing to any evidence of price (or other) competition between and among the majors to have on-demand services play more of their artists' works. 5/5/2015 Tr. 1940:24-1941:6 (Rubinfeld) ("Q. Perhaps I misphrased the question, but the question was designed to elicit whether you have any evidence you can cite to that major record labels compete with each other to secure increased plays on interactive services. A. Oh I'm sorry. I can't cite any direct evidence off the top of my head."). The record is demonstrably to the contrary.

72. The record company witnesses who sponsored the "thick" market of interactive service benchmark agreements – Dennis Kooker of Sony, Aaron Harrison of Universal, and Ron Wilcox of Warner – [redacted]

73. Dennis Kooker, the head of Sony's Global Digital Business, thus testified:

> Q. Well, do the -- when you're negotiating these prospective licensees, do they ever tell you we've got a proposal from another label that's better than yours? Does that ever happen?
>
> A. It always happens.
>
> Q. Okay. And have you ever -- have you ever lowered your rate in response to such a statement by a proposed licensee?
>
> A. **Absolutely not.**

Q. And you have also never lowered your proposed rate in order to get more plays from another service, correct?

A**. No.**

Q. So you've never cut the price that you're offering, either, to respond to a competitor label's price or to get more plays for Sony, correct?

A. **I have never cut -- we've never cut our price responding to a competitor's proposal or for more plays.**

4/28/15 Tr. 415:14 - 416:9 (Kooker) (emphasis added)

74. Aaron Harrison of UMG similarly testified:

Q. Okay. But you have never lowered any of the rates that you are proposing as a consequence to finding out some other major was offering a lower rate, correct?

A. I don't recall that happening.

…

Q. So you're at Page 218 of your deposition?

A. Yes.

Q. And did I ask, at that time, and did you answer, question: "Are there any actions you can think of that Universal takes to compete with Sony and Warner or Warner with respect to services?" Answer: "No."

A. Yes.

. . .

Q. Now, you have had services – without getting into any specifics -- come in and say, you know, if you cut your rates I'll play more of your music, right? Services have made that pitch to you?

A. I think it's mainly been in the inverse, meaning that if the rates are too high we won't play your content as much or won't merchandise the content as much.

Q. Okay.

A. But it's a reasonable inference from that.

Q. Okay. But that doesn't sway your decision as to what you're going to offer, correct, that argument?

A. Correct.

4/30/15 Tr. 1097:3-1099:14 (Harrison)

75. Ron Wilcox of Warner, the third of the three Majors, [redacted]

5/7/15 Tr. 2485:5-2486:1 (Wilcox) (emphasis added)

76. To the extent the on-demand services might be in position to make or influence the listening choices of their subscribers at the margin – and thus to "steer" their users towards less expensive tracks – the above evidence makes clear that the services make no attempt to engage in such steering (based on price or otherwise), and that even if they did, steering (or threats to steer) plays no role whatsoever in negotiations between the services and record companies or prices set in those negotiations.

77. What is more, the Majors [redacted]

[redacted]

78. Messrs. Kooker, Harrison, and Wilcox, testifying on behalf of the three Majors, [redacted]. *See* 4/28/15 Tr. 441:25-442:5 (Kooker); 4/30/15 Tr. 1142:14-20 (Harrison); 5/7/15 Tr. 2473:3-25 (Wilcox); *see also* Section IV.A.3, *infra* ([redacted]).

79. Professor Rubinfeld speculated that one might observe steering towards or away from the repertories of individual majors when it comes to the playlists or promotional spins of sound recordings by on-demand services. Rubinfeld CWRT ¶ 155; 5/5/15 Tr. 1940:5-1941:6 (Rubinfeld); 5/28/15 Tr. 6350:13-24 (Rubinfeld). He was unable, however, to identify any supporting evidence, and for good reason: all record evidence is to the contrary. *See* 5/5/15 Tr. 1940:5-1941:6 (Rubinfeld). Each major record company's agreements with the leading on-demand services contain [redacted].

[15] The specific [redacted] and the testimony surrounding them are discussed in more detail in Section IV.A.3 below.

80. Regardless of their precise form, their essence is clear: the on-demand services

[redacted]

This very dynamic created by anti-steering provisions was recognized in a recent federal court decision evaluating American Express' use of very similar anti-steering provisions – provisions that, like here, prevent aggregators (here interactive services, there merchants) from steering their customers towards or away from the use of one supplier's product (here the repertoire of a major, there a particular credit card) in response to differences in price. *See United States v. American Express*, 2015 WL 728563, at **1-3 (E.D.N.Y. Feb. 19, 2015) ("*American Express*"); 5/8/2015 Tr. 2689:12-2690:7 (Shapiro) (noting the similarity between the anti-steering provisions at issue here and those at issue in *American Express*). Recognizing the impact that such anti-steering provisions have in thwarting competition, the American Express Court concluded that "[p]rice competition is a critical avenue of horizontal interbrand competition, and yet it is frustrated to the point of near irrelevance … as a result of American Express's [anti-steering provisions]." *American Express*, at *51 (E.D.N.Y. Feb. 19, 2015); *see also* 5/8/2015 Tr. 2689:12-2690:7 (Shapiro).[16]

[16] *See also American Express* at *3 ("By preventing merchants from steering additional charge volume to

81. [redacted]. *See* 4/28/15 Tr. 455:5-456:15 (Kooker); 4/30/15 Tr. 1144:11-1145:4 (Harrison); 62/15 Tr. 7202:24-7205:3 (Harrison); 5/7/15 Tr. 2487:15-2488:10, 2490:3-2493:16 (Wilcox); *see also* Section IV.A.3, *infra* (providing examples from market agreements). Indeed, Mr. Harrison went so far as to devote an entire section of his rebuttal testimony to Universal's refusal to allow on-demand services to steer away from Universal content. *See* Harrison WRT ¶¶ 14-17.

3. SoundExchange's Interest in Replicating the Non-Competitive Licensing Conditions of the Interactive Services Market in the Statutory Webcast Market Ignores the Competitive Market Standard Governing this Proceeding

82. Left with no escape from the demonstrably non-competitive state of the interactive service licensing market, SoundExchange has sought to salvage use of that benchmark by the remarkable argument that, insofar as competitive conditions in the non-interactive service market assertedly would, in the absence of statutory licensing, *be just as non-competitive*, the interactive service benchmark makes for a suitable fit. This cynical approach to rate-setting deserves summary rejection.

83. In what amounts to a blatant effort to extend the record companies' monopoly power from the interactive service market into the statutory webcasting market, SoundExchange

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their least expensive network, for example, the [anti-steering provisions] short-circuit the ordinary price-setting mechanism … by removing the competitive 'reward' for networks offering merchants a lower price for acceptance services. The result is an absence of price competition among American Express and its rival networks."); *id.* at *65 ("The [anti-steering provisions] interrupt the ordinary price-setting mechanism … by taking away a network's reward for competing on the basis of price, and thereby removing any network's incentive to do so. In rendering merchants less responsive to changes in price, the [anti-steering provisions] ensure that no competitor will attempt to differentiate itself by being the lowest cost supplier, and consequently result in higher prices for merchants and their customers.").

and its fact and expert witnesses engage in a perverse effort to convince the Judges simply to take the non-interactive service market as one (allegedly) would find it: that is to say, a market that (in their portrayal) would be as locked down from competition between record companies as is the market for licensing on-demand services. 5/18/15 Tr. 4475:16-4476:7 (Shapiro). The arguments marshalled in favor of this effort include: the assertion that the major record labels are "must-haves" for non-interactive music services to the same degree as for interactive services, *see* Rubinfeld CWRT pp. 34-35; the castigation of price competition by way of steering as "playment" that allegedly is not contemplated by the statute, *see* Rubinfeld CWRT ¶ 70; 5/5/15 Tr. 1941:8-1942:15 (Rubinfeld); as "a race to the bottom" that should be staunchly resisted by the record industry, *see* Van Arman WDT p. 14; and the prediction that any efforts by a service like Pandora to engage in steering would be met [redacted] by demands from the record companies for "anti-steering" and MFN provisions that would douse any emerging flame of price competition. *See* Section II.C.2, *supra*.

84. This line of argumentation bespeaks SoundExchange's (and the record industry's) true motivation. While paying lip service to the principle that the rates to be set here must be those that would result from a competitive market, the record industry in actuality desires nothing more than to expand to this statutory market the quiet conditions of monopoly that have insulated record companies from meaningful competition in the on-demand market. *See* Shapiro WRT p. 47 (explaining that Professor Rubinfeld is requesting the Judges "to replicate and extend the excessive royalty rates from interactive services market – where competition is manifestly not working – into the market for the licensing . . . to statutory webcasters," and that makes a "mockery" of the rate-setting standard here); 5/18/15 Tr. 4475:16-4476:7 (Shapiro) (same). This

objective is wholly at odds with the Judges' mandate of determining rates consistent with the presence of such competition, not its absence, and should be rejected outright.

* * *

85. In sum, the record evidence in this proceeding is replete with uncontroverted evidence that the interactive services market from which SoundExchange draws its benchmarks is so thoroughly infected with the market power of the major record labels – fully realized on account of the demand characteristics of on-demand services – that the rates spawned in that market are higher even than those that would arise in a market *monopolized* by a single record company.[17] Shapiro WRT p. 18; 5/8/15 Tr. 2632:25-2622:13 (Shapiro). The interactive-services benchmarks tell us nothing about the rates that would be negotiated in a *competitive* market, and should be rejected out of hand for this reason alone.

86. Section IV below addresses SoundExchange's interactive-services benchmark in more detail, focusing on Professor Rubinfeld's flawed efforts to rely on agreements from this market as his primary benchmark, and identifying yet additional reasons why SoundExchange's rate proposal based on Professor Rubinfeld's efforts must be rejected.

D. The Services' Benchmarks Demonstrate the Workings of Effective Competition and Thus Satisfy the Basic Statutory Command

87. In stark contrast to the interactive-services benchmarks offered by SoundExchange and Professor Rubinfeld – where the record companies offer complementary products without any effort to compete against one another based on price – are the non-interactive benchmarks offered by Pandora and iHeartMedia.

[17] The situation is thus starkly different than confronted the Judges in *Web III Remand*, where they Judges noted that "[t]he parties presented no evidence from which the Judges could conclude that the repertoires of the respective record companies were complements or substitutes, or, perhaps, complementary to some degree and substitutional to some degree." 79 Fed. Reg. at 23114. That evidentiary gap has been filled here.

88. As we detail in Section III below, Pandora's primary benchmark – the Merlin Agreement – presents the Judges, for the first time in a webcasting proceeding, with a competitive, arm's length direct license between a statutory licensee and a significant number of record companies. The Merlin Agreement involves the same "willing seller" (the Merlin labels, 15,000-plus record companies that own sound recording copyrights) and the same "willing buyer" (Pandora, a non-interactive service) that exist in the hypothetical statutory market. Shapiro WDT p. 24; 5/28/15 Tr. 6323:14-6324:17 (Rubinfeld). And it concerns the same rights that are covered by the statutory license for the exact service at issue in this proceeding: public performances of sound recordings on non-interactive Internet radio and ephemeral copies made in aid of such performances. PAN Exs. 5014-5015; Shapiro WDT pp. 24-25; 5/28/15 Tr. 6325:19-6326:7 (Rubinfeld). The repertoires of the labels represented by Merlin – the "[redacted]," *see* PAN Ex. 5349 – include recordings by some of the most popular and prominent artists played by Pandora, including winners of Grammys and other major record-industry awards. *See* Shapiro WDT p. 26; Herring WDT ¶ 35; Section III(A)(3), *infra*.

89. Most important for purposes here, the rates agreed to by Pandora and Merlin reflect the emergence of *competition* in the relevant, non-interactive webcasting market. Because Pandora has demonstrated its ability "to significantly influence the mix of music they play" – and thus to "steer" listeners towards or away from the music from any one record company" – it was able to offer Merlin's affiliated labels the prospect of increased performances on Pandora in exchange for a discounted royalty rate. *See* Shapiro WDT pp. 15-16; *see also* 5/19/15 Tr. 4557:10-25 (Shapiro).

90. The directly-licensing Merlin labels (the "Merlin Labels") could have chosen to be paid at the prevailing Pureplay rates, but instead freely agreed to enter a separate license with

Pandora at a discounted rate in exchange for greater performances and the possibility of increased overall earnings. As Professor Shapiro testified, this is textbook competition at work: "This reduced per-play rate in exchange for increased plays is the central piece of the Merlin Agreement. This feature plainly demonstrates that the Merlin Agreement is embracing the workings of a competitive market." Shapiro WDT p. 27. Professor Shapiro continued:

> [T]he ability or inability of a webcaster to steer listeners toward or away from the music of a given record company is fundamental to the licensing negotiations that would take place in the absence of a compulsory license. A record company facing a webcaster with considerable ability to steer customers away from its music has a strong incentive to discount its royalty rate to increase the number of performances of its music made by that webcaster.

Shapiro WDT pp. 9-10; *see also* Shapiro WRT p. 19; 5/19/15 Tr. at 4574:22-4575:7 (Shapiro) ([redacted])

91. From the willing seller's perspective, witnesses from the Merlin Labels explained that it was in their "self-interest" and a "good competitive move" to opt-in to the Merlin Agreement and thereby achieve increased plays for their catalogs through steering. *See* 4/28/15 Tr. 610:13-611:11; 645:10-646:19 (Van Arman); Lexton WRT ¶ 4; 6/1/15 Tr. 7114:15-24 (Wheeler). Mr. Van Arman, for example, explained:

> THE WITNESS: . . . By us being part of an agreement with a play share incentive as a first mover, it makes it harder for bigger companies that normally are first movers to enter into play share incentive deals with that same digital service.
>
> JUDGE STRICKLER: So it was a good competitive move on your part?
>
> THE WITNESS: It was in our self-interest, yes.
>
> 4/28/15 Tr. 610:24-611:8 (Van Arman)

92. Mr. Barros of Concord likewise testified as follows:

[redacted]

5/28/15 Tr. 6535:25-6536:4, 6537:3-8 (Barros)

93. The 28 benchmark agreements offered by iHeartMedia – one with Warner and 27 with various independent labels – likewise reflect the emergence of competition in the non-interactive webcasting market. Shapiro WRT pp. 37-39. As Professor Shapiro explains, the iHeartMedia agreements "[redacted]." *Id.* at 38. For example, under its agreement with Warner, [redacted]. *See* Fischel/Lichtman AWDT ¶ 35.

94. While Pandora will leave detailed discussion of iHeartMedia's agreements to that litigant, the bottom line is evident: whereas SoundExchange's interactive-service benchmark fails the most basic test of competition, the Pandora-Merlin benchmark and the agreements offered by iHeartMedia pass that same test with flying colors.

95. Section III below details Professor Shapiro's derivation of proposed rates and terms for the statutory license from the Merlin Agreement, as well as discussion of the Pandora-Naxos agreement, which Pandora signed in January of 2015.

III. PANDORA'S DIRECT LICENSE WITH MERLIN: AN OPTIMAL BENCHMARK REFLECTING THE WORKINGS OF EFFECTIVE COMPETITION

A. The Merlin Agreement Addresses the Same Rights At Issue Here, Involves the Same Buyers and Sellers, and Was Negotiated Under Effectively Competitive Conditions

96. As explained in Section II, *supra*, for a royalty rate to be reasonable under the governing rate-setting standard, it must be one that would be negotiated between willing buyers and willing sellers in a workably competitive market, as affirmed by prior decisions of the Copyright Royalty Judges, including most recently in *Web III Remand.* *See* 79 Fed. Reg. at 23114 n.37 (Apr. 25, 2014) (quoting *Web I*, 67 Fed. Reg. at 45244-45); Shapiro WDT p. 3; 5/19/15 Tr. 4551-4553 (Shapiro) (elaborating on the "willing buyer/willing seller" framework and requirement of "workable" or "effective" competition in the relevant market).

97. Pandora's primary benchmark – the Merlin Agreement – presents the Judges, for the first time in a webcasting proceeding, with a competitive, arm's-length direct license between Pandora and thousands of record companies. The Merlin Agreement is an optimal benchmark in this proceeding, as it concerns the same rights as are covered by the statutory license for the exact service at issue in this proceeding: public performances of sound recordings on non-interactive Internet radio and ephemeral copies made in aid of such performances. PAN Exs. 5014-5015; Shapiro WDT pp. 24-25.

98. The Merlin Agreement involves the same "willing seller" (record companies that own sound recording copyrights) and the same "willing buyer" (Pandora, a non-interactive

service) that exist in the hypothetical statutory market. Shapiro WDT p. 24; *see also* 5/28/15 Tr. 6323:3-6324:23 (Rubinfeld) (agreeing that the Merlin Agreement satisfied each such criterion).

99. The Merlin Labels could have chosen to have their rates set at the prevailing Pureplay rates, but instead freely chose to sign a separate license with Pandora at a discounted rate in exchange for more performances and the possibility of increased revenues. *See, e.g.*, 5/28/15 Tr. 6535:25-6536:8 (Barros) [redacted]; *see also* 6/1/15 Tr. 6962:9-14, 6968:17-6969:16 (Lexton) (same); *id.* at 7114:15-24 (Wheeler) (same); 6/2/15 Tr. 7154:3-8 (Van Arman) (same). This is competition at work: Merlin's member labels discounting their rates to induce Pandora to "steer" plays in their direction and away from other labels. Shapiro WDT p. 27.

100. As Professor Shapiro has opined, the attributes of the Merlin Agreement commend it as an "almost perfect" benchmark for rate setting: "[F]irst, it's Pandora, the largest statutory webcaster is the buyer . . . . The seller is a record company . . . actually thousands of labels, but they have Merlin as their joint negotiating agent. . . . The product is the correct product, the repertoires of the record companies. And we see the workings of competition that are central to this agreement in terms of the steering and the discounting." 5/19/15 Tr. 4583:10-4584:2 (Shapiro).

101. Moreover, the Merlin Agreement was negotiated under workably competitive conditions in which neither party had undue market power. Shapiro WDT p. 24. As Professor Shapiro explained: "[a] market is workably competitive if two conditions hold: (1) there are multiple suppliers who are capable of offering buyers meaningful alternatives, so that no single supplier has substantial unilateral market power; and (2) these suppliers do not engage in

coordinated interaction. When both of these conditions are met, competition among the sellers in the market generates substantial benefits for buyers in the market." Shapiro WDT p. 10; *see also id.* at 11-13.

102. As detailed below, because webcasters such as Pandora are now "able to significantly influence the mix of music they play" – including through technological changes and algorithmic designs that offer "considerable flexibility to steer [] listeners toward or away from the music from any one record company" – workable competition has begun to emerge in the relevant, non-interactive webcasting market. *See* Shapiro WDT pp. 15-16; *see also* 5/19/15 Tr. 4557:10-25 (Shapiro). No such evidence existed at the time of the *Web II* or *Web III* proceedings. Shapiro WDT p. 16.

1. The Merlin Agreement

103. Merlin is a global rights agency that represents and collectively negotiates on behalf of thousands of independent record labels in 39 countries. Van Arman WDT p. 10; 6/1/15 Tr. 6865:17-20 (Lexton); *see also* 5/18/15 Tr. 4204:12-24 (Herring). These independent record labels negotiate with digital services collectively through Merlin in order to obtain more favorable terms than they otherwise could achieve on an individual basis. Van Arman WDT p. 10; 4/28/15 Tr. 626:19-627:5 (Van Arman); 6/1/15 Tr. 6856:9-6857:7 (Lexton) ("Q. Do you think that Merlin had more bargaining power by concentrating the independent labels together? A. Yes, that's the concept, Merlin, by offering a collective license . . . created transactional savings for digital services . . . to deliver the members a better deal than they would be able to obtain on their own.").

104. In light of its sophistication and the breadth of its bargaining power, Merlin has been referred to as the "[redacted]." PAN Ex. 5349 at 9 ("Universal White Paper" submitted to the FTC in July of 2012); 5/5/15 Tr. 1969:19-23, 1975:8-1977:4 (Rubinfeld).

105. On June 16, 2014, Pandora and Merlin entered into the Merlin Agreement, which establishes the terms and conditions under which Merlin grants Pandora the right to perform and create necessary ephemeral copies of all of the recordings in the catalogs of the Merlin Labels that opt into the Agreement. PAN Ex. 5014;[18] Shapiro WDT pp. 23, 26; Herring WDT ¶ 24.

106. The concept of steering – by which Pandora would alter the mix of songs performed to rely more heavily on sound recordings of participating Merlin Labels – was "central to the negotiations" of the deal, and a core feature of the final agreement. Indeed, Merlin's principal negotiator, Mr. Lexton, testified that the concept of Pandora steering towards the Merlin Labels, and Merlin agreeing to a discounted rate in return, "[redacted]." 6/1/15 Tr. 6966:25-6967:7 (Lexton); PAN Ex. 5116.

107. As Pandora CFO Michael Herring explained:

> Once we moved into a discussion off of a single unitary rate, our ability to steer was the way Pandora accomplished its economic objectives under the deal. It also was the mechanism with which Merlin accomplished its objectives under the deal.

5/18/15 Tr. 4215:2-10 (Herring); *see also id.* at 4210:9-4210:13 (Herring) ("We started in one place that worked for us economically. We got there eventually through a lot of give and take, but also by adding things that made it a win-win on both sides of the table.").

108. The key terms of the Merlin Agreement include the following (as described by Mr. Herring and Professor Shapiro in their written direct testimony):

109. Term: The Merlin agreement provides for an initial [redacted]. *See* PAN Ex. 5014 at ¶ 1(r); Herring WDT ¶ 25.

[18] On July 11, 2014 Merlin and Pandora entered into the First Amendment to the Merlin Agreement, which called for Pandora to pay certain administrative fees to Merlin. *See* PAN Ex. 5015.

110. Rate Structure and Royalty Payments: The Merlin Agreement provides for a structure for royalty payments consisting of the greater of a per-play prong and a percent-of-revenue prong. The percent-of-revenue prong specifies [redacted] of Pandora's Revenue, prorated based on the share of Performances on Pandora accounted for by the Merlin Labels. [redacted].[19] *See* PAN Ex. 5014 at ¶ 3(a); Herring WDT ¶ 26; Shapiro WDT p. 26. [redacted]. *See* PAN Ex. 5014 at ¶ 3(d); Herring WDT ¶ 26.

111. Potential Revenue Share: [redacted]. *See* PAN Ex. 5014 at ¶ 3(e); Herring WDT ¶ 26; Shapiro WDT p. 28-29. This provision has not been triggered, *see* 6/1/15 Tr. 6897:3-12 (Lexton), and Merlin's negotiators [redacted]. *See id.* at 6956:10-6957:22; PAN Ex. 5110.

112. Steering: As discussed in greater detail in Section III.A.2, *infra*, the Merlin Agreement provides for a [redacted]

[19] In November of 2013, Pandora had initially proposed a [redacted] Herring WDT ¶ 24; 5/18/15 Tr. 4204:3-16 (Herring). Pandora ultimately accepted Merlin's request for a [redacted]. Herring WDT ¶ 24.

[redacted].[20] *See* 5/18/15 Tr. 4227:3-9 (Herring). [redacted]

[redacted]. *See* PAN Ex. 5014 at ¶ 4; Herring WDT ¶ 27; Herring AWRT ¶ 48; Shapiro WDT p. 27.

113. Compensable Performances: [redacted]

[redacted]. *See* 5/18/15 Tr. 4227:10-13 (Herring). [redacted]

[redacted]. *See* 5/18/15 Tr. 4227:13-18 (Herring). [redacted]

[redacted]. *See* 5/18/15 Tr. 4228:5-8 (Herring). [redacted]

[redacted]. *See* PAN Ex. 5014 at ¶ 3(d); Herring WDT ¶ 26; Shapiro WDT p. 28.

114. Guarantees: [redacted]

[redacted]. *See* PAN Ex. 5014 at ¶ 5; Herring WDT ¶ 29. [redacted]

[20] Specifically, Pandora can increase performances of Merlin-label tracks by as much as [redacted] without any additional payments, which results in a decrease in the effective per-performance payment. The record shows that Pandora has indeed increased spins of Merlin-label tracks well above the required [redacted]. *See* Herring AWRT ¶ 50; 5/18/15 Tr. 4229:15-4230:2 (Herring).

[redacted]. Herring WDT ¶ 29; Shapiro WDT pp. 28-29.

115. Ancillary Promotional Benefits: In addition to the above price-related terms, the Merlin Agreement provides for certain additional non-pecuniary promotional benefits, including [redacted] (PAN Ex. 5014 at ¶ 6); [redacted] (*id*. at ¶ 7); [redacted] (*id.* at ¶ 8); [redacted] (*id.* at ¶ 9); [redacted] (*id.* at ¶ 10); and [redacted] (*id.* at ¶ 11); *see also* Herring WDT ¶ 30; Shapiro WDT p. 29.[21]

2. The Concept of Steering – Which Lies At The Heart of the Merlin Agreement – Injects Competition into the Licensing of Sound Recording Performance Rights

116. In the hypothetical market with no statutory license, the streaming service that has shown a considerable ability to "steer" towards certain recordings, and away from others, will have "much more bargaining power and be able to negotiate a lower royalty rate." Shapiro WRT p. 19. In such a market, record companies will know that offering prices below those of their competitors will enhance the prospects for more plays, while failing to do so may significantly reduce their share of the music played by this service. As Professor Shapiro noted, "[t]he threat by the service to divert performances from one record company to another gives the service negotiating leverage." *Id. Accord* Shapiro WDT pp. 9-10; *see also American Express*, at *52 ("Steering is a lynchpin to inter-network competition on the basis of price. Without the ability to induce merchants to shift share in response to pricing differentials, a credit card network like

[21] Professor Shapiro's analysis of the value of these non-pecuniary provisions is set forth at Section III.C, *infra.*

Discover cannot increase sales or gain market share by offering merchants a more attractive price than its competitors.").

117. The Merlin Agreement's steering provisions, PAN Ex. 5014 at ¶ 4, reflect the forces of "competition at work": a supplier offering a lower price in an attempt to gain volume. Shapiro WDT p. 27 ("This reduced per-play rate in exchange for increased plays is the central piece of the Merlin Agreement. This feature plainly demonstrates that the Merlin Agreement is embracing the workings of a competitive market."); Shapiro WRT p. 19; *see also* 5/19/15 Tr. 4574:12-4575:7 (Shapiro) ("[I]t's fortunate that we have several examples of competition at work in negotiations between webcasters and record companies. Pandora and Merlin is one of them . . . by which I mean webcasters negotiating discounts in exchange for steering. We would embrace that if we saw Macy's getting a discount from Rockport to sell more of their shoes. And we should here, too."); *American Express*, at * 1 (noting that "as a general matter" steering is "pro-competitive.").

118. Pandora's CFO, Mr. Herring, has shown precisely how the Merlin Agreement – and Pandora's subsequent direct license with Naxos (discussed at Section III.G, *infra*) – "reflect[s] the workings of competition." Specifically, because the Merlin Agreement "provides for a lower effective per-play rate as [Pandora] 'steer[s]' . . . toward directly-licensed repertory," Pandora has the "competitive incentive to play directly-licensed tracks more heavily than [it] would otherwise." Herring AWRT ¶ 48. Likewise, because the Naxos Agreement has a set rate below the otherwise applicable statutory rate, it, too, provides an incentive for Pandora to steer towards Naxos's repertoire. *See* 5/19/15 Tr. 4705:21-4706:9 (Shapiro); *see also* PAN Ex. 5018.

119. From the willing seller's perspective, witnesses from the Merlin Labels explained that it was in their "self-interest," a "good competitive move," and a "first-mover advantage," to

opt into the Merlin Agreement and thereby achieve increased plays for their catalogs through steering. *See* 4/28/15 Tr. 610:16-611:8; 645:10-646:16 (Van Arman); 6/1/15 Tr. 7114:15-24 (Wheeler); 6/1/15 Tr. 6964:2-5 (Lexton) ("[redacted]; PAN Ex. 5099 [redacted]") (emphasis in original).

120. Pandora recognized these to be key motivations for Merlin and its member labels. 5/18/15 Tr. 4218:7-4219:14 (Herring); *see also* 5/19/15 Tr. 4577:6-4578:22 (Shapiro) (Merlin was "embracing steering"); *id.* at 4615:23-4616:25 (Shapiro) ("[redacted]").

121. The evidence has further shown that Pandora has effectively overspun the tracks of Merlin Labels under the Merlin Agreement without receiving negative feedback from its listeners or sustaining any negative financial impact. *See* 5/18/15 Tr. 4229:10-4230:2, 4231:4-9, 4232:7-4233:24 (Herring) (explaining that Pandora [redacted]"); *see also* Shapiro WDT p.33 ("During the past six months, Pandora has demonstrated its ability to steer . . . through the Merlin Agreement itself.").

122. Some Merlin Labels, including the largest among them (for example, [redacted]), are now being overspun [redacted]. 5/18/15 Tr. 4291:13-4293:5 (Herring). While the level of [redacted]

[redacted]. *See* 5/18/15 Tr. 4229:15-4230:2, 4291:13-4293:6 (Herring) ([redacted]).

3. Merlin Includes Numerous Prominent Independent Labels, Which Produce Commercially and Critically Successful Music

123. The Merlin Agreement covers recordings by some of the most popular and prominent artists played by Pandora, including winners of Grammys and other major record-industry awards.[22] *See* Shapiro WDT p.26; Herring WDT ¶ 35 (sampling some of the awards won by artists for recordings covered by the Merlin Agreement); Herring AWRT ¶ 49 (detailing the six 2014 Grammy Awards won by artists associated with the Merlin Labels); Van Arman WDT pp. 3-4; 4/28/15 Tr. 592:4-593:2; 628:14-629:18; 630:21-632:1; 655:9-656:1 (Van Arman); SX Ex. 469 at 2 (Van Arman 6/24/14 Congressional Testimony).

124. SoundExchange witness Simon Wheeler, for example, testified that his company, "Beggars Group," is "one of the leading record companies in the world," consisting of "amazing and diverse" artists who have "incredible and undeniable" critical and commercial impact on the music landscape). Wheeler WDT ¶¶ 4-6. Beggars Group – which owns and distributes several labels, including XL Recordings, Matador, and 4AD – opted into the Merlin Agreement along with [redacted], covering [redacted]. *See* 5/18/15 Tr. 4221:1-16, 4235:8-15 (Herring); *see also* 6/1/15 Tr. 6870:9-23 (Lexton) (admitting in response

[22] As detailed below, numerous SoundExchange witnesses testified that the commercial value of the Merlin Labels' music is every bit the equal of recordings licensed by the Majors. *See* § III.D.1, *infra.*

to questions from Judges Feder and Strickler that [redacted]).

125. Beggars Group's catalogs include some of the most talented recording artists in the world, including "groundbreaking" and "iconic" artists who have won multiple Grammy awards and multiple Mercury Prizes, and who regularly top the charts in the United States. *See* 5/1/15 Tr. 1246:18-1247:9; 1248:2-1249:23; 1258:18-1262:5 (Wheeler). Among others, the Beggars Group covers:

- Vampire Weekend: This band's third studio album, *Modern Vampires of the City*, won the Grammy for Best Alternative Music Album in 2014. Vampire Weekend's albums *Contra* and *Vampire Weekend* are both certified gold by the RIAA, as is their single, "A-Punk."

- Interpol: This band's albums *Turn on the Bright Lights* and *Antics* have both been certified gold by the RIAA. They have released three albums with Matador that each peaked at #2 on the Billboard Alternative Albums and Top Rock Albums charts.

- The National: This band released two albums with 4AD – *Trouble Will Find Me* and *High Violet* – that each peaked at #3 on the Billboard 200 chart. *Trouble Will Find Me* also was nominated for a Grammy Award in the Best Alternative Music Album category in 2014.

Herring WDT ¶ 35.

126. Other examples of prominent Merlin labels that opted in to the Merlin Agreement include:

- **Merge**: This label's catalog includes the album *The Suburbs* by the acclaimed band Arcade Fire. *The Suburbs* won the Grammy for Album of the Year at the 53rd Annual Grammy Awards in 2011. Arcade Fire's debut album *Funeral* was nominated for the Grammy for Best Alternative Music Album in 2005. Both *Funeral* and *The Suburbs* are certified platinum by the RIAA.

- **Epitaph**: This label released The Offspring's hit album *Smash* in 1994. Fueled by hit singles "Come Out and Play," "Self Esteem," and "Gotta Get Away," the album set an all-time record for most units sold by an independent label band, at 16 million records. *Smash* has continued to sell consistently well in the twenty years since its release, and has been certified six-times platinum in the U.S.

Epitaph's catalog also includes Bad Religion, whose albums *Christmas Songs* and *New Maps of Hell* both reached #7 on the Hard Rock Albums chart.

- **ANTI-**: This sister label to Epitaph released the acclaimed album *The Whole Love* by Wilco, which peaked at #5 on the Billboard 200 chart in 2012 and was nominated for a Grammy Award in the Best Rock Album category. ANTI- also released Tom Waits's album *Mule Variations*, which won the Grammy Award for Best Contemporary Folk Album in 2000 and was certified gold by RIAA. Waits's albums *Real Gone* and *Bad as Me* each topped Billboard's Top Independent Albums chart. Alternative country artist Neko Case released her fifth studio album *Middle Cyclone* with ANTI-, which peaked at #3 on the Billboard 200 chart and topped the Independent Albums Chart in 2009; Case's 2013 ANTI- album *The Worse Things Get, The Harder I Fight, The Harder I Fight, The More I Love You* also topped the Billboard Independent Albums chart and hit #5 on the Top Rock Albums chart.

- **Razor & Tie**: One of the largest privately-owned independent labels in North America, Razor & Tie has sold over 40 million units and has won multiple Grammy Awards in its more than 20 years in the recording business. Razor & Tie's diverse catalog represents rock artists such as All That Remains and For Today, as well as world music such as artist Angelique Kidjo, whose album *Djin Djin* won the 2007 Grammy for Best Contemporary World Music Album, and Ladysmith Black Mambazo, who were nominated for a Grammy Award in the Best World Music Album category in 2012. Razor & Tie is also a leader in children's music: their Kidz Bop series has amassed more than twenty #1 albums on the Billboard Kids' Album chart, fourteen Top 10 hits on the Billboard 200 chart, and nine gold records.

- **Jagjaguwar**: Co-founded by Darius van Arman, a member of SoundExchange's board of directors, this label's catalog covers indie rock band Bon Iver, which won the 2012 Grammy Award for Best New Artist and whose album *Bon Iver, Bon Iver* won the 2012 Grammy Award for Best Alternative Music Album.

- **ATO**: This label's catalog includes the rock band Alabama Shakes, which was nominated for a Grammy Award in 2012 for Best New Artist and for a BRIT Award for Emerging Artist of the Year. Alabama Shakes' debut album *Boys & Girls* peaked at #6 on the Billboard 200 chart, topped the Independent Albums chart, and is certified gold by the RIAA. ATO has also four albums by rock band My Morning Jacket, including the 2011 album *Circuital* and 2009 album *Evil Urges*, both of which were nominated for Grammy Awards in the Best Alternative Music Album category. Soul singer Allen Stone's self-titled album was re-released by ATO in 2012, and peaked at #4 of Billboard's Top Heatseekers chart.

See Herring WDT ¶ 35.

B. The Reasonable Royalty Rates Implied By The Merlin Agreement Benchmark

127. Pandora proposes as reasonable rates for the 2016-2020 period those derived from the Merlin Agreement. Professor Shapiro has testified as to why that benchmark – and its central steering component – is an optimal one for rate-setting, and has provided the rationale underlying his straightforward rate calculations therefrom. *See* Shapiro WDT pp. 20-21, 23-37, Appendix D ("Analysis of Merlin Agreement"). Those include some simple adjustments to account for certain aspects of the Merlin Agreement that differ from the statutory license at issue in this proceeding.

128. The two principal aspects of the Merlin Agreement requiring adjustment are: (i) the steering provision, and (ii) differences in the determination of which performances are compensable as compared to the statutory license. Shapiro WDT p. 30. As to the latter, [redacted]. *Id.* As Professor Shapiro noted, it is "relatively simple to account for these aspects of the Merlin Agreement through a single straightforward adjustment." *Id.*; *see also* 5/19/15 Tr. 4588:13-4590:4 (Shapiro) ([redacted]).

129. Specifically, Professor Shapiro calculated the total payment Pandora expects to make to the Merlin Labels and then divided that payment by the number of performances of Merlin Label recordings that would be compensable under the statutory license (as currently defined). Shapiro WDT pp. 30-31; *see also* Appendix D. Such a calculation yields the per-play rate that the Merlin Agreement would call for if Pandora and Merlin had negotiated an

agreement with a fixed per-play rate that treated [redacted]. *Id.*

130. In both his written and oral testimony, Professor Shapiro offered the following illustrative example of the arithmetic that is involved in making these two adjustments using round numbers, as depicted below for ease of reference:

[redacted]

See Shapiro WDT pp. 30-31; 5/19/15 Tr. 4589:14-4592:16 (Shapiro); *see also id.* at 4594:19-25 (noting that the above $0.00111 rate was "an illustrative example," and "not a rate proposal").[23]

131. Professor Shapiro's calculations also accounted for the additional financial terms of the Merlin Agreement, [redacted]

[23] Professor Rubinfeld purported to criticize [redacted] *See* 5/28/15 Tr. 6372:5-6373:16 (Rubinfeld). Even after this error was pointed out to Professor Rubinfeld at his deposition, and despite his admission that "[redacted] *See id.*

[redacted].

See 5/19/15 Tr. 4592:19-4593:20; *see also* Shapiro WDT Appendix D at D-1-D-9.

132. Professor Shapiro also accounted for all of the non-pecuniary terms of the Merlin Agreement. While those terms were, collectively, "of little economic consequence," and had "only a minor impact on the overall economics of the Merlin Agreement," Professor Shapiro evaluated each of them and made additional adjustments to account for them where appropriate. *See* Shapiro WDT pp. 29-31; *see also* Appendix D. Those adjustments amounted to an increase to the per-play statutory rate implied by the Merlin Agreement of 0.0002¢ per performance. *See* Shapiro WDT p. 31; Appendix D at D-10-19 ("Non-Pecuniary Terms in the Merlin Agreement"); *see also* 5/19/15 Tr. 4595:1-4598:12 (Shapiro) ([redacted]).

133. Having properly accounted for all of the terms of the Merlin Agreement, Professor Shapiro calculated the statutory rates that would be implied by the Merlin Agreement for the period of Q4 2014 through 2015 based upon [redacted] ([redacted]), and a higher steering rate of 30% ([redacted]). As he explained, "[t]he rate depends on how much steering Pandora is doing. If they do more steering, that lowers the rate they're going to be paying, in fact, and so then that lowers the corresponding statutory rate derived from the Merlin Agreement." 5/19/15 Tr. 4603:24-4604:5.

134. Professor Shapiro further explained that the two factors enumerated in the statutory willing buyer/willing seller formulation – Pandora's role in promoting or substituting

for other Merlin label revenue streams, and Pandora and Merlin's [redacted]. *See* 5/19/15 Tr. 4605:13-4606:10 (Shapiro). Given this fact, no additional adjustment is necessary to the rates derived from that agreement.[24]

135. Starting from the rates implied by the Merlin Agreement for the [redacted] period as an "anchor," Professor Shapiro determined the per-play rates for 2016-2020 by accounting for inflation "to ensure that the per-play rates provide the record labels with the same real value over time." *See* Shapiro WDT p. 32; *see also* 5/19/15 Tr. 4606:11-16; 4607:25-4608:23. Professor Shapiro's resulting per-play royalty rate proposal is set forth below:

Reasonable Per-Play Royalty Rates After Adjustments
2016 Through 2020
Cents Per Play

	Advertising-Supported	Subscription	Blended
12.5% Steering			
2016	0.1205	0.2238	0.1324
2017	0.1226	0.2276	0.1347
2018	0.1247	0.2316	0.1370
2019	0.1269	0.2357	0.1394
2020	0.1291	0.2399	0.1419
30% Steering			
2016	0.1105	0.2146	0.1225
2017	0.1124	0.2183	0.1246
2018	0.1144	0.2221	0.1268
2019	0.1164	0.2260	0.1290
2020	0.1185	0.2300	0.1313

Shapiro WDT Table 1.[25]

[24] Pandora's legal discussion regarding the proper statutory formulation of the "willing buyer/willing seller" framework is contained in Section II, *supra.*

[25] In addition to the proposed per-play rates, Professor Shapiro's rate proposal employs a "greater of" structure, with the other prong a "25 percent of the revenue attributable to the licensed music," as that concept is defined in the regulations proposed by Pandora. *See* Shapiro WDT 20 and n. 30; 5/19/15 Tr. 4608:16-23 (Shapiro). [redacted]. *See* PAN Ex. 5014 at ¶ 3(a).

136. Professor Shapiro also considered other factors that could result in changes to the webcasting market in the 2016-2020 period, including "that Pandora and other webcasters are going to be increasingly in the automobile," which "will tend to cause rates to fall over time" as Pandora will almost certainly displace more terrestrial radio listening, which will benefit the record industry and lead "willing sellers," all else equal, to accept a lower royalty rate. *See* 5/19/15 Tr. 4610:12-4612:1 (Shapiro); *see also* Shapiro WDT pp. 33-34; Fleming-Wood WDT ¶¶ 24-25 (explaining that Pandora's ability to expand into the automobile market, which has been dominated by terrestrial and satellite radio, represents its "greatest opportunity to grow"). Because Professor Shapiro did not have sufficient information to make a reliable downward adjustment to account for this predictable trend, however, he did not do so. His rate proposal thus "likely overstate[s] the true royalty rates that would emerge in a workably competitive marketplace." Shapiro WDT pp. 34-35; *see also* 5/19/15 Tr. 4612:2-5.

137. Professor Shapiro also did not make any downward adjustments to the proposed per-play rates to account for the likely increase in the webcasting market of the type of competition typified by the Merlin Agreement, which would "tend to push rates down further." 5/19/15 Tr. 4612:6-18; Shapiro WDT pp. 32-33 ("Pandora and perhaps other statutory webcasters will likely demonstrate to record companies their ability and incentive to steer . . . . In a workably competitive market, this would cause royalty rates to decline into the 2016-2020 statutory time period. My proposed rates do not include a downward adjustment during the 2016-2020 time period to reflect this process.").

C. Pandora's Rate Proposal Fully Accounts For The Entirety of Consideration Received By Merlin

138. Professor Rubinfeld contends that Pandora's rate proposal does not "account for the full value of consideration" received by Merlin, in light of certain non-pecuniary

"promotional benefits" described in the Merlin Agreement. *See* Rubinfeld CWRT ¶¶ 74-76. Professor Shapiro, however, over the course of nine pages of detailed written testimony, expressly analyzed each provision referenced by Professor Rubinfeld. *See* Shapiro WDT Appendix D at D-10-D-19.

139. As already noted, Professor Shapiro's analysis of these specific non-pecuniary provisions revealed that they had only "a very minor impact on the overall economics of the Merlin Agreement." *See* ¶ 132, *supra* (citing Shapiro WDT p. 31). Where appropriate, however, Professor Shapiro made additional adjustments to account for them (resulting in a 0.0002¢ per performance upward adjustment that corresponds to Merlin's entitlement to discounted advertisements on Pandora).

140. Merlin's negotiators, for their part, [redacted]. *See* 6/1/15 Tr. 6973:20-6977:1 (Lexton); *see also* 5/19/15 Tr. 4698:22-4699:9, 4703:2-9 (Shapiro) (noting that [redacted]"). Nor did Professor Rubinfeld. *See* 5/28/15 Tr. 6339:2-18 (Rubinfeld).

141. Additionally, the record shows that (i) [redacted], *see*, *e.g.*, Shapiro WDT pp. D-11, D-13, D-15, D-17-D19, and (ii) [redacted]. *See* 6/1/15 Tr. 6974:20-23 (Lexton) (re: [redacted]); *id.* at 6976:5-9 (re: [redacted]); Shapiro WDT p. D-14 (re: [redacted]).

142. The rebuttal testimony of several record label signatories to the Merlin Agreement aggrandizes the alleged importance of certain collateral provisions of the agreement, to the point of suggesting that they were more important than the opportunity to make more money for the label and its artists from more plays on Pandora. *See* 6/1/15 Tr. 7104:9-16 (Wheeler); 6/2/15 Tr. 7171:25-7172:24 (Van Arman). This self-serving testimony, [redacted] *see* ¶ 99, *supra*, should be given little weight. Concord's Mr. Barros illustrated the disingenuous nature of such testimony. After testifying on direct examination that [redacted], *see* 5/28/15 Tr. 6511:6-14 (Barros), on questioning from Judge Strickler, Mr. Barros was forced to concede that, [redacted]." *Id.* at 6538:4-6539:3.

D. The Merlin Agreement is Representative of the Rates That the Major Record Companies Would Negotiate in a Workably Competitive Market

143. In both his written and oral testimony, Professor Shapiro has shown that in a workably competitive market, the Majors would negotiate the same or similar rates as are reflected in the Merlin Agreement. While the Majors have a higher share of the overall plays on Pandora than the Merlin Labels – and thus receive more in royalty income – that "occurs automatically under a per-play rate structure or a percent-of-revenue structure with payments prorated according to label share." Shapiro WDT pp. 37-38. The relevant question for purposes of rate-setting "is whether the repertoires of the major record companies would command a higher rate *per play* or a higher percent-of-revenue than the Merlin Labels in a workably

competitive market." *Id.* The record – including Professor Rubinfeld's own analysis and conclusions, and testimony from several SoundExchange fact witnesses – reveals they would not.

1. The Sound Recordings of Independent Labels Generally, and the Merlin Labels Specifically, Are as Valuable as Those of the Majors, and Independents Generally Secure Rates Through Sophisticated Bargaining at Around the Same Levels as the Majors

144. The larger repertories of the Majors as compared to the Merlin Labels "does not mean" that the Majors deserve a "greater value per performance." 5/20/15 Tr. 5058:7-24 (Shapiro); *see also* 5/19/15 Tr. 4730:12-25 (Shapiro) (rejecting use of market share alone in determining "value per spin").

145. To the contrary, multiple witnesses testified that the value of the sound recordings released by independent record labels is no less than the value of the sound recordings released by the Majors. *See, e.g.*, 4/28/15 Tr. 629:9-14 (Van Arman). As Mr. Van Arman from the Secretly Group (which opted into the Merlin Agreement) put it: "Music is music, and a sound recording from an independent record company is no less valuable than a sound recording from another record company, major or otherwise." Van Arman WDT p. 13; *see also* 5/20/15 Tr. 5061:24-5062:25 (Shapiro). Mr. Wheeler of the Beggars Group concurred: "Our rights are just as important, as are our artists, we are entitled to A-list prices for A-list repertoire." Wheeler WDT ¶ 18; *see also* 5/1/15 Tr. 1252:8-12 (Wheeler) ("Q. In your experience, the value of the sound recordings released by independent record labels is not any less than the value of the sound recordings released by major record labels, right? A. That's right."); 5/20/15 Tr. 5063:16-5064:9 (Shapiro).

146. The Merlin Labels have deep experience in negotiating license deals with digital services, and are "just as capable of understanding the complexity of the rights and licenses at

issue in digital streaming as major record labels." 5/1/15 Tr. 1251:1-1252:7 (Wheeler); *see also* 5/28/15 Tr. 6513:2-6 (Barros) (agreeing that independent label "Concord's assessment of the value it receives from licensing its repertoire is just as sophisticated as any other label"). Merlin's Mr. Lexton, who represented Merlin's interests in negotiating the agreement, is an "experienced negotiator" who agreed that "Merlin brings expertise to bear on its negotiations with digital music services." 6/1/15 Tr. 6924:5-7, 6925:12-14 (Lexton); *see also* PAN Ex. 5097.

147. In concluding that the Majors would not command a higher per-play royalty rate than Merlin, Professor Shapiro studied two questions: (i) whether Pandora has a different impact on the sale of songs from Majors than it does on the sale of songs from independent labels; and (ii) whether Pandora has the ability to sufficiently steer toward or away from the repertoires of each of the Majors without harming the listener experience such that Pandora can credibly state in a negotiation with a Major that it will meaningfully respond to changes in that record company's per-play rates. *See* Shapiro WDT p. 38. Both questions, according to Professor Shapiro, are central to the "fundamental tool for pricing in microeconomics for differentiated products, which is the Lerner Equation." *See* 5/19/15 Tr. 4619:10-4620:14 (Shapiro).[26]

148. Put in economic terms, the first question asks "whether the cost to a major [record company] of licensing to Pandora is different than the cost to Merlin." 5/19/15 Tr. 4620:15-22 (Shapiro). The second question asks "whether Pandora's elasticity of demand, or flexibility, steering ability regarding the major [record companies] is different than it is with Merlin." 5/19/15 Tr. 4620:2-14 (Shapiro). To answer each question, Professor Shapiro turned to two sets of experiments conducted by Pandora.

[26] The Lerner Equation is a standard micro-economic tool taught "in all textbooks," including Professor Rubinfeld's. *Id.* at 4620:24-4621:12 (Shapiro).

2. The Music Sales Experiments Show That Pandora's Ability to Promote Is—If Anything—Larger for the Majors than for the Merlin Labels, Requiring No Upward Adjustment to the Merlin Benchmark

149. With respect to the first question – which concerns the marginal, or opportunity, cost to a major record company of licensing to Pandora as compared to the Merlin Labels – Professor Shapiro relied upon the "Music Sales Experiments" conducted by Dr. McBride in 2013 as "exactly responsive" to this inquiry. *See* 5/19/15 Tr. 4622:7-4623:3. As discussed in greater detail in Section V.B, *infra,* the Music Sales Experiments analyzed, among other things, "whether there is a statistically significant difference between the impact that performances on Pandora have on the sale of sound recordings from the major record companies versus the sale of sound recordings from independent labels." Shapiro WDT p. 38 and Appendix E; *see generally* McBride WDT ¶¶ 23-49 and 5/18/15 Tr. 4338:4-4349:9 (McBride).

150. The results of the experiments demonstrate that, if anything, "the overall net promotional effect from performances on Pandora is *larger* for the major record companies than for independent record companies." Shapiro WDT Appendix E p. 3 (emphasis added). Consequently, Professor Shapiro concluded that "the cost to a [M]ajor of licensing to Pandora is lower than it is for Merlin because you actually get a benefit, some promotion, and that would tend to lead to a lower price." 5/19/15 Tr. 4623:4-4624:5 (Shapiro).

151. The empirical evidence thus demonstrates that there is no basis to make an upward adjustment to the Merlin benchmark to account for any purported difference in promotional effect from performances on Pandora on the sale of songs from the Majors. Indeed, the evidence suggests that, in a competitive marketplace, the royalty rate for performances of the Majors' sound recordings would be *less* than the rate for performances of independent record companies' sound recordings, although the results were not precise enough for Professor Shapiro to make such a downward adjustment. 5/19/15 Tr. 4623:14-4624:14 (Shapiro).

3. Just as Pandora Can Steer Performances Toward Merlin Labels, Pandora Has a Proven Ability to Steer Towards or Away Each of the Majors

152. As to the second question – which concerns Pandora's ability to steer vis-à-vis a Major – Pandora's steering experiments (also discussed in detail in Section V.A, *infra*) show that Pandora has a "powerful" ability to steer toward and away from the repertoires of each of the Majors, just as it has done with the Merlin Labels. *See* 5/19/15 Tr. 4624:15-4630:11 (Shapiro); *see also* Shapiro WDT Appendix F p. F-6.

153. Specifically, the steering experiments "were designed to test Pandora's ability to steer plus and minus 15 (percent) or 30 (percent) for each of the majors . . . in the same way that [Pandora] did toward Merlin." 5/19/15 Tr. 4625:3-4626:25 (Shapiro). As Professor Shapiro explained, "[t]he key finding from these experiments is that the percent change in listening hours is very small, especially for the experiments that involved 15 percent steering toward a Major, which is the most relevant for assessing an agreement like the Merlin Agreement." *See* Shapiro WDT Appendix F p. F-6 and Table F.2.

154. For example, as to Sony, the steering experiments reflected that when Pandora steered toward Sony's music at a rate of 15% (causing Sony's share of Pandora performances to increase by an extra [redacted]), there was a drop in listening hours of only [redacted], or about one listening hour out of every [redacted]. *Id.* While Pandora's ability to generate advertising revenues is linked to the number of listener hours, when Pandora engages in steering, its "savings on royalty payments are far larger than its loss of advertising revenues for each of the three Majors."[27] Shapiro WDT Appendix F pp. F-6, F-9 (concluding that any such drop in listener hours is "far below the level that would make it unprofitable for Pandora to steer in this

[27] For UMG, there was actually a gain in advertising revenue. *Id.*

manner"). Thus, while steering away from a Major entails "a little bit of lost listening hours," there is a "much larger, *70 times as large*, benefit, in terms of the savings on royalties." *See* 5/19/15 Tr. 4628:12-4629:9 (emphasis added); Shapiro WDT Table F-2.[28]

155. The steering experiments further showed that steering at a 30% rate was "highly profitable for Pandora." Shapiro WDT Appendix F at F-10. While Professor Shapiro found that steering at that level resulted in a "stronger response by listeners," and thus a higher cost to Pandora, "Pandora's savings on royalty payments are still far larger than its net costs of steering." *Id.*; *see also* Table F-3 (showing savings in royalty payments of [redacted], reflecting benefits to Pandora that are at least nine times the cost to Pandora).[29] It would thus "be profitable for Pandora to enter into an agreement with any of the three major record companies on the same terms that Pandora did with Merlin but with 30 percent steering rather than 15 percent steering." Shapiro WDT Appendix F p. F-10.[30]

[28] Professor Rubinfeld's critique of Pandora's reliance on the steering experiments misses the mark because it *only* focuses on the costs of steering to Pandora. *See* Rubinfeld WRT ¶¶ 144-147 (noting that steering will "likely . . . have a nontrivial cost to Pandora"). Professor Rubinfeld's analysis is "literally one-sided," as it ignores the benefits (*i.e.*, the savings in royalty payments) which "dwarf the costs." *See* 5/19/15 Tr. 4636:7-4637:14 (Shapiro). Professor Rubinfeld conceded the one-sided nature of this analysis on the witness stand. *See* 5/28/15 Tr. 6368:25-6370:24 (Rubinfeld) ("[redacted]").

[29] As Professor Shapiro noted, even if the "loss of listener hours were two times, four times, eight times as much as we picked up in these experiments, it would still be credible and profitable for Pandora to do the steering in the same way . . . for all three of the Majors, in the same way [it] did for Merlin. That's a powerful result." 5/19/15 Tr. 4629:10-460:11 (Shapiro).

[30] The Steering Experiments did not test steering at the 100% level in light of the necessary sample sizes that one needs in order for the experiments to have statistical power. *See* 5/19/15 Tr. 4765:20-4766:1 (Shapiro). More fundamentally, however, Professor Shapiro explained that it is the credible *threat* of steering – and not the ability to steer away from a given label at 100% – that induces workable competition. *See* ¶¶ 186-87, *infra*.

156. In sum, Professor Shapiro concluded that "these experimental results establish that Pandora has a great deal of flexibility to alter the mix of the music it plays with little or no impact on the listening experience, as measured by average listener hours. This translates directly into a high elasticity of demand by Pandora for the repertoire of recorded music of each of the major record companies." Shapiro WDT Appendix F p. F-7.

157. Thus, Professor Shapiro opines that in a hypothetical, workably competitive marketplace, the Majors would reach agreements with Pandora at the same, if not lower, rates, as Merlin. *See* 5/19/15 Tr. 4647:19-4651:21 (Shapiro); *see also* Shapiro WDT pp. 40-41.

4. Professor Rubinfeld's Own Empirical Analysis Confirms That The Merlin Labels Negotiate the Same or Similar Rates as the Majors in Their Other Direct License Deals

158. Professor Rubinfeld has submitted that while Merlin is "significant as a representative of independent recording companies," it is not a Major, and therefore would not be able to extract the same per-play rates from noninteractive digital music services as would a Major. Rubinfeld CWRT ¶¶ 65-66.

159. Professor Shapiro has shown, however, that this critique of the Merlin Agreement as a supposedly "unrepresentative" benchmark is belied by Professor Rubinfeld's own direct and rebuttal evidence. Exhibit 8(a) to Professor Rubinfeld's CWRT – admitted at the hearing as SX Ex. 136 – [redacted]. *See* SX Ex. 136 at Ex. 8(a) ([redacted]); *see also* 5/19/15 Tr. 4662:7-4663:12 (Shapiro) ("[redacted]."). Professor Rubinfeld admits as much. *See* Rubinfeld CWRT ¶ 67.

160. And, while Professor Rubinfeld asserts that "[redacted]" (*see id.*) – such as [redacted] – that statement, too, is belied by his own proffered evidence. Professor Rubinfeld's Exhibit 8(b) shows that [redacted]. *See* SX Ex. 136 at Exs. 8(b)-(d).

161. Moreover, Professor Rubinfeld's assertion in this regard is further contradicted by his own WDT – which he prepared before he was aware of the Merlin Agreement – where he stated "that some independent labels have entered into agreements that provide substantial [redacted]." Rubinfeld CWDT ¶ 221 (emphasis added). As if to prove the point, Professor Rubinfeld proceeded to cite the [redacted]. *Id.*

162. At bottom, Professor Rubinfeld's own evidence confirms that relative to the Majors, "Merlin is doing very well for themselves"—consistent with its position in the marketplace as a sophisticated rights holder and a "[redacted]." *See* 5/19/15 Tr. 4661:7-4663:12 (Shapiro).

163. More generally, Professor Rubinfeld's critique of the Merlin Agreement as "unrepresentative" of rates the Majors would elicit flies in the face of his own adjustments to his preferred, interactive services benchmark. That benchmark draws upon license agreements reached between on-demand services and the Majors. Anticipating a potentially similar criticism – that the benchmark is flawed because it fails to measure the rates that independent labels have

been able to attain in their own dealings with interactive services – Professor Rubinfeld performed an analysis, described in paragraphs 120 and 136 of his WDT and reflected in exhibit SX Ex. 31 thereto (introduced into evidence at the hearing as SX Ex. 63), to address this issue. The results [redacted], *see* 5/5/15 Tr. 1986:25-1987:18 (Rubinfeld), scarcely evidence of the "unrepresentativeness" of one category of licensor experience, be it a Major or an independent label, vis-à-vis the other.

E. The Rates Reflected in the Merlin Agreement Are Above Competitive Levels—Not Below—Because the Statutory License Acts as a Magnet to Pull Rates Up

164. SoundExchange has asserted that the Merlin Agreement is an "improper benchmark" purportedly because it was "directly influenced by the existing pureplay rates flowing from the [WSA]." Rubinfeld CWRT ¶ 64; *see also* 5/28/15 Tr. 6295:8-6296:2 (Rubinfeld). This attack fails.

165. As Professor Shapiro explained, the statutory rates to which an eligible music user is subject provide a ceiling on what that user will pay. When this ceiling is above the competitive level, record companies acting unilaterally will have an incentive to undercut this price to secure increased performances. Such agreements, in turn, indicate that the statutory rate is above the competitive level. *See* Shapiro WDT pp. 36-37; *accord* Rubinfeld CWDT ¶ 98 n.76 Rubinfeld CWRT ¶¶ 64, 222.

166. This is precisely the dynamic one observes in the context of the Merlin Agreement: the forces of competition caused rights holders (the Merlin Labels) to agree to a *lower* rate than the prevailing statutory rate in exchange for additional plays of their music. *See* ¶ 119, *supra.*

167. As Mr. Barros of the Concord label elaborated, the Merlin Agreement was a "win-win" for both Pandora and Concord, whereby Concord "[redacted]." 5/28/15 Tr. 6536:9-6537:8 (Barros); *see also id.* at 6537:11-6538:3.

168. That the injection of competition into the marketplace led to rates below the statutory level strongly suggests that the prevailing rates were *above* competitive levels, and are not artificially depressing the negotiated royalty rates. *See* Shapiro WDT pp. 36-37; Shapiro WRT pp. 33-34 ("since the statutory rate has been set too high, *i.e.*, above the competitive rate, it will *pull up* the negotiated rates from the competitive rate toward the statutory rate") and Figures 7-8 (depicting same); *see also* 5/8/15/ Tr. 2670:7-2671:12 (Shapiro) (explaining that where two parties enter a direct licensing agreement below the statutory rate, "that tells you that the competitive rate, at least for those two parties, was below the statutory rate," and therefore the statutory rate "tends to act like a magnet. It pulls things, negotiated deals towards it.").

169. As Professor Shapiro explained, Pandora and Merlin "both knew that if they didn't cut a deal, then Pandora would continue to pay the pureplay rates to Merlin." 5/19/15 Tr. 4651:22-4653:4 (Shapiro). Notwithstanding that knowledge, "Merlin agreed to a lower rate in exchange for more plays. That tells me that the competitive rate is, in fact, below the pureplay rate simply because Merlin didn't have to do it . . . . So the competitive rate, at least regarding Merlin and Pandora . . . is below the statutory rate. It was probably pulled up by the statutory rate as a magnet, [] which would be a reason, conceivably, to adjust downwards to come up with a proposal. I didn't do that. But I have accounted for the statutory rate." 5/19/15 Tr. 4651:22-4653:4 (Shapiro).

170. Accordingly, SoundExchange's experts' criticism of the use of the Merlin Agreement on the basis that it was "influenced" by the statutory license is exactly backwards. If anything, "to the extent that the shadow of the current statutory rate applicable to Pandora has influenced the rates in the Merlin Agreement, it has likely served as an anchor on the high side, keeping the Merlin rates above competitive levels." Shapiro WDT p. 37; *see also* 5/19/15 Tr. 4653:10-4654:18 (Shapiro).

171. That SoundExchange witnesses decried the operation of competitive forces as exhibited in the Merlin Agreement as undesirable, as destabilizing of a "strong" statutory license, as "a race to the bottom," and the like, *see*, *e.g.*, Van Arman WDT p. 14; 6/2/15 Tr. 7155:2-20 (Van Arman), does not alter the basic precepts as to how competitive markets, free of collusive behavior, operate. It particularly taxes credulity for certain of the same entities that voluntarily entered into the Merlin Agreement to obtain first-mover advantages over their competitors to now disparage the very competitive regime from which they benefited. In all events, it is not the role of the Judges to protect the record industry from the forces of competition.

F. SoundExchange's Other Objections to the Merlin Benchmark Are Unfounded

172. SoundExchange has raised certain other objections that it claims lessen the value of the Merlin Agreement as a benchmark in this proceeding. Each of these objections misses the mark.

1. Pandora Did Not Exert Any Undue Buyer-Side Market Power Over Merlin

173. Professor Rubinfeld asserts that the Merlin Agreement "does not offer a reliable foundation for a statutory benchmark" because Pandora purportedly maintains a "power position in the industry," and is thus a "uniquely situated buyer." *See* Rubinfeld CWRT ¶¶ 65, 68-69.

174. The Merlin Labels, however, "generate revenues from many different users of their sound recordings, including other non-interactive webcasters, interactive services, and from the sale of physical albums and digital downloads." *See* Shapiro WDT p. 24. In fact, uncontroverted record evidence shows that "Pandora accounts for only some 5% of the revenues received by the Merlin Labels in 2013 for the licensing of their music in the United States." *See* Shapiro WDT p. 24 and n. 35.

175. Because only a small percentage of the Merlin Labels' overall revenues come from Pandora, the mere fact that Pandora is the largest *non-interactive webcaster* is insufficient to establish that Pandora had any undue "buyer-side" market power when negotiating with Merlin. *See* Shapiro WDT pp. 24-25 (finding no evidence that "Pandora has monopsony power over Merlin"). Indeed, Professor Rubinfeld has conceded that he has formed no contrary opinion. 5/28/15 Tr. 6359:4-6360:25 (Rubinfeld).

2. The Timing and Duration of the Merlin Agreement Do Not Inhibit Its Use as a Benchmark

176. Professor Rubinfeld further contends that the Merlin Agreement was "directly influenced . . . by this rate proceeding" because it was "[redacted] and is [redacted]." Rubinfeld CWRT ¶¶ 64, 71.

177. The evidence has shown, though, that *everyone* in the industry is well aware that direct licenses can potentially be used as benchmarks in this proceeding; the parties to the Merlin Agreement were no exception to that universal principle (and, certainly, Pandora had no ability to force a deal upon an unwilling seller). As Professor Shapiro has noted, *any* record company that discounts its rate below the statutory rate "will naturally consider the precedential effect of these rates at the next rate-setting proceeding," and Merlin is no exception. *See* Shapiro WRT p. 35; *see also* 5/19/15 Tr. 4760:9-23 (Shapiro) ("My working assumption is that *everybody* is

aware of this proceeding and how . . . deals they cut might affect it.") (emphasis added); 4/30/15 Tr. 1141:1-1142:4 (Harrison) (recognizing the [redacted]); 4/28/15 Tr. 508:21-509:11 (Kooker) (regarding [redacted]").

178. Additionally, Professor Rubinfeld's criticism ignores the testimony from Pandora's CFO that Pandora's direct licensing initiatives, including the Merlin Agreement, are "part of a much larger much broader strategy that involves a lot more than just even domestic rates, but also our ability to have non-DMCA compliance features and functionality . . . within our service to expanding international markets . . . [where] [t]here is no equivalent of these statutory rates." 5/18/15 Tr. 4213:5-12 (Herring).

179. Merlin's representatives were aware from the very outset of the negotiations with Pandora that doing a deal at rates below the statutory Pureplay rate could influence the outcome of this proceeding. Merlin's chief negotiator, its advisory committee, and its Board of Directors were all well aware that the deal "would be available as evidence in this proceeding," and elected to move forward anyway to secure economic advantages. *See* 6/1/15 Tr. 6962:15-23 (Lexton) ("[redacted]."); *see also id.* at 7095:10-20 (Wheeler) (same); SX Ex.102 at 3 (5/14/14 e-mail among Merlin executives); PAN Ex. 5117 (6/9/14 internal e-mail from Mr. Lexton) ("[redacted]").

180. Professor Rubinfeld's criticism of the duration of the Merlin deal is no more well founded. As Professor Rubinfeld admitted during the hearing, the [redacted] of the Merlin Agreement is in the "same ballpark" as the average duration of the interactive service agreements upon which Professor Rubinfeld himself relies. *See* 5/28/15 Tr. 6319:20-6321:8 (Rubinfeld).

3. The "First-Mover Advantage" Reflects Competition at Work

181. Professor Rubinfeld attempts to portray the Merlin Agreement as atypical and unrepresentative of deals that more generally would be struck in the marketplace, insofar as Merlin and the participating Merlin Labels attained a so-called [redacted]." *See* Rubinfeld CWRT ¶ 70. But that fact *commends* the Merlin Agreement as a benchmark rather than invalidates it. What Professor Rubinfeld tries to write off as anomalous market behavior reflects, quite instead, the forces of competition. *See* Shapiro WRT p. 40 ([redacted]").

182. As Mr. Lexton admitted, Merlin was aware that if it did not "[redacted]" with respect to a direct license with Pandora, its competitors, including the Majors, could instead enter "[redacted]" with Pandora—complete with their own steering arrangements. *See* 6/1/15 Tr. 6963:10-23 (Lexton); *see also* 4/28/15 Tr. 610:5-611:8 (Van Arman) ([redacted]). In other words, if Merlin did not provide Pandora an incentive to steer towards its labels, then the expectation of the Merlin Labels was that some other record company would provide Pandora with that incentive. *Id.*

183. The Merlin Labels understood, in agreeing by the thousands to opt into the Merlin Agreement, that "steering is how record companies compete on price in the statutory market." Shapiro WRT p. 40 (citing Van Arman WDT pp. 10-14); *see also* PAN Ex. 5116 (6/5/14 e-mail

from Mr. Lexton to Mr. Harrison of Pandora) ("[redacted].").

184. Cutting price to make sales that would otherwise go to your competitors is precisely what happens in a workably competitive marketplace.[31] *See* 5/19/15 Tr. 4573:7-4575:21 (Shapiro) (responding to Professor Rubinfeld's "first-mover" critique by noting that "[redacted]."). Even Professor Rubinfeld was forced to concede the same. *See* 5/28/15 Tr. 6341:3-12 (Rubinfeld) ("Q. And you acknowledge that the reason a record company would seek a first mover advantage would be to secure a competitive advantage over second or third movers, correct? A. Yes. Q. And the nature of that advantage could include obtaining more market share at the expense of one's competitors, right? A. It could be, yes.").

185. Professor Rubinfeld further suggests that because steering guarantees "[redacted]" – *i.e.*, that because [redacted] – an agreement that provides for increased plays cannot serve as a benchmark for the entire industry (or a statutory license that provides access to the works of every sound recording). 5/28/15 Tr. 6339:20-6340:9 (Rubinfeld); Rubinfeld CWRT ¶ 70 ([redacted]").

186. That position, Professor Shapiro explains, is a straw-man that is "[redacted]." Shapiro WRT p. 40. What this argument wholly ignores is the powerful force that

[31] As noted in Section II, *supra*, none of SoundExchange's witnesses could recall ever cutting prices to garner additional plays in the distinct marketplace for interactive services.

a credible *threat* of steering will have in the hypothetical market with no statutory license, whereby "the record company knows that raising its royalty rate to this streaming service can significantly reduce its share of the music played by this service." Shapiro WRT p. 20; *see also id.* at 41-42 ("Commitments to Steer").

187. As Professor Shapiro elaborated at the hearing: "This notion that you can't steer, the 100 percent thing, it's kind of offensive to an antitrust economist, at least, because it's basically saying, oh, price competition is some horrible thing. Price competition is great for customers, at least, and I believe [the Judges] should be incorporating it under the effective competition element." 5/19/15 Tr. 4561:21-4564:5 (Shapiro); *see also* 5/8/15 Tr. 2691:8-2696:7 (Shapiro) ("[T]he short answer is when record companies compete to get more plays, you should love that as competition.").

4. Professor Talley's Observations About "Low-Value" Buyers and Sellers is Untethered to Reality

188. SoundExchange's rebuttal expert, Professor Talley, has asserted that the statutory license "crowds out negotiated deals," leaving only direct deals "involving relatively low-value buyers and sellers to be negotiated." Talley WRT pp. 28-29, 47, and 53.

189. As Professor Shapiro observed at the hearing, Professor Talley's model is inconsistent with and "disconnected from" the real-world evidence, including the Merlin Agreement itself.[32] *See* 5/19/15 Tr. 4654:19-4655:18 (Shapiro). Whereas Professor Talley's model only includes "deals where the buyer would never pay the statutory rate," that is simply not true for Pandora: "We know Pandora is paying the statutory rate to everybody else, was

[32] This failure is not surprising, given that Professor Talley did not speak with anyone at either a record label or non-interactive service in connection with his testimony, nor did he review any documents produced in discovery in this proceeding. *See* 5/27/15 Tr. 6080:22-6082:17 (Talley) (admitting that the "CRB materials" he relied upon consisted of two procedural orders). Moreover, Professor Talley admitted that he did not "calibrate [his] model with market [real-world] data." *Id.* at 6098:8-15.

paying the statutory rate to Merlin, and we have every reason to believe without . . . the deal with Merlin, [Pandora] would have continued to pay the statutory rate." *Id.*

190. Professor Talley's model thus breaks down because it does not account for either Pandora (which is not a "low-value buyer") or Merlin (which is not a "low-value seller"). It also does not properly account for various other deals that are below the statutory rate – including the 28 iHeartMedia direct licenses and the Pandora/Naxos Agreement – which indicate that "competition is breaking out." *See* 5/19/15 Tr. 4657:6-4659:17 (Shapiro); *see also id.* at 4660:5-4661:1 (noting further that Professor Talley's model does not include steering or any other interaction or "competitive dynamic" between the various real-world marketplace deals).

G. The Rates Agreed-To By Pandora and Naxos Are Similar To Those in the Merlin Agreement and Corroborate Pandora's Proposed Rates Here

191. Pandora's agreement with Naxos, PAN Ex. 5018, corroborates the rates Pandora proposes based on the Merlin Agreement benchmark. In January 2015, Pandora signed a direct license agreement with Naxos, a leading classical music label. Herring AWRT ¶ 51; 5/12/15 Tr. 3341:6-15 (Herring). [redacted]. *Id.*; PAN Ex. 5018.

192. Although the Naxos agreement, unlike the Merlin agreement, [redacted]. Shapiro WRT p. 42; 5/19/15 Tr. 4705:21-4706:9 (Shapiro).

193. Applying the same method of calculation that Professor Shapiro employed with the Merlin Agreement benchmark (including [redacted]), and assuming that Pandora increases performances of Naxos music by [redacted], the Naxos agreement implies a statutory rate of [redacted] for each advertising-supported performance and [redacted] for each subscription performance. Shapiro WRT p. 37. The "blended" rate implied for all performances is [redacted] per performance. *Id*.

194. Using the same methodology, if Pandora steers 30% toward Naxos, the implied statutory rates are [redacted] for each advertising-supported performance and [redacted] for each subscription performance. Shapiro WRT pp. 37-38. The "blended" rate implied for all performances is [redacted] per performance.[33] *Id.* at p. 38.

H. After Appropriate Adjustments, the *Satellite II* Benchmark Further Corroborates Pandora's Proposed Rates

195. The reasonableness of the rates Pandora proposes based on the Merlin Agreement benchmark is corroborated by the rate set by the Copyright Royalty Judges in the *Satellite II* proceeding. "The CRB's April 2013 decision in *SDARS II* specified royalties as a percentage of gross revenue, rising from 9% in 2013 to 11% in 2017." Shapiro WDT p. 42. The *Satellite II* decision found that "'the most appropriate rate for SDARS for the 2013 to 2017 licensing period is 11% of Gross Revenues.'" *Id*.; *Satellite II*, 78 Fed. Reg. at 23071.

[33] The fact that [redacted] does not affect the implied statutory rate. [redacted] 5/13/15 Tr. 3549:11-3550:12 (Herring). That SoundExchange has refused to pay Naxos for the artist share in the past – despite [redacted] – is irrelevant, and a matter between SoundExchange and Naxos.

196. As described by Professor Shapiro, while not as probative as the Merlin Agreement, the *Satellite II* rate does have a number of aspects that commend it as a benchmark. Shapiro WDT p. 41. First, while not identical, the buyer is similar: non-interactive, radio-like services, available both online and in the car, and capable of steering playlists towards the repertories of directly-licensed record companies. *Id.*; *see also* Shapiro WRT pp. 22-23. Second, the seller in both instances – record companies – is the same. Shapiro WDT pp. 41-42. Third, the rights at issue are the same, namely, the right to perform sound recordings on a non-interactive basis and make the necessary ephemeral copies to facilitate those performances. *Id.* at p. 42. Moreover, the rate set by the Judges was influenced, at least in part, by direct licenses that were negotiated by Sirius XM under what appears to be workably competitive conditions, in which numerous record labels agreed to reduced royalties in exchange for the likelihood of increased plays on the Sirius XM service. *Id.*

197. That said, there are a number of differences between Sirius XM and Pandora that must be accounted for to translate the rate set by the Judges in the *Satellite II* proceeding into one that is appropriate in the instant setting. Those adjustments are set forth in Professor Shapiro's written testimony. *See* Shapiro WDT pp. 42-45.

198. To start, in *Satellite II*, evidence was put forward by SoundExchange's economic expert, Professor Janusz Ordover, that approximately half of the value of Sirius XM's content was derived from non-music programming. *Satellite II*, 78 Fed. Reg. at 23063; Shapiro WDT p.42 & n.69. This is not the case for Pandora, which offers almost exclusively music content. Shapiro WDT p.42. Accordingly, an upward adjustment is necessary. Using Professor Ordover's valuation, we can interpret the *Satellite II* decision as concluding if it was reasonable for Sirius XM to pay 11% of total revenue (including revenue earned on account of both music

and non-music programming), the reasonable royalty rate for Sirius XM to pay on the roughly 50% share revenues solely attributable to *music programming* was 22%. *Id*. This 22% figure can thus serve as a benchmark for the percentage of revenue that music-only services like Pandora should pay, subject to a possible adjustment to reflect other differences between SiriusXM and Pandora, or more generally between Sirius XM and the services in *Web IV*. *Id.*

199. To fully evaluate the *Satellite II* benchmark, Professor Shapiro also considered whether adjustments were appropriate to reflect the difference in investments that have been made by Sirius XM and Pandora. Shapiro WDT p.43. In *Satellite II*, the Judges recognized that Sirius XM's need to make substantial investments in satellite technology might warrant some downward adjustment from benchmark rates that were derived from benchmark agreements by Internet-based services that did not make investments of a similar magnitude. *See Satellite II*, 78 Fed. Reg. at 23068. The Judges found that Sirius XM makes substantial financial outlays that are unique to the satellite radio business that are not shared by webcasters. The Judges stated:

> [i]n light of the substantial evidence in the record of the unique and substantial financial costs that Sirius XM has incurred and anticipates incurring over the license period to maintain and upgrade its distribution system, … the most appropriate rate for the current license period will be somewhat below the 12%-13%, which the Judges are reasonably confident represents the top of the zone of reasonableness. Therefore [the final rates] reflect a downward adjustment from the 12%-13% range based upon the third Section 801(b) factor.

Id. at 23069.

200. To account for Sirius XM's unique investments in satellite technology, the Judges selected a royalty rate, 11%, that is somewhat below the 12-13% percent which they viewed as the top of the zone of reasonableness based on online service benchmarks. *Id.*

201. This question thus arises whether the same discount, from 13% to 11%, would apply to Pandora. To be sure, Pandora has made significant investments in, among other things, the Music Genome Project, the development of advertising markets, and the development of

highly sophisticated playlist-creating algorithms. Shapiro WDT p. 44; *see* Section I, *supra*. The popularity that Pandora has gained with a music library that is substantially smaller than the libraries of interactive services is testimony to the unique investment that Pandora makes in the knowledge of music and in optimization programs that play music that listeners are likely to want to hear *without* their asking for it. Shapiro WDT p. 44.[34] Pandora makes these investments with the goal of offering a compelling non-interactive music service. *Id*.

202. Still, since Pandora has not engaged in satellite and infrastructure investments comparable to those undertaken by Sirius XM, *see Satellite II*, 78 Fed. Reg. at 23069, Professor Shapiro concluded that it is reasonable not to apply the same downward adjustment (13% to 11%) in the rate for Pandora. This suggests a rate somewhat higher than the 22% of revenue rate implied by the *Satellite II* rate (for application to revenue earned only for non-music programming). Shapiro WDT pp. 44-45. Professor Shapiro adopted a rate of 26%, which eliminates the complete downward adjustment the Judges granted Sirius XM – and essentially ignores any differences between the investments made by Pandora and those made by interactive services. *Id*. By ignoring these differences, which may in fact be quite significant, Professor Shapiro's analysis tends to overstate the appropriate royalty rate for Pandora that is derived from the *Satellite II* benchmark. *Id.* at p. 44.

203. As the rate derived from the *Satellite II* benchmark is very close to the [redacted] prong in the Merlin Agreement, it serves to reinforce the conclusion that the rates derived from the Merlin Agreement are reasonable—and that the appropriate royalty rate for a

[34] *See also In re Petition of Pandora Media, Inc.*, 6 F. Supp. 3d 317, 328 (S.D.N.Y. 2014) ("Pandora has a catalog of between approximately 1,000,000 to 2,000,000 songs, somewhat less than half of which are licensed through ASCAP. This number is considerably lower than the catalog size of an on-demand service like Spotify, which must have the ability to play virtually any composition any customer might select. Successful on-demand services have catalogs in the range of 20 million songs."), *aff'd*, --- F.3d ----, 2015 WL 2080884 (2d Cir. May 6, 2015).

mature webcaster is approximately 25 percent of revenue. Shapiro WDT p. 45. The record evidence indicates that unlike Pandora, Sirius XM is now a mature service that is able to successfully monetize its product. *Id*. Pandora, while making significant progress, is still improving its ability to monetize its service. As a result, the sound recording royalty payments Pandora makes have been declining over recent years as a percentage of its revenue, and will continue to do so (in the direction of 25%) as long as Pandora continues to ramp up its ability to monetize listener hours. Shapiro WDT p.45.

204. There are additional considerations that would be taken into account in negotiations in a workably competitive market, such as the impact that the service has on other revenue streams of the record label seller and the ability of the service to steer towards or away from a label's repertoire. Shapiro WDT p.43; Shapiro WRT pp. 18-27. Ideally, as Professor Shapiro testified, one would adjust the *Satellite II* benchmark for any differences between Pandora and Sirius XM in these respects. Shapiro WDT p.43. But as the Judges lack evidence on the degree of difference (if any) between Pandora and Sirius XM, it is reasonable to assume that Pandora and Sirius XM, as non-interactive statutory licensees, are similar in these respects. *See* Shapiro WDT p. 43.

205. Finally, unlike with the Merlin benchmark, there is no need to make an adjustment to this 22% figure to account for the passage of time. Shapiro WDT p.42. First, because the *Satellite II* rate is a percent-of-revenue rate, it automatically accounts for inflation. *Id*. Second, absent some major anticipated change in the marketplace, there is no reason to make an adjustment to a rate that was determined to be reasonable for the five-year period 2013-2017, a period that overlaps with the 2016-2020 period at issue in this proceeding. *Id.* at pp. 42-43.

IV. THE IMPROPRIETY OF RELIANCE UPON SOUNDEXCHANGE'S BENCHMARK DRAWN FROM THE NON-COMPETITIVE INTERACTIVE SERVICES LICENSING MARKET

206. SoundExchange, through Professor Rubinfeld, once again turns to the same benchmark to support its fee proposal as it has in all prior CRB proceedings, namely, agreements between the Majors and interactive, on-demand services. This is so despite the fact that, as Professor Rubinfeld candidly acknowledged, the CRB has "questioned the use of agreements with interactive services as benchmarks for statutory webcasting ('non-interactive') services." Rubinfeld CWDT ¶ 21; *see also* 5/6/15 Tr. 2000:24-2001:9 (Rubinfeld).

207. Faced with these prior criticisms of SoundExchange's preferred benchmark, Professor Rubinfeld attempts to salvage continued resort to those same license agreements on the premise that interactive and non-interactive services have been "converging" – that is to say, interactive and non-interactive services are now "relatively close substitutes" in the eyes of consumers. Rubinfeld CWDT ¶ 21. This reach for an analytical foothold is for naught, insofar as it is based on no empirical analysis whatsoever and is, in any event, completely disconnected from the rate-setting task at hand. 5/6/15 Tr. 2018:9-2019:9 (Rubinfeld) (Professor Rubinfeld conceding that he did no quantitative analysis to support his convergence theory); *see also* 5/6/15 Tr. 2008:20-2009:15 (Professor Rubinfeld acknowledging that the basis for his convergence theory is a single marketing study done by Edison Research and a handful of trade-press articles found while doing some Internet research).

208. The convergence Professor Rubinfeld has in mind is entirely about competition between Internet music services in the *downstream* consumer market. It tells us nothing about whether interactive and non-interactive services are similar as buyers in the markets that must be analyzed were one to use the interactive benchmark as a proxy for rate-setting here – the respective *upstream* markets in which interactive and non-interactive services secure sound

recording licenses from record labels. Shapiro WRT pp. 46-47; 5/18/15 Tr. 4469:25-4471:8, 4474:3-4475:15 (Shapiro). As the hearing record fully demonstrates, SoundExchange has not even attempted to make such a demonstration, let alone prove it. In fact, it is untenable. *See* Section IV.C, *infra*.

209. Once the faulty convergence premise has been exposed for the red herring it is, SoundExchange and Professor Rubinfeld are left with an attempt to revivify a fundamentally flawed interactive benchmark, none of whose shortcomings has been remedied—quite instead, on the present record, whose ill-fit with the governing legal standard for establishing a reasonable rate has been demonstrated beyond peradventure. What the present record establishes for the first time is how thoroughly infected the interactive service licensing market is with the market power of the majors. That recognition tells us that we know nothing about what competitive rates in that market would approximate. To ignore that and engraft the existing interactive service rates onto the statutory licensing market would serve only to expand the domain of the supra-competitive rates attained by the record industry in licensing digital audio music services. Such a result would, of course, be antithetical to the mandate of the Judges, which is to determine rates that willing buyers would pay to willing sellers in "an '*effectively* competitive market.'" *Web III Remand*, 79 Fed. Reg. at 23114 n.37 (emphasis in original); *see also* Section II, *infra*.

210. Were this fundamental failing not enough, Professor Rubinfeld has made a number of other crippling errors in his analysis of the interactive service benchmark. These include, among others: (i) a complete failure to account for the fact that the buyers in the interactive market are fundamentally different from the buyers at issue in this proceeding; and (ii) a complete failure properly to account for the differences in rights acquired by interactive

services as compared to the rights granted by the statutory license. Correcting for just some of these additional fundamental flaws leads to dramatically lower rates than those proposed by SoundExchange – indeed, to rates that are far more supportive of Pandora's own fee proposal.

211. For these reasons, as more fully elaborated upon below, SoundExchange's proposed per-play and percentage-of-revenue rates derived from the interactive service benchmark should be rejected.

A. The Market To License Sound Recordings to Interactive Services Is Demonstrably Not Competitive

212. As more fully discussed in Section II above, it is well established that the governing rate-setting standard calls for approximating rates that would emerge in a *competitive* marketplace. *See, e.g.*, *Web III Remand*, at 23114 n. 37. In light of this standard, the Judges in *Web III Remand* considered the attributes of the record industry in its licensing of digital audio services that should inform the judgment as to whether proposed benchmark rates drawn from such activity reflect adequate indicia of competition between record companies. Specifically, the Judges recognized that if, in an upstream licensing market in which each service was required to deal with each of the major record companies individually, and in which the repertories of each major were required by a service, "*i.e.*, if the repertoires [of those majors] were *necessary complements*," "then each record company would have an incentive to charge a *monopoly price* to maximize its profits without concern for the impact on the market writ large." *Id.* at 23114 (emphasis added). The Judges there observed that on the record presented, they were unable to conclude whether "the repertoires of the respective record companies were complements or substitutes, or, perhaps, complementary to some degree and substitutional to some degree." *Id.*

213. That evidentiary void has now been filled in relation to the Majors' dealings with interactive services. The overwhelming evidence, as summarized in Section II, *supra*,

demonstrates that the repertoires of the Majors are indeed necessary complements rather than substitutes for on-demand services and that each major record company can seek to maximize its price in its license dealings with such entities without regard for the impact on the market writ large. In other words, the very monopoly conditions that *Web III Remand* hypothesized as presenting serious concerns for their conformity with the statutory mandate have been proven to be present in SoundExchange's chosen benchmark market. Indeed, as testified to by Professor Shapiro, the interactive market is so thoroughly infected with the market power of the Majors that it generates rates that are even *higher* than those that would arise in a market monopolized by a single record company. Shapiro WRT pp. 2, 15-18; 5/8/15 Tr. 2627:20-2630:4 (Shapiro) (Professor Shapiro explaining that, as a result of having multiple must-have sellers, the interactive market is worse for buyers than a fully monopolized market.). That SoundExchange would continue to press its case for relying on the record industry's license experience with interactive services in the face of this powerful evidence is nothing short of remarkable.

214. SoundExchange and Professor Rubinfeld chose to ignore these market realities in presenting SoundExchange's direct case. Nowhere in his written direct testimony – the testimony in which he sets forth and analyzes the interactive benchmark – does Professor Rubinfeld even mention, let alone evaluate, whether the rates found in the interactive benchmark agreements reflect the forces of competition at work. Indeed, Professor Rubinfeld candidly acknowledged that he only addressed the topic of competition at all – and not until page 26 of his written *rebuttal* testimony (*see* ¶ 41, *supra*) – because he felt compelled to respond to the written direct testimonies of Professors Shapiro and Katz, each of whom addressed the topic directly and thoroughly when evaluating potential benchmarks. *Id.* at 1924:5-14 (Rubinfeld).

215. A far more plausible explanation for Professor Rubinfeld's failure to discuss the state of (non)-competition in the interactive service licensing market until forced to do so is the damning nature of his own, as well as UMG's and its counsel's, 2012 submissions to the FTC, in which UMG and its advisors effectively told the FTC that the agreements from which Professor Rubinfeld has constructed his rate benchmark here are demonstrably *not* the result of the workings of a competitive marketplace. *See* Section II, *supra*. Indeed, as explained by Professor Shapiro, the upstream market in which the interactive service agreements are negotiated is about as far from competitive as a market can be. 5/8/15 Tr. 2632:25-2633:13 (Shapiro) (describing the interactive market as "quite a dysfunctional market" as a result of having "multiple monopoly suppliers.").

1. The Majors are "Must Have" Suppliers to the Interactive Services

216. From an economic perspective, the reason that the upstream market in which interactive services secure sound recording performance rights licenses from record labels is not competitive is because the buyers in that marketplace – the interactive services – have no choice but to secure licenses from each of the Majors. Shapiro WDT pp. 12-13; Shapiro WRT pp. 13-14. That is, each of the Majors is a "must have" supplier to the interactive services, which cannot substitute one label's works for another's. 5/5/15 Tr. 1836:1-17 (Rubinfeld) ([redacted]).

217. A market in which there are several "must have" suppliers that do not substitute for one another – by definition – cannot be workably competitive because buyers are left with no choice but to deal with each of the must have suppliers, and, as explained by both Professors Shapiro and Katz, buyer choice among substitutes is the essence of competition. In the parlance of economics, and in the language of *Web III Remand*, the multiple "must have" suppliers are

necessary *complements*, and not substitutes, because buyers need each of them and cannot substitute one for another. Shapiro WRT p. 14; 5/8/15 Tr. 2632:5-24 (Shapiro); Katz WRT ¶¶ 14-31; *Web III Remand*, 79 Fed. Reg. at 23114.

218. On the record developed in this proceeding, which differs dramatically from that available to the Judges in all prior CRB proceedings, there is no doubt that the repertoires of each of the major labels are "must-have" and necessary complements to the interactive services. As recounted in Section II, Professor Rubinfeld, UMG, and even SoundExchange's own counsel [redacted] *See, e.g.*, PAN Ex. 5349 p. 17 (UMG asserting that it "[redacted]"); PAN Ex. 5025 p. 18 (Mr. Pomerantz noting that [redacted] (emphasis added); 5/5/15 Tr. 1836:1-17 (Rubinfeld) ([redacted]); PAN Ex. 5025 p. 21 ("[redacted]") (emphasis added); NAB Ex. 4129 p. 44 (Professor Rubinfeld concluding that "[redacted]").

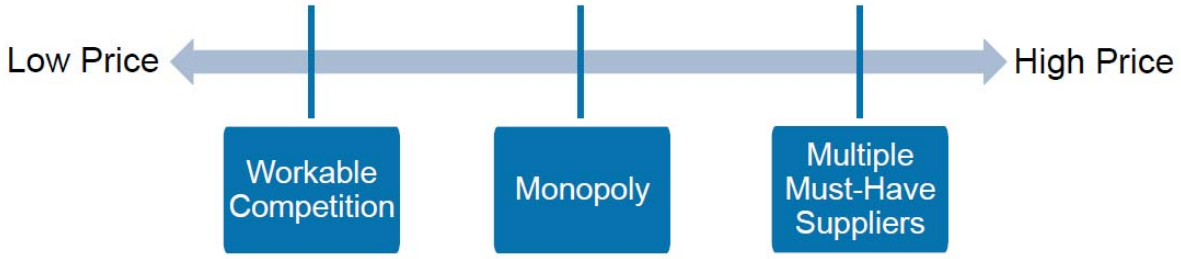
219. The economic implication of the "must-have" and complementary status of the Majors for their license dealings with the interactive services was also clearly recognized by Professor Rubinfeld, UMG, and SoundExchange's own counsel. Simply, it provides those labels with all, or nearly all, of the bargaining power when negotiating with the interactive services.

See Section II, *supra; see also* PAN Ex. 5349 p. 17 ([redacted]"); PAN Ex. 5025 p. 16 (Mr. Pomerantz noting same); NAB Ex. 4129 p. 42 (Professor Rubinfeld noting that "[redacted]").

220. As these devastating admissions from UMG, SoundExchange's counsel, and its principal expert economist plainly demonstrate, the marketplace in which interactive services secure sound recording performance rights licenses is anything but competitive. It is, instead, plagued with multiple "must have" suppliers that have all, or nearly all, of the bargaining power in their negotiations with interactive services. As Professor Shapiro explained, under such circumstances, this market not only fails to be competitive, but is *even worse than a market controlled by a single monopoly supplier*. Shapiro WRT p. 18; 5/8/15 Tr. 2628:7-2630:4 (Shapiro).

221. The relationship between prices charged under competitive conditions, when a market is monopolized, and when a market is populated with multiple must-have sellers was illustrated by Professor Shapiro in Figure 6 to his Written Rebuttal Testimony. That figure is reproduced below.

Figure 6: Total Price Charged to Buyer



Shapiro WRT p. 18.

222. In fact, the Judges noted precisely this relationship in their *Web III Remand* decision. *Web III Remand*, 79 Fed. Reg. at 23114.

223. [redacted]. In Mr. Pomerantz's June 22, 2012 letter to the FTC, he stated:

[redacted]

PAN Ex. 5025 p. 23 (emphasis added); *see also* 5/5/15 Tr. 1961:23-1962:20 (Rubinfeld) (Professor Rubinfeld agreeing with as much).

224. As the foregoing demonstrates, the per-play and percentage-of-revenue royalties charged by the Majors to interactive services exceed even the royalties that would be charged by a single firm controlling the supply of *all* recorded music. Accordingly, the interactive benchmark fails the governing rate-setting standard – which requires *competitive* rates – in dramatic fashion. Shapiro WRT p. 18; 5/8/15 Tr. 2632:25-2633:13 (Shapiro) ("Q. . . . [W]hat

are the consequences for this proceeding of having must-have suppliers . . .? A. It follows really immediately that that market is monopolized and, therefore, this effectively competitive element of the economic framework, and what I take to be the governing legal rules, is not met and rather dramatically so. It's not simply that there's not much competition. It's quite a dysfunctional market, actually, with multiple monopoly suppliers."); *see also* Katz AWRT ¶ 127 (explaining that the lack of "competition among record companies to license to on-demand services infects the percentage-of-revenue royalty terms as well as the minimum per-play royalty terms.").

2. Major Record Label Witnesses Conceded That The Majors Do Not Compete When Licensing Interactive Services

225. Lest there be any doubt, the absence of competition in the licensing of sound recording rights to interactive services is further confirmed by the testimony of the record label executives themselves.

226. As is detailed in Section II, *supra*, the very record company witnesses who sponsored the agreements upon which SoundExchange's case is founded – Mr. Kooker of Sony, Mr. Harrison of Universal, and Mr. Wilcox of Warner – each flatly conceded that [redacted]

227. There is no countervailing evidence in the record of this proceeding, as Professor Rubinfeld himself conceded. 5/5/15 Tr. 1940:24-1941:6 (Rubinfeld) ("Q. Perhaps I misphrased the question, but the question was designed to elicit whether you have any evidence you can cite to that major record labels compete with each other to secure increased plays on interactive services. A. Oh I'm sorry. I can't cite any direct evidence off the top of my head.").

3. Record Labels, [redacted] Ensure that Any Potential For Competition Between Labels is Eliminated

228. Not only do the major labels *not* compete with each other to have their works performed by interactive services, they enforce the status quo by structuring their contracts with interactive services so as to contractually *prohibit* even the possibility of price competition occurring.

229. [redacted]. *See, e.g.*, 4/28/15 Tr. 441:25-442:17 (Kooker); 4/30/15 Tr. 1143:9-15 (Harrison). As is discussed in Section II, *supra*, rather than stimulate price competition, these provisions ensure that [redacted].

230. [redacted]. *See* 4/28/15 Tr. 441:21-442:5 (Kooker); 4/30/15 Tr. 1142:14-20 (Harrison); 5/7/15 Tr. 2473:3-10 (Wilcox).

231. To note but a few examples:

- Sony: [redacted]. 4/28/15 Tr. 447:3-450:3 (Kooker); SX Ex. 80 p. 25542-43; PAN Ex. 5091.
- Universal: [redacted] 4/30/15 Tr. 1142:5-

1144:10 (Harrison); *id.* at 1144:1-4 ("[redacted]"); SX Ex. 36.

- Warner: [redacted] to the higher price or payment level. 5/7/15 Tr. 2474:1-2479:8 (Wilcox); SX Ex. 343.

232. [redacted]

233. By way of example:

- Universal: [redacted]. 6/2/15 Tr. 7202:16-7206:11 (Harrison); SX Ex. 37; *see also* 4/30/15 Tr. 1145:2-5 (Harrison) (explaining that [redacted]. Mr. Harrison further confirmed that [redacted]. 6/2/15 Tr. 7206:13-17 (Harrison). *See also* Harrison WRT ¶¶ 15-16; SX Ex. 36 ¶ 7.

- Sony: [redacted] 4/28/15 Tr. 455:5-456:4 (Kooker). As a result, [redacted]

[redacted] 4/28/15 Tr. 456:5-15 (Kooker); *see also* SX Ex. 80 p. 25537-38.

- Warner: [redacted] 5/7/15 Tr. 2490:3-2493:16 (Wilcox); *see also* SX Ex. 343 p. 20; SX Ex. 1814 p. 26; SX Ex. 346 p. 5.

4. Professor Rubinfeld's Belated Efforts to Defend the "Competitiveness" of Licensing to Interactive Services Fall Flat

234. In the face of the collective force of the evidence as to the absence of effective competition in the upstream interactive service licensing market, Professor Rubinfeld, in his *rebuttal* testimony, makes a number of half-hearted attempts to blunt the force of that evidence. The essence of his advocacy is that, while there is a complete absence of competition between record labels to have their works performed by interactive services, the rates called for in the interactive agreements nevertheless are still somehow "consistent with a competitive (though not perfectly competitive) marketplace." Rubinfeld CWRT ¶ 113. As explained by Professors Shapiro and Katz, these arguments range from being completely devoid of any factual or empirical support to being economically nonsensical. Unsurprisingly, Professor Rubinfeld abandoned certain of his claims during cross-examination.

235. First, Professor Rubinfeld asserts – with no empirical support whatsoever – [redacted]. 5/5/15 Tr. 1837:1-1838:2 (Rubinfeld). [redacted]." 5/5/15 Tr. 1836:18-23 (Rubinfeld).

236. As explained by Professor Shapiro, this argument is a red herring. The competition that Professor Rubinfeld alludes to – that between premium interactive services,

piracy, and free-to-the-consumer interactive services – all takes place in the *downstream* market in which a wide variety of services compete for consumers. The relevant question is not whether this downstream market is competitive but, rather, whether the *upstream* market in which interactive services secure sound recording performance rights from record labels is competitive. Simply put, the competition in the downstream consumer market that Professor Rubinfeld points to does nothing to change the fact that the upstream licensing market for interactive services is worse than monopolized—and certainly does not ensure that it is competitive. 5/8/15 Tr. 2648:10-2649:15 (Shapiro); 5/11/15 Tr. 2822:25-2823:22 (Katz).

237. [redacted] 5/5/15 Tr. 1860:17-1862:1 (Rubinfeld). This argument ostensibly is supported by rebuttal testimony from the major record witnesses – Messrs. Kooker, Wilcox, and Harrison – that their negotiations with interactive services are hard-fought and involve give-and-take in which the labels makes concessions and cannot dictate price. Kooker WRT pp. 19-20; Harrison WRT ¶¶ 21-27; Wilcox WRT ¶¶ 28-31. Yet as Professor Shapiro explained, this assertion of Professor Rubinfeld's (and the testimony of the label representatives) tells us nothing about whether the rates negotiated between the interactive services and the Majors are competitive. Even monopolists negotiate with their customers, as Professor Rubinfeld had to concede. 5/28/15 Tr. 6487:21-6488:3 (Rubinfeld) ("Q. Do firms with monopoly power ever bargain with their customers? A. Yes. Q. Do firms with monopoly power ever make concessions or change their bargaining position in response to positions taken by buyers with which they are dealing? A. Yes."). In fact, when questioned about this assertion by Judge Stickler, Professor Rubinfeld

backed away from it. 5/5/15 Tr. 1861:12-1863:6 (Rubinfeld) ("[redacted]").

238. Finally, in what can only be seen as a deeply cynical argument, Professor Rubinfeld asserts that [redacted]. 5/5/15 Tr. 1866:21-1868:9 (Rubinfeld). As discussed in Section II, *supra*, this last defense of the interactive service benchmark asks the Judges to ignore the lack of competition in the benchmark market on the premise that – taking the world as we assertedly would find it – the non-interactive services licensing market would be similarly infected with the supra-monopoly power of the Majors.

239. This effort to expand the reach of the Majors' monopoly power runs headlong into the Judges' statutory mandate, which is not to import into the statutory license setting blatantly non-competitive rates attained by the record industry elsewhere but, instead, to set rates that presuppose the forces of competition at work. 5/8/15 Tr. 2652:24-2653:12 (Shapiro); 5/11/15 Tr. 2829:3-2830:3 (Katz). What is more, SoundExchange's cynical prediction as to the nature of competition in the non-interactive marketplace ignores the evidence of emerging competition of precisely the sort to which the rate-setting process aspires. [redacted]. *See, e.g.*, Shapiro WRT p. 40; Shapiro WDT pp. 15-16.

B. Professor Rubinfeld's Analysis of the Interactive Benchmark Suffers a Number of Additional Crippling Flaws

240. As demonstrated above, the upstream market in which record companies license their content to interactive services is worse than a monopolized market. Accordingly, the interactive benchmark SoundExchange proffers fails the governing rate-setting standard in dramatic fashion. The per-play and percentage-of-revenue rates derived from the interactive benchmark, therefore, should be rejected out of hand for this reason alone. Shapiro WRT p. 18; Katz AWRT ¶¶ 10-34; 127.

241. Even putting this disqualifying flaw to one side, Professor Rubinfeld's analysis of the interactive benchmark is still riddled with conceptual flaws, unwarranted assumptions, and computational errors. These include, among others: (i) a complete failure to account for the significant differences between the interactive and non-interactive services as buyers of sound recording performance rights; and (ii) a complete failure to properly account for the differences in rights acquired by interactive services as compared to the rights granted by the statutory license. Accounting for just those errors made by Professor Rubinfeld that are readily quantifiable – and ignoring the fundamental monopoly power problem discussed above – leads to rates that are drastically lower than those proposed by SoundExchange. Indeed, these partially corrected rates are far more consistent with those proposed by Pandora than those proposed by SoundExchange.

1. Professor Rubinfeld Failed to Account for Critical Differences Between the Buyers in the Interactive Market and the Buyers in the Statutory Market

242. Rather than do any analysis to ascertain whether, in fact, the interactive services are similar to non-interactive services as buyers of sound recording performance rights, Professor Rubinfeld simply assumed that they are. 5/8/15 Tr. 2681:13-2682:4 (Shapiro); Rubinfeld CWDT

¶ 158 (stating, with no supporting analysis, that the interactive and non-interactive services are "similar" as buyers of sound recording performance rights).

243. As Professor Shapiro's analysis demonstrates, however, there are at least two fundamental differences between interactive and non-interactive services as buyers of sound recording performance rights, and these differences would need to be accounted for if one were to use the interactive service agreements as benchmarks. Shapiro WRT pp. 18-27; 5/8/15 Tr. 2682:17-2683:11 (Shapiro).

244. The first difference ignored by Professor Rubinfeld is that non-interactive services have far greater ability and incentive to steer, that is, to adjust the mix of the music they play in response to differences in the royalty rates charged by different record companies, than do interactive services. The second difference is that, on balance, non-interactive services are more promotional of music sales than are interactive services. In both cases, accounting for these differences requires a downward adjustment to the per-play and percentage-of-revenue rates found in the interactive service agreements. Shapiro WRT pp. 18-27; 5/8/15 Tr. 2682:17-2683:11 (Shapiro); Katz AWRT ¶ 137. Professor Rubinfeld failed to make either of these adjustments, even though both are implicated by his own "same parties test," based on differences between interactive services and statutory webcasters as buyers of the rights to perform recorded music. As Professor Shapiro observed, "this failure is striking." Shapiro WRT p. 19.[35]

[35] When before the FTC as part of the UMG/EMI merger review, Professor Rubinfeld [redacted]. Shapiro WRT p. 19; 5/8/15 Tr. 2699:3-2700:4 (Shapiro).

a. Non-Interactive Services Have a Greater Ability to Steer Than Do Interactive Services

245. The ability or inability of a service to steer listeners toward or away from the music of a given record company is fundamental to the licensing negotiations that would take place in the absence of a compulsory license. A record company facing a service with considerable ability to steer customers away from its music has a strong incentive to discount its royalty rate to increase the number of performances of its music made by that service (or to avoid being steered against). In contrast, a record company facing a service with little ability to steer will have little incentive to offer a discount, as that discount will lead to little change in the number of performances of its music made by the service. Shapiro WDT pp. 9-10; Shapiro WRT pp. 19-20; 5/8/15 Tr. 2683:12-2684:14 (Shapiro) (explaining that steering is "the essence of what causes competition to work" and that the "buyer's ability to steer is fundamental").

246. The Judges have previously considered how interactive and non-interactive services differ in their ability to steer, stating:

> The major difference between the two markets is the role of the ultimate consumer in selecting the sound recordings for listening. In the interactive market (as the adjective connotes), the ultimate consumer essentially decides which sound recordings he or she will receive. By contrast, in the noninteractive market (as the adjective again connotes), the consumer plays a more passive role, and the webcaster offers the consumer music that the webcaster anticipates the listener might enjoy (much like radio).

Web III Remand, 79 Fed. Reg. at 23115 (footnote omitted).

247. As common sense suggests, and as the record evidence incontrovertibly shows, non-interactive services have more control over the sound recordings that the consumer receives, and thus have a greater ability to steer, than do interactive services, where users, not the services, select the songs they want to hear. Shapiro WRT pp. 22-25.

248. Regarding statutory non-interactive services, uncontroverted evidence shows that both Pandora and iHeartMedia have a substantial ability to steer in response to differences in the royalty rates charged by different record companies. Indeed, both have done so. Pandora is currently boosting plays of labels that are party to the Merlin Agreement by [redacted] in the aggregate. Herring AWRT ¶ 50; 5/18/15 Tr. 4229:10-4230:2 (Herring). Furthermore, the steering experiments that Pandora ran at the direction of Professor Shapiro demonstrate that Pandora would face no meaningful adverse commercial consequences from increasing or decreasing performances of each of the major record companies by 15% or 30%. Shapiro WDT pp. 39-40 and Appendix F; 5/8/15 Tr. 2700:10-2701:4 (Shapiro); *see* Section V.A, *infra*. Likewise, for the 27 independent labels with which iHeartMedia has direct license agreements, iHeartMedia has increased performances on its standard and custom webcast stations by approximately [redacted] on average. Fischel and Lichtman AWDT ¶ 64.

249. On the interactive side, the evidence presents a starkly different story. First, as noted above, there is a complete absence of any steering by interactive services. Indeed, [redacted] the major label executives testified that not only have they never offered discounted rates in an effort to incentivize the interactive services to steer in their favor but, in fact, they [redacted]. *See* Section II, *supra*. To the extent that interactive services have some ability to influence user song choice through recommendations or playlists – and that ability is far more limited than SoundExchange suggests – they definitively do not use that ability to drive users towards or away from the music of particular labels or to negotiate better rates. *See id.*

250. These conclusions are consistent with those reached by Professor Rubinfeld in his work related to the UMG and EMI merger. He there told the FTC that [redacted]

[redacted]. NAB Ex. 4129, p. 42. As Professor Shapiro explained, this would not be the case if the interactive services had any significant ability to steer. 5/8/15 Tr. 2701:17-25 (Shapiro). Professor Rubinfeld further explained that [redacted]. NAB Ex. 4129 p. 42; Shapiro WRT pp. 23-24.

251. Finally, Professor Shapiro conducted an empirical analysis to ascertain whether interactive services do in fact steer when faced with different prices from different labels. [redacted]. Shapiro WRT pp. 24-25 and Table 1; 5/8/15 Tr. 2709:14-2710:25 (Shapiro).

252. In sum, the record shows that non-interactive services have a far greater ability to steer than do interactive services. Indeed, there is no evidence (other than naked assertions) to the contrary. Accordingly, non-interactive services – should they choose to use that steering ability – would be able to negotiate significantly lower royalty rates in a competitive market than would interactive services. Therefore, a large downward steering adjustment to the rates implied by the interactive services benchmark would be called for if the interactive benchmark were to be used as the basis for determining the statutory royalty rates. Shapiro WRT p. 26. As noted above, Professor Rubinfeld failed to make such an adjustment. *Id.*

b. Non-Interactive Services Are More Promotional of Other Record Company Revenues Than Are Interactive Services

253. Like its ability to steer, the impact that a music service has on other revenue streams of the record company will also affect the royalty rates that would be negotiated in a competitive market. As Professor Shapiro explained, the more promotional of other revenue

streams the music service is, on net, the lower the rate that the music service will pay, all else equal. Shapiro WRT p. 26; Shapiro WDT pp. 6-7.

254. Accordingly, were one to use the interactive service agreements as a benchmark, it would be necessary to make an adjustment to account for any difference in the impact that interactive services have, on net, on other record label revenue streams as compared to the impact that non-interactive services have on those same revenue streams. Shapiro WRT pp. 26-27; 5/8/15 Tr. 2714:4-2715:6 (Shapiro); 5/6/15 Tr. 2143:5-14 (Rubinfeld) (acknowledging that it would "be appropriate to consider differences between promotional effects and interactive services and noninteractive services."); Katz AWRT ¶ 137 (explaining that this adjustment would not only apply to the per-play rates derived from the interactive benchmark, but to the percentage-of-revenue rates as well). Indeed, such an adjustment – were one to use the interactive service as a benchmark – is required by the governing statute. 17 U.S.C. § 114(f)(2)(B).

255. Despite this statutory mandate, Professor Rubinfeld failed to perform any analysis or make any such adjustment. In fact, in developing his direct testimony supporting use of the interactive services benchmark, he failed to give this issue any consideration at all. Shapiro WRT pp. 26-27; 5/6/15 Tr. 2148:19-2149:7 (Rubinfeld); *id.* at 2151:24-2153:15 (Rubinfeld) (acknowledging that he has not done any study of his own as to the difference in the promotional impact of interactive as compared to non-interactive services and conceding that whether there is such a difference is therefore an "open question").

256. The record evidence on this point shows non-interactive services, on net, to be more promotional (or less substitutional) of other record label revenue streams than are interactive services. [redacted]

[redacted]. PAN Ex. 5027 p. 10; Shapiro WRT p. 27; 5/8/15 Tr. 2719:1-2720:24 (Shapiro).

257. In addition to this direct comparison between the impact that interactive and non-interactive services have on record company physical and digital revenue streams, Pandora presented empirical evidence through Dr. McBride that proves that performances of sound recordings on Pandora *cause* an increase in sales of those same sound recordings. The same cannot be said of interactive services. *See* Section V.B.2, *infra* and ¶¶ 149-50, *supra*.

258. All told, the record evidence strongly supports the conclusion that statutory non-interactive services do more than interactive services, on net, to promote music sales by record companies. This difference would call for an additional downward adjustment to the per-play and percentage-of-revenue rates derived from the interactive benchmark, were such benchmark to be used in establishing reasonable rates here. Once again, Professor Rubinfeld failed to make any such adjustment. 5/6/15 Tr. 2148:19-2149:7 (Rubinfeld); *id.* at 2151:24-2153:15 (Rubinfeld).

2. Professor Rubinfeld's So-Called "Interactivity Adjustment Factor" is Fatally Flawed

259. In an effort to account for the fact that the rights secured by interactive services from record labels are different from those granted by the statutory license, Professor Rubinfeld

made an adjustment using what he refers to as the "interactivity adjustment" factor. Rubinfeld WDT ¶¶ 167-68, 207 & n.124.

260. Professor Rubinfeld does this by simply dividing the average retail price of interactive services by the average retail prices of what he claims are statutorily compliant non-interactive services. Using this methodology, Professor Rubinfeld comes up with an adjustment factor of approximately 2. Rubinfeld WDT ¶¶ 168, 207 and Exhibit 5.

261. As an initial matter, Professor Rubinfeld's own logic makes clear that this adjustment is completely uninformative. According to Professor Rubinfeld, the royalty rates found in the interactive service agreements "can be expected to reflect the incremental value of the granted functionality over-and-above what can be achieved with the statutory rights." Rubinfeld CWDT ¶ 145. If true, then backing out that "incremental value" – making an "interactivity adjustment" – would just get us back to the *statutory* rate. We would be left with no new information. Put differently, if Professor Rubinfeld were correct, after making his "interactivity adjustment" we would be left with the statutory rate, plus some noise reflecting imperfections in the adjustment process. We would not learn anything at all about competitive rates. Shapiro WRT pp. 28-29; 5/8/15 Tr. 2723:5-2724:20 (Shapiro).

262. Were that not enough, Professor Rubinfeld's interactivity adjustment factor also lacks any economic basis. It is predicated on a completely unsupported, and economically unsound, *assumption* – that the "ratio of the average retail subscription price to the per-subscriber royalty paid by the licensee to the record label is approximately the same in both interactive and non-interactive markets." Rubinfeld CWDT ¶ 169; Shapiro WRT pp. 29-30 ("there is simply no plausible economic rationale that would support the use of Professor Rubinfeld's 'interactivity adjustment.'"); 5/8/15 Tr. 2724:21-2725:22 (Shapiro); Katz WRT ¶¶

45-51. As explained by Professor Shapiro, in making this assumption, Professor Rubinfeld effectively ignores all of the critical differences between interactive and non-interactive services as buyers of sound recording performance rights that affect the royalties that they would negotiate with record labels in a competitive market. Shapiro WRT pp. 29-30; 5/8/15 Tr. 2726:3-2729:11 (Shapiro).

263. To be clear, this unsupported and economically irrational assumption not only inflates the per-play rates derived from the interactive benchmark, but also the percentage-of-revenue rate that Professor Rubinfeld proposes. By simply taking the percentage-of-revenue rates called for in the interactive agreements, with no adjustment whatsoever, Professor Rubinfeld is "simply repeating his bald assumption that the ratio of royalties to subscription price for statutory webcasters should be the same as for interactive services." Shapiro WRT p. 30. As noted above, and as explained by Professor Shapiro, "this assumption is entirely unjustified" and "does not substitute for actually analyzing the two upstream markets for the licensing of recorded music, which Professor Rubinfeld has not done." *Id.*

264. In addition to these conceptual flaws, Professor Rubinfeld has made a number of significant computational errors in calculating his interactivity adjustment factor. First, several of the non-interactive services that Professor Rubinfeld includes in his analysis to come up with his 2:1 adjustment factor are not, in fact, statutorily compliant services. These services, including Nokia MixRadio, Slacker Radio Plus, and Rhapsody UnRadio, all include additional functionality that goes well beyond that which is allowed by statute. 5/6/15 Tr. 2042:5-2051:22 (Rubinfeld). As a result, the retail prices for these services are all greater than those that would be charged for similar, but statutorily compliant services. *Id.* Correcting for this flaw would lead to a larger adjustment factor, and, therefore, lower per-play rates.

265. Second, and more significantly, Professor Rubinfeld failed to account for the majority of listeners – the advertising-supported listeners – on both interactive and non-interactive services when calculating his interactivity adjustment factor. His analysis focuses solely on the revenues the services earn from subscribers. While Professor Rubinfeld acknowledged that one should consider the revenues earned by the services from *all* listeners – both subscribers and ad-supported listeners – he chose not to, claiming that the data necessary to account for ad-supported listeners were not available. Rubinfeld CWDT ¶ 170.

266. As Professor Katz explained, Professor Rubinfeld is wrong. Sufficient data to account for the revenues earned from both subscribers and advertising-supported listeners are available. Katz WRT ¶¶ 54-58.

267. When the revenues earned from subscribers and advertising-supported listeners are both accounted for, Professor Rubinfeld's interactivity adjustment factor nearly doubles—going from 2 to 3.96. Katz WRT ¶ 58 and Table 2. Making just this one correction to Professor Rubinfeld's analysis leads to rates that are nearly half of those that Professor Rubinfeld calculates—rates that are far closer to those proposed by Pandora than those proposed by SoundExchange.

268. In addition – and as significant – Professor Rubinfeld, in calculating his interactivity adjustment factor, focused solely on the *revenues* of interactive and non-interactive services. But, as explained by Professor Katz, the appropriate measure to focus on is not revenues but, rather, *profits*, thereby accounting for both revenues and non-licensing costs. Katz WRT ¶¶ 70-71; 5/11/15 Tr. 2860:4-2861:13 (Katz). [redacted] Katz WRT ¶¶ 70-71; 5/11/15 Tr. 2863:6-2866:18 (Katz) (explaining that a

correct analysis, like that used by Professor Rubinfeld in his work for UMG before the FTC, considers not what *revenues* the service stands to gain by entering into a license with a record label, but the *profits* the service stands to gain.).

269. Making this additional correction to Professor Rubinfeld's analysis has a similarly dramatic impact on the bottom line results. Using the best available data on non-licensing costs, and when combined with the prior adjustment to account for advertising revenues, the interactivity adjustment factor jumps from 2 up to 7.9. Replacing Professor Rubinfeld's adjustment factor with this partially corrected factor yields rates that are approximately one-fourth the size of those proposed Professor Rubinfeld. Katz WRT ¶¶ 70-76; 5/11/15 Tr. 2867:15-2873:5 (Katz).

270. This failure to account for non-licensing costs not only impacts the per-play rates calculated by Professor Rubinfeld, but also the percentage-of-revenue rates. As explained by Professor Katz, accounting for non-licensing costs alone yields percentage-of-revenue rates that are *half* of those proposed by Professor Rubinfeld. That is to say, making only this adjustment, and before accounting for the many other problems – including the consequential market power problem – associated with Professor Rubinfeld's proposed percentage-of-revenue royalty rate, yields a percentage-of-revenue royalty rate of 27.5%. Katz AWRT ¶¶ 128-133.

271. Making just the above-discussed readily quantifiable adjustments – accounting for the advertising-supported listeners on both interactive and non-interactive services and focusing on profits rather than just revenues – yields per-play rates that are *below* those proposed by Pandora and percentage-of-revenue rates that are entirely in line with those proposed by Pandora. Accordingly, when these straightforward and necessary adjustments are made – and before accounting for any of the many other problems with the interactive service benchmark that make

it unreliable here – it is clear that, contrary to the claims of Professor Rubinfeld, the interactive benchmark does not support the rates proposed by SoundExchange. If anything, it supports those proposed by Pandora.

* * *

272. All told, Professor Rubinfeld's analysis starts off on the wrong foot and never recovers. He never considers the threshold issue of whether his benchmark market is competitive. Because, as demonstrated above, this market is entirely devoid of competition, the royalty rates determined in that market tell us nothing about the rates that would be negotiated between willing buyers and willing sellers in a competitive market. This fundamental error is then compounded with baseless assumptions, computational errors, and a complete failure to account for critical differences between the buyers in the interactive market and the buyers in the market at issue in this proceeding. Accordingly, Professor Rubinfeld's analysis, and the rates derived therefrom, should be rejected.

C. The Markets for Interactive and Non-Interactive Streaming Services Are Not "Converging"

1. Professor Rubinfeld's "Convergence" Theory is Rife with Economic, Empirical and Factual Errors

273. As outlined above, Professor Rubinfeld attempts to support his interactive benchmark – in recognition of prior criticisms of that benchmark – by positing that the differences between interactive and non-interactive services "are less profound than in prior proceedings" on account of a purported "convergence in functionality and the ways in which consumers engage with non-interactive and interactive services." Rubinfeld CWDT ¶ 21; *see also id.* at ¶¶ 34-74; 5/6/15 Tr. 2002:16-2003:2 (Rubinfeld). As such, according to Professor Rubinfeld, "consumers are likely to view" on-demand services and non-interactive radio services

as "relatively close substitutes for each other." Rubinfeld CWDT ¶ 21; 5/6/15 Tr. 2003:3-8 (Rubinfeld).

274. There are multiple defects with Professor Rubinfeld's theory, beginning with his failure to undertake any "analysis of the type that an economist normally would," *see* Shapiro WRT p. 10, including a failure to consider (i) substitution patterns among the various modes of music consumption or (ii) market shares in the downstream market. *Id.*

275. Even more fundamentally, though, Professor Rubinfeld's "convergence" theory has no applicability to rate-setting in this proceeding, as it focuses entirely on competition between services in the "downstream" consumer market. Because it focuses on the views of consumers, *see* Rubinfeld CWDT ¶ 21, it offers no insight into the respective *upstream* markets in which interactive and non-interactive services secure sound recording performance rights licenses from record labels. Shapiro WRT pp. 46-47; 5/18/15 Tr. 4469:25-4471:8, 4474:3-4475:15 (Shapiro).

276. Professor Shapiro explained at the hearing that there is a fundamental "disconnect" between Professor Rubinfeld's convergence theory and his interactive benchmark for purposes of rate-setting: "[C]onvergence is a claim or a statement about the downstream market, that the interactive services are relatively close substitutes to the statutory Webcasting services . . . . [W]e have a proposed benchmark by Professor Rubinfeld in the interactive upstream market, and he is making a claim that is a good benchmark for the statutory market. That involves a comparison of two upstream markets, [whereas] the convergence theory is about the downstream market." 5/18/15 Tr. 4470:7-4471:8 (Shapiro); *see also* Shapiro WRT p. 13 (convergence is a "detour" and "distraction" from the "benchmarking exercise," because

"'[c]onvergence' is entirely about competition for listeners in the downstream market—it tells us nothing about the comparability of the two distinct upstream markets at issue.")

277. In other words, even if interactive services and webcasting services are close substitutes in the downstream market – and, as a factual matter, they are not, *see* Section IV.C.2, *infra* – that would not imply that they are "similar buyers" in their respective upstream markets for the licensing of recorded music, or that the royalty rates as a percentage of retail price should be equivalent. *See* Shapiro WRT p. 46; *see also id.* at Figure 5 (depicting two separate and distinct upstream markets for interactive services and statutory webcasters, *as well as* a separate downstream market "for the provision of music to listeners"). Nor does it lead to the conclusion that the interactive service *licensing* market is in fact competitive; in short, competition among services to attract listeners in the downstream consumer market does not cause or imply competition among record labels to license services in the upstream licensing market.

278. Professor Rubinfeld never analyzes whether there has been any "convergence" between the two categories of licensing "buyers" – interactive services and statutory webcasters – in the two distinct upstream markets in which sound recording rights are bought and sold. *See* Shapiro WRT § 10 ("SoundExchange's 'Convergence' Claim, Even if True, Would Not Justify Use of the Interactive Benchmark"); *see also* 5/18/15 Tr. 4474:3-4475:15 (Shapiro) ("[T]he convergence theory does not imply that they are similar buyers in the upstream market.").

279. Moreover, importing the rates from the interactive upstream market as the basis for rate-setting in this proceeding – in which the Judges are seeking to establish a rate for non-interactive webcasting that reflects competition – would incongruously inject inflated, monopolized rates from a market that is *not* workably competitive. *See* Shapiro WRT p. 46; *see also* Section IV.A, *supra.*

280. Accordingly, not only is the "convergence" theory irrelevant as a basis for rate-setting, its implications are "dangerous." Shapiro WRT p. 46. As Professor Shapiro opined, if one were to "accept convergence as a basis for using the interactive benchmark, then you are in real danger of taking a monopoly rate that we see in the interactive market," and thereby "propagate [a] monopoly situation into another market." *See* 5/18/15 Tr. 4475:16-4476:7 (Shapiro).

2. As a Factual Matter, The Markets for Interactive and Non-Interactive Streaming Services Are Not "Converging"

a. Interactive and Non-Interactive Services Offer Fundamentally Different Listening Experiences

281. In addition to the above-described economic and conceptual flaws with the "convergence" theory, the fact record is clear: non-interactive services are fundamentally different than interactive services. As a non-interactive service, Pandora offers a "'lean-back,' radio-style listening experience." Fleming-Wood WDT ¶ 5; Westergren WDT ¶ 29; *see also* 5/27/15 Tr. 6134:23-6135:13; 6138:2-23 (Fleming-Wood) ("Pandora is a radio experience where the user doesn't know what song is going to play for them next. It's programmed by the service. They have no control over what plays next, and they don't know it until it begins playing for them."). On-demand services, in contrast, offer a "lean-forward" listening experience, where a user can choose the exact song (or playlist of songs) he or she wants to listen to, when and as often as desired, no differently than accessing one's own music collection. *See* ¶¶ 282-88, *infra.*

282. This difference is, in part, a function of the statutory license. The Digital Millennium Copyright Act ("DMCA") "draws the lines" between "services [that] are within DMCA-compliance that are statutory, and others [that] are beyond it and have to get a different license." *See* 5/6/15 Tr. 2103:9-23 (Rubinfeld) (agreeing that Pandora and iHeartRadio "fall within the group of statutory services"); *see also* 5/13/15 Tr. 3445:20-3446:16 (Herring)

(explaining that there is a "bright line" between a lean-back and a lean-forward experience, and that a statutory licensee is only licensed to offer a lean-back, radio-style experience).

283. In order to take advantage of the statutory license, Pandora must follow certain requirements. Among other things, Pandora can play no more than four songs by the same artist or three songs from the same album in any given three-hour period. *See* 17 U.S.C. § 114(j)(13); *see also* 5/27/15 Tr. 6136:23-6137:3 (Fleming-Wood) ("Q. Are there limits on how many times the selected artist can play? A. Yes. So we adhere to the performance complement for sound recordings . . . ."); 5/6/15 Tr. 2017:12-18 (Rubinfeld) ("Q. Is Pandora, to your knowledge, subject to the limitations of the sound recording complement when it programs music for its users? A. Yes."). Pandora also has hourly limits on skips, such that a Pandora listener is limited to six skips per hour per station, and 24 skips in any 24-hour period. Fleming-Wood WRT ¶ 4.

284. These distinctions in functionality, coupled with the statutory limitations, mean that Pandora users, in contrast to Spotify and other on-demand users, cannot listen to an entire album; cannot listen to a designated song; cannot create a playlist of favorite songs and listen to them at any time or in any order; cannot rewind songs; and cannot see the next song that is to play. *See* 5/6/15 Tr. 2016:6-2018:8 (Rubinfeld) (enumerating the various ways in which Pandora differs from on-demand services, and admitting that Pandora "clearly" does not have the "same functionalities" as on-demand services such as Spotify); *see also* 5/29/15 Tr. 6591:6-14 (Kooker).

285. As Professor Rubinfeld admitted:

> There are differences, clearly, between Spotify and Pandora . . . . [O]n the Pandora side, Pandora is a statutory service so it has to follow the requirements to be DMCA-compliant, and Spotify does not have to do that. So Spotify can literally pick out -- if I want to take the time, I can curate a station that has all the artists and songs I want, and I can't do that -- I can't do that on Pandora, and, of

> course, on Pandora, if I do choose an artist to seed a station, I'm going to be limited as to the number of songs I hear by that artist.

See 5/6/15 Tr. 2012:23-2014:6 (Rubinfeld).

286. Professor Rubinfeld and other SoundExchange witnesses have asserted that Pandora offers "customization and personalization" that "come close to replicating the *lean-forward* experience of Spotify's on-demand service in a *lean-back* way." Rubinfeld CWDT ¶ 53 (emphasis in original); *see also id.* at ¶ 21. SoundExchange has also claimed that Pandora's offerings have been "converging" with interactive services' offerings "in terms of functionality and the ways in which consumers engage with these services, since 2009." *Id.* at ¶ 52. As detailed below, however, when challenged on cross-examination as to the support for these sweeping claims, Professor Rubinfeld could cite only to the footnoted sources in his testimony, which consisted almost exclusively of website quotes from blogs and such sources as theverge.com and geek.com, with which, as became evident at the hearing, he was utterly unfamiliar. *See* 5/6/15 Tr. 2007:25-2011:17 (Rubinfeld); *see also* ¶ 291, *infra.*

287. In fact, the evidence adduced at the hearing contradicts SoundExchange's convergence-of-functionality thesis. Multiple witnesses, including SoundExchange's witnesses, acknowledged that interactive subscription services are not only free of the constraints of the sound recording performance license and the statutory license more generally, but also offer a fundamentally different listening experience than that offered by statutory licensees, including the following:

- **Immediate and unlimited on-demand plays**. Interactive service users can pick the precise song or album they want and listen whenever they want, as many times as they want, no different than with their own CD collection. *See, e.g.*, 4/28/15 Tr. 433:8-17, 434:10-24, 435:4-8 (Kooker) (discussing how on-demand services allow users to select a specific song whereas a Pandora user cannot do that); 5/4/15 Tr. 1665:8-22 (Blackburn); Rubinfeld CWDT ¶ 158; 5/6/15 Tr. 2013:21-2017:23 (Rubinfeld); 5/14/15 Tr. 3763:22-25 (Rosin); 5/29/15 Tr. 6590:22-6591:20, 6593:19-6595:15; 6596:24-6597:25 (Kooker) (acknowledging

that on Pandora he cannot pick a specific song or album, nor listen to the same song repeatedly given Pandora's compliance with the Sound Recording Performance Complement);

- **Previews of songs that will be played**. On-demand users can view the entire contents of playlists or albums ahead of time and listen to them again and again, thus achieving complete predictability on par with a CD or download collection. *See, e.g.*, 4/28/15 Tr. 435:9-12 (Kooker); 5/29/15 Tr. 6592:6-6593:7 (Kooker) (acknowledging that, by contrast to on-demand services, a Pandora user does not know what song or artist will play next);[36]

- **Caching for offline playback**. On-demand services allow one to download tracks to users' personal devices, listen to them even when not online, and keep them for as long as the user subscribes to that service. *See, e.g.*, Rubinfeld CWDT ¶ 158 ("directly licensed 'interactive' services often … provide 'cached' downloads"); 4/30/15 Tr. 1163:11-15 (Harrison) [redacted]); 5/6/15 Tr. 2049:19-22; 2088:9-2089:13 (Rubinfeld) ("once you're caching, you're not DMCA compliant, that's clear to me");

- **Ability to fast-forward, rewind, or otherwise control what portion of the track is performed.** *See, e.g.*, 4/30/15 Tr. 1163:11-15 (Harrison) ([redacted]); 5/6/15 Tr. 2017:4-11 (Rubinfeld);

- **Sharing of playlists on social media to facilitate friends' on-demand listening.** *See, e.g.*, 4/28/15 Tr. 433:18-434:9 (Kooker) (discussing how Spotify and Pandora allow the sharing of stations or playlists, but that only on-demand services allow for friends to select and listen to songs on demand).

288. On cross-examination, Professor Rubinfeld readily admitted all of the above distinctions:

> Q. Do you understand that a Pandora user can select the songs she wants to hear when she wants to hear them?
> A. No.
> Q. Do you understand she can do that on Spotify Premium?
> A. Yes, I do understand there are differences of the kind you're describing.
> Q. Do you understand that a Pandora user can listen to an entire album of [an] artist?
> A. No.

[36] Whereas listeners to an on-demand service's top 40 playlist know exactly what song will play and can skip forward to specific tracks, non-interactive webcast listeners have a limited number of skips and offer far less user control over the listening experience. *See, e.g.*, 5/13/15 Tr. 3445:20-3446:16 (Herring).

Q. Do you understand that a Spotify Premium user can do so?
A. Yes.
Q. Do you understand that a Pandora user could create a playlist of favorite songs and listen to them at any time and in the order of her choosing?
A. No, she cannot do that.
Q. Do you understand a subscriber to Spotify Premium can do so?
A. Yes.
Q. Can a Pandora user skip without limitation?
A. No.
Q. Rewind?
A. No.
. . . .
Q. Are you familiar with something called a sound recording complement?
A. Yes.
Q. Is Pandora, to your knowledge, subject to the limitations of the sound recording complement when it programs music for its users?
A. Yes.
Q. Do you have an understanding whether Spotify Premium is subject to those limitations in its ability to fulfill user demand for music?
A. My understanding is that it is not subject to that limitation.

See 5/6/15/ Tr. 2016:6-2017:23 (Rubinfeld).

289. Consistent with all of this additional functionality, the scope of copyrights conferred upon such interactive services is "considerably broader" than those conveyed by law to statutory services. *See* 5/6/15 Tr. 2003:17-22 (Rubinfeld).

b. Professor Rubinfeld Performed No Empirical Analysis of Convergence

290. While suggesting that Pandora is moving in the direction of on-demand services, Professor Rubinfeld could not identify any additional functionality offered by Pandora since 2009 to support that claim, other than adding "recommended stations" in 2014 and making certain undescribed modifications that "made it easier to seed . . . stations with particular artists"—neither of which puts Pandora outside the confines of the statutory license. *See* 5/6/15 Tr. 2004:14-2007:24 (Rubinfeld).

291. Moreover, Professor Rubinfeld acknowledged that the basis for his "convergence" theory is a single marketing study done by Edison Research and a handful of trade-press articles

found while doing some Internet research. *See* 5/6/2015 Tr. 2008:20-2009:15 (Rubinfeld); *see also* 5/18/15 Tr. 4476:19-4478:14 (Shapiro) (critiquing Professor Rubinfeld for failing to take "even . . . the first step" in assessing whether the interactive and non-interactive markets are "reasonably close substitutes," which would include reviewing market share information); *see also* Shapiro WRT pp. 42-47.

292. Contrary to Professor Rubinfeld's suppositions, since Pandora launched in 2005, "the major functionality of Pandora has not changed dramatically at all," save for "some ancillary things like bios and, in some cases, lyrics." *See* 5/27/15 Tr. 6137:4-23 (Fleming-Wood). Professor Rubinfeld admitted, however, that such features are not really signs of "convergence." *See* 5/7/15 Tr. 2303:20-2304:21 (Rubinfeld) (conceding that "I don't think of artists' biographies, per se, as promoting convergence" and that "I wouldn't put very much weight on song lyrics" in promoting convergence).

293. While Pandora users can give a particular track a "thumbs up" or "thumbs down" (an option available since Pandora's inception), users cannot rewind or replay tracks or dictate whether or when that track will be played to him or her again. As Mr. Herring explained, even if a listener uses the "thumbs" feature – and many Pandora users do not[37] – "you still don't have control over what actual artist is played or what song is played." 5/13/15 Tr. 3446:17-3447:14 (Herring); *see also* 5/20/15 Tr. 4856:14-4857:6 (Pittman).

294. As Professor Rubinfeld acknowledged, none of Pandora's features, new or otherwise, "enhance the Pandora users' ability to select a particular song for listening at the time he or she wants to listen to it." *See* 5/7/15 Tr. 2304:22-2305:2 (Rubinfeld). While Pandora users

[37] As noted in Paragraph 18, *supra*, a large number of Pandora listeners (approximately [redacted]) do not use the feature on a consistent basis, and prefer to simply listen to the music that is played for them. Fleming-Wood WDT ¶ 9.

can "seed" stations with certain artists or indicate that they like particular tracks, they cannot listen to particular songs on-demand, and they cannot listen to a particular artist or album on an unlimited basis. *See* 5/6/15 Tr. 2013:21-2017:23 (Rubinfeld) ("[O]f course, on Pandora, if I do choose an artist to seed a station, I'm going to be limited as to the number of songs I hear by that artist.").

c. SoundExchange's Efforts to Show Similarities Between Pandora and On-Demand Services Only Accentuated The Stark Differences Between Them

295. In further support of its claim that Pandora and other non-interactive services are "converging" with on-demand services, SoundExchange offered an "experiment" conducted by Mr. Kooker of Sony. As part of his rebuttal testimony, Mr. Kooker seeded stations on Pandora with each of the top 20 artists on the Billboard Top 100 Artist Chart and found that a track from the seeded artist always played first and another track from the same artist almost always played within the first five songs. *See* Kooker WRT p. 12.

296. On cross-examination, Mr. Kooker admitted to a number of acts that increased the chances of the desired artist playing during his "experiment": (i) he created a new account for the experiment, meaning Pandora had no information on what tracks or types of music the creator liked other than the "seed" artist (unlike the typical Pandora listener who has created many stations, used the thumbs-up/thumbs-down button, skipped tracks, and provided Pandora a host of information on his/her tastes above and beyond the first "seed" artist); (ii) he indicated that the new account user was a 25-year-old female, a demographic which Mr. Kooker admitted was specifically chosen because it was "the typical demographic, from [Sony's] experience, that would be looking for pop hit type of playlists" (and who would then be more likely to receive those playlists); and (iii) he skipped between the first five songs, even though he acknowledged

that such activity could influence Pandora's playlist algorithms. *See* 5/29/15 Tr. 6589:18-6592:2 (Kooker).

297. Mr. Kooker further acknowledged that on Pandora, he could not play the same song "over and over again," nor could he determine ahead of time the song or album that would be played. *Id.* at 6590:24-6591:14 (Kooker). He also admitted that the sound recording performance complement prevents a statutory service from playing any more than three songs from the same album in a three-hour period or playing more than four songs from the same artist in a three-hour period. Thus, while Ed Sheeran (in his example) played twice in the first 15 minutes of listening to the Ed Sheeran seeded station, a listener would only be able to hear Ed Sheeran, at most, twice more over the course of the next two hours and 45 minutes. *Id.* at 6593:19-6594:21 (Kooker). By contrast, a Spotify subscriber could listen to "nothing but Ed Sheeran songs" for three hours if he or she wished. *Id.* at 6594:22-6595:1 (Kooker).

298. At bottom, Pandora's features and functionality – which have remained fundamentally the same ever since its launch in 2005 (*see* 5/27/15 Tr. 6137:4-23) (Fleming-Wood) – do not "bring the user experience ever closer to that provided by an on-demand subscription service," as Mr. Kooker suggests. *See* Kooker WRT p. 14. Certainly, if a user wanted to listen to an artist on an on-demand basis, there are easier and more efficient means to do so other than listening to a seeded station for three hours hoping that the seeded artist will play the maximum four allowable times under the DMCA. For example, such an aficionado could simply utilize Spotify's on-demand service, or pull up a particular track on YouTube. *See* 5/29/15 Tr. 6593:19-6594:21, 6643:23-6644:1 (Kooker) ("Q. And, in fact, when a song is unavailable on a paid music service, most users look for it on YouTube, don't they? A. Yes.").

299. SoundExchange witness Mr. Hair's testimony further demonstrates that the Pandora listening experience is not converging with that of an on-demand service. Specifically, Mr. Hair expressed his inability to hear particular artists when he wants to hear them on non-interactive services, which he finds "frustrating": "I have a lot of friends that are recording artists, and I like to follow them. I like to hear my friends when I want to hear them, and sometimes I'm not able to do that on Pandora." 4/29/15 Tr. 812:6-22 (Hair).

300. Notably, even the interactive services themselves do not agree with SoundExchange's purported "convergence" theory. As Spotify's CEO has stated, "*I don't really view [Pandora] as a competitor*. The rest of the world seems to, for some reason. We want Spotify to be your music player. We don't want to be the radio service; we don't want to be the place where you watch a music video and then a cat the next moment. *We want to be the place where you store and collect, where you build your playlist for your dinner party or your workout. That is very different from Pandora*." Herring AWRT ¶ 10 (emphasis added).[38]

d. SoundExchange's "Convergence" Theory Ignores That Pandora Operates in a Fundamentally Different Market Than Premium, On-Demand Services

301. In addition to offering different functionality, statutory services like Pandora address a fundamentally different market than interactive services: the market for *radio* listening. The record shows that the vast majority (about 80%) of music consumption in the U.S. today takes place via a "lean-back" radio-listening experience. Fleming-Wood WDT ¶ 14 n.2; 5/27/15 Tr. 6138:2-23 (Fleming-Wood); 5/13/15 Tr. 3397:11-3398:5, 3398:6-3399:6 (Herring);

[38] *Citing* Georg Szalai, *Spotify's Daniel Ek Zings Dr. Dre's Beats Music*, THE HOLLYWOOD REPORTER (January 22, 2014), *available at* http://www.hollywoodreporter.com/news/spotifys-daniel-ek-zings-dr-672509.

see also Herring AWRT ¶ 9 & Figure 2 ([redacted]).

302. Figure 2 to Professor Shapiro's WRT depicts another, similar estimate of the market shares associated with different methods by which listeners in the United States get their music. This figure shows that terrestrial radio "[redacted]," and that other forms of radio-like listening (*e.g.*, "satellite radio," "webcasting") constitute another [redacted] percentage points, a point that Professor Rubinfeld "virtually ignores" in crafting his "convergence" theory.

[redacted]

See Shapiro WRT Figure 2; *see also id.* at 9; 5/18/15 Tr. 4478:15-4479:16 (Shapiro).

303. Nor is this this well-documented split between streaming internet radio and on-demand services of recent vintage; historically, music listening has long been dominated by terrestrial radio, with a much smaller population willing to spend money for records and CDs. As Mr. Herring explained, [redacted]

[redacted]." *See* 5/13/15 Tr. 3553:16-3554:6 (Herring); *see also id.* at 3556:13-3557:14 ("[redacted]"); 5/14/15 Tr. 3727:3-3728:4 (Rosin).

304. As SoundExchange witness Simon Wheeler testified, "[I]n the United States . . . consumers seem more willing to accept 'lean-back' music experiences instead of adopting the on-demand models that are more prevalent in Europe . . . . This makes me think that there is more of a passive user experience in the United States, listening to sets of playlists on a constant consumption basis rather than a search and play experience. Also, in my discussions with others in the industry, I often hear reference to how there is more of a 'lean back' mentality in the United States." Wheeler WDT ¶ 32; *see also* 4/30/15 Tr. 1204:4-17 (Wheeler) (agreeing that "consumers in the United States are, on the whole, experiencing a more . . . lean-back type of experience, you know, more of a give me a feed of the music I like type of experience.").

305. This testimony is fully supported by the empirical research of Pandora witness Larry Rosin, discussed in Section IV.C.3.a, *infra*.

306. That on-demand services are now starting to offer some radio-like functionality as part of their product offerings does not demonstrate that on-demand services and online radio are "converging," but simply that on-demand services are attempting to move into the adjacent radio market as well as the on-demand market, and thus reach the majority of consumers who are

interested in a lean-back experience. *See* 5/13/15 Tr. 3555:3-13, 3555:25-3557:14 (Herring) ([redacted]). To the extent that on-demand services are attempting, as part of their suite of offerings, to emulate Pandora-like functionality, this form of "convergence" scarcely supports SoundExchange's effort to engraft onto the statutory service market the prevailing rates in the interactive service market.

307. Moreover, that Spotify and other on-demand services have begun to offer different *features* – curation, recommendations, and the like, *see, e.g.*, Kooker WRT pp. 14-19 – that could appeal to the "lean-back" listening audience does not change the core of their business model. For example, when Spotify or Rhapsody users accept a recommendation from the service, the subsequent play of the song or album is still an on-demand event. *See* 6/2/15 Tr. 7206:18-7207:13 (Harrison) ("Q. When a user takes up Spotify . . . on one of its recommendations, the resulting play is still an on-demand play by that user, correct? A. That's correct."). And, when Spotify or Rhapsody users create playlists, that too involves the track-by-track selection of the songs that go on the list. *Id.* at 7209:7-10 (Harrison). Even when those users just listen to a playlist created by a friend or third-party, they are able to see every track on the playlist in advance, skip between such tracks, and listen over and over (and are, of course, not bound by the sound recording performance complement or other restrictions of the statutory license.). *Id.* at 7209:24-7210:9 (Harrison).

308. As Professor Lichtman rightly noted, what Professor Rubinfeld "doesn't talk about is the thing that's always been there that defines the service, which is Spotify lets you demand a song and get it. It hasn't been added but it hasn't been taken away. I think if you

really wanted to say there's been convergence, that Spotify looks a lot like Pandora, you have to say they've stopped on-demand. That's the key thing that makes the services different, not the little features that have been added, but the big feature that's always been there years ago and still today. So if you frame convergence and say, look at the things that have been added, you miss the most important thing that shows, hey, these really are different services." *See* 5/15/15 Tr. 3397:18-3998:21 (Lichtman).[39]

309. Nor does the increasing use of mobile devices to listen to both lean-back and lean-in music experiences lead to the conclusion that there has been a "convergence" between those two experiences themselves, as SoundExchange would have it. As Professor Rubinfeld admitted on cross-examination, that Pandora is available on mobile devices does *not* enhance a "Pandora user's ability to select a particular song for listening at the time he or she wants to listen to it." 5/7/15 Tr. 2304:22-2305:2 (Rubinfeld). Mr. Kooker of Sony admitted the same. 4/28/15 Tr. 432:16-433:14 (Kooker). Additionally, as Mr. Fleming-Wood explained, the fact that younger listeners are increasingly using Spotify and other on-demand services on their mobile and tablet devices is the "opposite of convergence"—such users "are exercising their desire to have full control over their listening experience," which is a feature Pandora cannot provide. 5/27/15 Tr. 6205:7-25 (Fleming-Wood).

3. There Is No Credible Evidence that Non-Interactive Users Would Otherwise Be Paying for On-Demand Services

310. SoundExchange's witnesses have also posited that statutory webcasters compete with (and thus substitute for) on-demand services, and that in the *absence* of statutory webcasting, "less zealous music customers" – those for whom selecting a specific song is not of

[39] Professor Lichtman agreed entirely with Judge Strickler's follow-up question that, as between interactive and statutory services, "there's still this huge gap because the fundamental points on each end are different, in one place you pick your music, in one place you still can't." *See id.* at 3999:10-4000:2.

critical importance – would be more likely to sign up for subscription-based interactive services. *See* Blackburn WDT ¶ 96 (contending that statutory webcasters "do cannibalize the revenues that copyright holders would otherwise earn from these services"). *But see* 5/4/15 Tr. 1674:23-1677:2 (Blackburn) (admitting he did no empirical analysis of extent to which Pandora users would switch to AM/FM radio, other statutory webcasters, or other entertainment options, rather than an on-demand service if Pandora were unavailable).

311. This assertion, like the "convergence" theory generally, was belied by the hearing testimony described above, which plainly demonstrated that approximately 80% of the U.S. music listening audience simply prefers a "lean-back listening experience" for which they do not have to pay. *See, e.g.*, 5/7/15 Tr. 2470:6-2471:24 (Wilcox) (conceding that he has no evidence that Pandora and services like it do in fact substitute for interactive services); 5/4/15 Tr. 1669:4-1670:5 (Blackburn) (acknowledging that some users prefer a "lean-back" experience to one in which they have to select music); *id.* at 1679:5-15 (admitting that some consumers are unwilling to pay for music); *see also* PAN Ex. 5289 at SNDEX0002916 ("The Internet audio pie continues to grow – the leading services are growing, but so far no evidence it's at one another's expense.").

312. As further noted above, market research demonstrates that a significant majority of Americans are not willing to spend any money – or only very little money – on music. For this vast audience, Pandora provides a high-quality, lean-back listening experience. 5/13/15 Tr. 3553:16-3554:6 (Herring) ([redacted]"); *see also* 5/13/15 Tr. 3555:25-3557:14 (Herring) ([redacted]

[redacted].").[40]

313. Moreover, industry research shows that nearly half of Pandora listeners are discovering music through Internet radio, and the most popular next step after discovering new music, especially for young listeners, is to listen to the song on an on-demand service. Fleming-Wood WDT ¶ 18.

a. Edison Research's 2015 Music Survey Shows That Pandora Does Not Cannibalize On-Demand Services

314. In order to test assertions made by SoundExchange witnesses concerning a purported "convergence" between on-demand music services and non-interactive Internet radio services, as well as the related theory that non-interactive webcasters are "cannibalizing" sales from interactive services, *see, e.g.*, Rubinfeld CWDT ¶¶ 68, 73, 194 and Blackburn WDT ¶¶ 24, 32, Pandora solicited the assistance of Larry Rosin of Edison Research ("Edison"), a recognized leader in the media research sector. *See* Rosin WRT pp. 1-3; 5/14/15 Tr. 3719:3-3721:16 (Rosin).

315. Edison conducted a national telephone survey of Americans ages 13 years and older (the "2015 Music Survey"). Rosin WRT p. 5. The 2015 Music Survey was designed to represent the national population using a random probability sample in which every member of the population has a known, non-zero chance of being selected to participate in the survey, a

[40] Pandora has experienced consumers' lack of willingness to pay for music firsthand. As Mr. Westergren testified, when Pandora Radio launched in the fall of 2005, it began with a subscription model that allowed for ten free listening hours, after which users were required to subscribe at a rate of $36 per year. Westergren WDT ¶ 18. That model proved to be flawed, as listeners were generally unwilling to pay for the service. *Id.* Instead, they would listen to the free ten hours and then never subscribe. *Id.*

methodology that that is widely recognized as the most reliable form of survey research and is used by most major polling organizations for their national surveys. Rosin WRT p. 5.[41]

316. As Mr. Rosin testified, the market for music acquisition includes a small core of heavy purchasers, often called "avids," a much larger group that engages in occasional purchases, as well as a group that that does not purchase at all. This classification of the music market is often referred to as the "80/20" rule: 80% of sales comes from 20% of the customers.[42] Rosin WRT p. 8; 5/14/15 Tr. 3727:21-3728:4 (Rosin) ("[T]he music business is not unlike many other media or entertainment-oriented businesses where there is a minority of people who are very avid users or purchasers, in this case, and a larger minority who don't participate at all in the market or participate on very light levels.").

317. Consistent with this principle, the results of the 2015 Music Survey showed that less than 20% of consumers spend more than $5 per month on average to purchase recorded music or otherwise consider it "very important" to keep up-to-date with music.[43] Rosin WRT pp. 8-9.

[41] A total of 2,006 respondents were interviewed, with 1,002 interviews conducted via a landline telephone and 1,004 interviews conducted via a cell phone to ensure the proper proportion of coverage of households in the United States that do not have a landline phone. Rosin WRT pp. 5-6. The data were weighted to match the most recent United States population estimates from the U.S. Census Bureau for age, gender, race and region of the country. Rosin WRT p. 7; 5/14/15 Tr. 3723:15-3724:2 (Rosin). With a total sample size of 2,006 respondents, the margin of error with a 95% confidence interval for results among the entire sample was +/- 2%.

[42] These same dynamics are consistently found in the markets for most non-staple goods, especially for entertainment options (*e.g.*, movie and book sales). Rosin WRT p. 8.

[43] To measure interest in music, the national 2015 Music Survey sample was asked: "How important is it to you to keep up-to-date with music?" The choices were "very important," "somewhat important" or "not at all important." Rosin WRT p. 8. As Figure 1 attached to Mr. Rosin's rebuttal testimony shows, only 17% of the US population ages 13 and older said keeping up-to-date with music is "very important" to them. Rosin WRT p. 8 & Figure 1; 5/14/15 Tr. 3724:6-21 (Rosin).

318. To assess music spending as well as interest, respondents were asked how much they spent on "purchasing physical CDs or digital songs and albums" in 2014. Rosin WRT p.8. As Figure 2 to the Rosin WRT demonstrates, *nearly half* of respondents said they did not spend *anything* on music in the previous year. Another 34% of respondents said they spent $60 or less per year (*i.e.*, $5 per month or less), and only 18% of respondents indicated that they spent more than $60 on recorded music in 2014. Rosin WRT pp. 8-9; 5/14/15 Tr. 3727:3-20 (Rosin).

b. Most Consumers are Unwilling to Pay Monthly Subscription Fees for Access to Online Music Services

319. The results of the 2015 Music Survey led Mr. Rosin to conclude that most consumers are simply unwilling to pay monthly subscription fees for access to online music services. Rosin WRT p. 9. In fact, only 3.8% of respondents reported currently subscribing to a service like Spotify Premium, which offers on-demand, commercial free access to music for $9.99 per month ($119.88 per year). Rosin WRT p. 9.

320. To assess consumer willingness to pay for an on-demand subscription service beyond those 3.8% who had already indicated that they did subscribe, the other respondents were asked how likely they were to spend $9.99 per month for a service that provides "on-demand access to a music library," and allows for streaming of "entire albums or individual songs that you choose." As Figure 3 to the Rosin WRT reflects, fully 77% of respondents were "not at all likely" to subscribe to an on-demand service at a monthly subscription rate of $9.99. An additional 14% of respondents said that they were "not very likely" to subscribe. Less than 10% of respondents said that they were even "somewhat likely" to subscribe, and only 3% said that they were "very likely" to do so. Rosin WRT p. 9 & Figure 3; 5/14/15 Tr. 3728:5-3729:13 (Rosin).

321. Mr. Rosin also tested lower price points ($4.99 and $2.99 per month, respectively) for an on-demand online music service. Rosin WRT p. 10. At $4.99 per month, Mr. Rosin found that 64% of respondents still were "not at all likely" to subscribe to a subscription music service, with an additional 15% "not very likely to do so." Rosin WRT p. 10 & Figure 4; 5/14/15 Tr. 3730:3-16 (Rosin). Even at a further reduced, $2.99 per month price point, a majority of respondents were "not at all likely" to subscribe to on-demand online music service, and more than two-thirds of respondents were not even "somewhat likely" to subscribe. Rosin WRT p. 10 & Figure 5; 5/14/15 Tr. 3730:17-3731:1 (Rosin).

322. These findings demonstrate that most consumers are simply unwilling to pay for an on-demand subscription service, even at prices substantially reduced from the $9.99 monthly rate currently charged by Spotify and other on-demand services. Rosin WRT p. 10. Moreover, as Figures 6-8 to Mr. Rosin's testimony show, consumers who use a non-interactive service such as Pandora are only marginally more likely than consumers generally to express interest in paying for such an on-demand subscription service at any of the $9.99, $4.99, or $2.99 per month price points. Rosin WRT p. 10 & Figures 6-8; 5/14/15 Tr. 3732:1-3733:10 (Rosin).

323. In sum, and contrary to SoundExchange's contentions, Pandora is not satiating users who otherwise would be paying to subscribe to Spotify or other interactive services.[44] Rosin WRT p. 10.

[44] The 2015 Music Survey further demonstrated that most consumers are unlikely to pay for a subscription to an online music service *of any kind*. Respondents who indicated that they had listened to Pandora in the last month, but who were not paid subscribers to Pandora's paid subscription tier, Pandora One, were asked about their interest in subscribing to Pandora One. Over 75% of respondents answered that it was "not at all likely" or "not every likely" that they would pay the current price of $4.99 per month to do so. *See* Rosin WRT p. 11 & Figure 9; 5/14/15 Tr. 3733:11-3734:10 (Rosin).

c. Non-Interactive Services Are Not Inhibiting the Growth of Paid On Demand Services

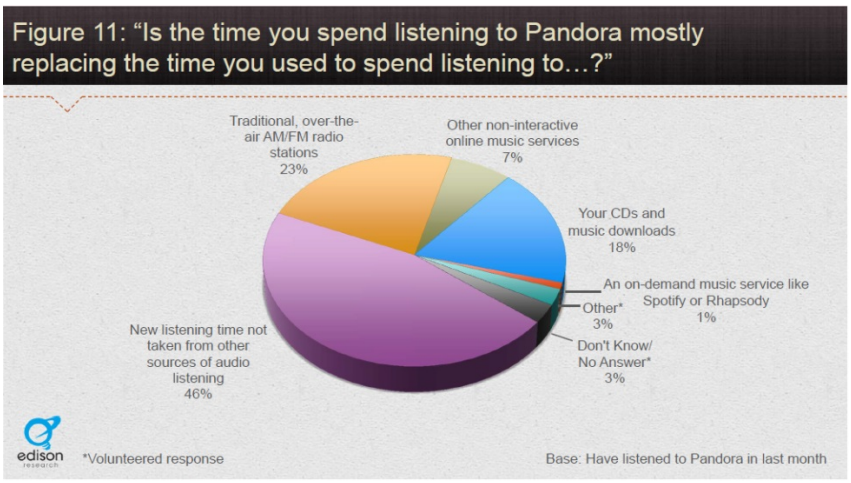
324. Another striking finding of the 2015 Music Survey is that, contrary to the assertions of SoundExchange witness Dr. Blackburn, there is little indication that Pandora and other similar "non-interactive" services inhibit the growth in the number of subscriptions to paid interactive services. *Compare* Rosin p. 11 and PAN Ex. 5289 at SNDEX0002916 *with* Blackburn WDT ¶ 96.

325. In fact, the 2015 Music Survey results show that *only 9%* of Internet audio users said they would pay for a subscription to an on-demand Internet music service if they could not use free Internet audio-only music services. Rosin WRT p. 12 & Figure 10.[45]

326. The 2015 Music Survey results also reveal that time spent listening to Pandora is mostly either (i) new listening time (46%)[46] or (ii) replacing time previously spent listening to traditional AM/FM radio (23%). Rosin WRT p. 12 & Figure 11. By contrast, a mere 1% of Pandora's monthly users said the time they spend listening to Pandora is replacing time spent listening to an on-demand service like Spotify or Rhapsody:

[45] Half of respondents said they would revert to broadcast radio or watch music videos or listen to music on YouTube or Vevo. *Id.* Less than one-quarter said they would listen more to their owned music. 15% said they would simply listen to less music if free online music services were to disappear. *Id.*

[46] As Mr. Rosin explained, the fact that many respondents indicated that time spent listening to Pandora was new time was consistent with his expectations given that increasing use of smartphones is providing for new listening opportunities. Rosin WRT p. 12 n.10.

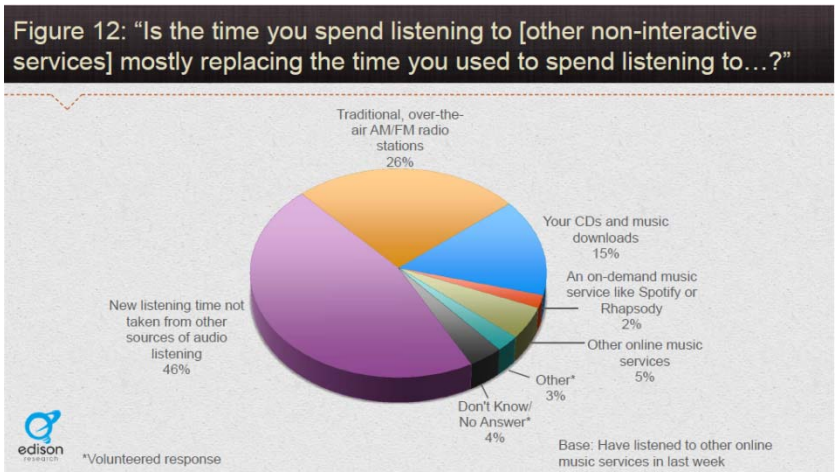


See id.

327. Professor Shapiro expanded upon the significance of these results, explaining that Figure 11 reflects "the type of substitution question that economists are interested in . . . . And the question is where is it taking listening time from, or what's it's effect overall? . . . . So what we're seeing here is actually half of the listening time is new listening . . . . But the convergence theory would say the additional time listening on Pandora would be coming at the expense of an interactive service, if they were . . . a relatively close substitute. And you absolutely do not see that." 5/18/15 Tr. 4479:17-4481:19 (Shapiro).

328. Moreover, that only 1% of time spent listening to Pandora is replacing an "on-demand music service like Spotify or Rhapsody," while 23% is replacing terrestrial radio listening, shows that "terrestrial radio is a much closer substitute for Pandora than is Spotify, for example." *Id.*

329. The results were similar for users of other non-interactive services, with only 1.6% of respondents (rounded to 2%) indicating that time spent listening to the non-interactive service is replacing time spent listening to on-demand services. *See* Rosin WRT pp. 12-13 & Figure 12. As Figure 12 depicts:



See also 5/18/15 Tr. 4481:20-4482:19 (Shapiro) ("[T]he results we just had for Pandora apply for the other webcasting services . . . . we're getting the same story here.").

4. The Evidence Shows That Internet Radio and Interactive Services Are Complements—Not Substitutes

330. Additionally, the results of the 2015 Music Survey indicate that many users of on-demand services are *also* users of non-interactive services. Rosin WRT p. 13. Specifically, 59% of the Spotify users (both users of the ad-supported service and Spotify Premium) reported that they also use a non-interactive service like Pandora (either free or paid). Rosin WRT p. 13.

331. These survey results further undermine Professor Rubinfeld's assertion that consumers likely view non-interactive and interactive services as "relatively close substitutes for each other." *See* Rubinfeld CWDT ¶¶ 21, 160. If changes in functionality were leading consumers to view on-demand services and non-interactive services as "relatively close substitutes," one would expect to see use of non-interactive services replacing use of interactive services at substantially higher rates, and not to see users of interactive services also using non-interactive services at the levels they do. Rosin WRT p. 13. Use of both types of services demonstrates that such services are not *substitutes*, as Professor Rubinfeld would have it, but

rather serve different, *complementary* roles for the subset of consumers that are willing to spend money on music. *Id*.

332. In addition to Mr. Rosin's survey work, the factual record further demonstrates that among the relatively small subset of music aficionados that are willing to pay for music, Pandora and on-demand services are more properly viewed, if anything, as complements of, rather than substitutes for, one another. *See* 5/13/15 Tr. 3398:9-3399:6 (Herring) (noting that Internet radio and on-demand services compete with each other "at that [20%] margin," but that that "in terms of the majority of listening for either service, it's not competing directly. They're not substitutes for each other.").

333. As detailed above, Pandora provides listeners with the opportunity to discover new music, and if the listener wishes to hear a specific song again later, he or she can either download the song from a site like iTunes, or listen on-demand through streaming service like Spotify. *See* Fleming-Wood WDT ¶ 18. In this way, Pandora fills the traditional role of radio, and the on-demand streaming services fill the traditional role of record stores, or replacement of a personal music collection. *Id.* at ¶ 19.

334. As Mr. Fleming-Wood elaborated during his oral testimony:

> [I]f you were to segment the population, there are a lot of people who listen just to radio-style kinds of things. But there are a lot of people who listen to radio and want to control their music-listening experience at some point. There are also some that always want to control their listening experience. So the group that wants both of those things looks for services that can satisfy both of those needs. *So we look at dual usage of platforms or services like Pandora and services like Spotify, and we see a high correlation.*

5/27/15 Tr. 6140:4-19 (Fleming-Wood) (emphasis added).

335. Mr. Fleming-Wood's testimony in this regard was informed by "quantitative research studies that . . . show the overlap of [Pandora's] listeners with on-demand listeners," as well as the fact "that Pandora and Spotify have managed to grow side-by-side over the last few

years." *Id.* at 6140:20-6141:6 (Fleming-Wood). [redacted] 5/13/15 Tr. 3554:7-3555:2 (Herring); *see also id.* at 3397:11-3398:5.

336. One such market study indicated that among the respondents that indicated that [redacted] *See* SX Ex. 269 at 17; *see also* 5/13/15 Tr. 3558:2-3559:11 (Herring).

337. To be sure, there is some competition between Pandora and interactive, on-demand services in the context of this smaller, more dedicated group of music listeners. 5/13/15 Tr. 3398:6-3399:6 (Herring) (noting existence of "marginal" competition between Pandora and on-demand services). Such services, however, are lesser, indirect competitors of Pandora due to their different, complementary functionality. Indeed, the context in which Pandora and the interactive streaming services do compete tends to be at the margins of their businesses.

338. For example, Pandora recognizes that "there are a lot of people who listen to radio and want to control their music-listening experience at some point." 5/27/15 Tr. 6140:10-12 (Fleming-Wood). Accordingly, Pandora has considered whether to launch an on-demand product to complement its radio product, and Spotify, for its part, has attempted to attract lean-back listeners by curating playlists. 5/13/15 Tr. 3398:9-3399:6 (Herring). But these activities merely reflect Pandora and Spotify's attempts to "compete in each other's adjacent markets," even though their "core businesses are very different." *Id*.

339. Far from having a purported "substitutional" effect vis-à-vis interactive services, industry research reflects, and SoundExchange's witnesses admit, that to the extent Pandora

draws its listening audience away from other competing music providers, it draws them primarily from (i) AM/FM radio[47] and (ii) pirated music websites,[48] neither of which provide record companies or artists with revenues from royalty payments. *See, e.g.*, 4/28/15 Tr. 431:6-19 (Kooker); 5/1/15 Tr. 1401:12-22 (Harleston).

D. SoundExchange's Efforts to Corroborate its Fee Proposal Through Use of the Apple Agreements Fails

340. In evident recognition of the frailty of his primary interactive benchmark, Professor Rubinfeld belatedly turns to agreements between Apple and two of the major labels – Warner and Sony – which grant Apple the right to perform Warner and Sony repertory music on its iTunes Radio service; these agreements, he claims, "corroborate" the fees he derives from the interactive benchmark.[49] 5/7/15 Tr. 2284:7-15 (Rubinfeld) ("I've used [the Apple agreements] in the sense to corroborate what I've done."); *see also* 5/7/15 Tr. 2287:9-16 (Rubinfeld) (Professor Rubinfeld confirming that he is not proposing the Apple-major label agreements as

[47] *See, e.g.*, PAN Ex. 5048 p. 44 ([redacted]); 4/30/15 Tr. 1125:25-1126:7 (Harrison) (discussing same); 5/4/15 Tr. 1676:20-1677:2 (Blackburn) ("Q. And if Pandora witnesses testified that they viewed terrestrial radio broadcasters as their primary competition to listenership, you have no basis to dispute that, right? A. As long as there's a recognition that there's competition with the other sources and that there's diversion from those sources as I wouldn't have any reason to disagree with that.").

[48] *See, e.g.*, 5/29/15 Tr. 6828:12-25 (Butler) ("Q: So this slide reflects that increased use of music streaming services is reducing illegal peer-to-peer music downloading, right? A: That's correct, yes.").

[49] In Section III.E to his CWRT, Professor Rubinfeld presented new arguments about four services – specifically, Rhapsody unRadio, Nokia MixRadio, Spotify's "free tier," and Beats Music's "The Sentence" – solely to "corroborate" and "confirm" SoundExchange's rate proposal. *See* Rubinfeld CWRT § III.E. For all of the reasons set forth in the Services' Renewed Motion to Strike Section III.E and Related Oral Testimony, dated June 2, 2015, incorporated herein by reference, the now-complete evidentiary record demonstrates that the four, non-statutory services discussed by Professor Rubinfeld in Section III.E are "so dissimilar" to statutory webcasters that Professor Rubinfeld's testimony was not proper rebuttal testimony, and in any event fails to provide any basis for rate-setting for statutorily compliant webcasters. Accordingly, that testimony should be stricken, or, at a minimum, accorded no weight, pursuant to the Judges' April 2, 2015 Order. Should the Judges deny the Licensee Services' motion to strike, Pandora will address SoundExchange's presentation of the Section III.E services in its reply findings of fact.

benchmarks.); 5/5/15 Tr. 1893:4-10 (Rubinfeld) ("[redacted].").

341. The Apple-Sony and Apple-Warner agreements do no such thing. In analyzing these two agreements, Professor Rubinfeld made a number of fundamental errors, rendering his analysis entirely uninformative. These include, among others, a complete failure to account for the complex web of interconnected agreements between Apple and the Majors, as well as several methodological and computational errors – most significant among them a failure to examine the parties' expectations at the time the agreements were entered into and instead, a reliance on Apple's (woeful) performance under the agreement. Shapiro SWRT pp. 1-3.

342. In the end, the approach used by Professor Rubinfeld to evaluate these agreements is so fundamentally flawed that it yields results that are ludicrous on their face: rates that are well above the otherwise applicable statutory rates and which result in payments that far outstrip the revenues earned by the iTunes Radio service. As Professor Shapiro explained:

> Professor Rubinfeld . . . "is doing a calculation that returns numbers substantially higher than the applicable statutory rate for what is either a statutory service or very close to a statutory service. . . . *That just doesn't make any sense*. . . . [W]hy would Apple pay far above the statutory rate when everybody agrees the statutory rate serves as a ceiling and it's an option for Apple. So you know right away *something is very much off with these numbers*.

5/19/15 Tr. 4526:5-16 (Shapiro) (emphasis added).

343. While elsewhere in his testimony Professor Rubinfeld acknowledges that the statutory rates act as a ceiling, when analyzing the iTunes Radio agreements he has no trouble ignoring that basic and uncontroverted principle. Rubinfeld CWDT ¶ 98 and n.76; Rubinfeld CWRT ¶ 222; *see also* Talley WRT p. 47 ("[A]t the very least, the presence of the statutory license places a ceiling on the set of plausible negotiated prices that would ever conceivably emerge from negotiated transactions from a willing buyer and willing seller.").

344. Moreover, when properly evaluated, using the best available information, the Apple agreements (including the two used by Professor Rubinfeld, as well as the agreement between Apple and UMG) are far more supportive of the rates proposed by *Pandora* than those proposed by *SoundExchange*.[50] Shapiro SWRT pp. 12-16 and Table 1.

1. Professor Rubinfeld Failed to Account for the Complex Web of Interconnected Agreements Between Apple and the Major Labels

345. As was plainly demonstrated at trial, the Apple iTunes Radio Agreements with the Majors "constitute just one part of a complex and interconnected set of agreements between Apple and the major record companies (and their publishing counterparts) that involve important non-statutory services, including the Apple Cloud Service." Shapiro SWRT p. 4; *see also* Katz AWRT ¶¶ 184-188; 5/11/15 Tr. 2912:1-21 (Katz).

346. By way of example, [redacted]

- Sony: [redacted] SX Ex. 2073; Shapiro SWRT p. 4. [redacted] SX Ex. 2073; Shapiro SWRT p. 4.

[50] This is not to suggest that the agreements between Apple and the Majors are good benchmarks for the rate-setting task at hand. As Professor Shapiro explained, and as discussed below, there are a number of complexities and unknowns that render the Apple-Majors Agreements poor benchmarks. 5/19/15 Tr. 4518:6-18 (Shapiro) ("[T]he complicated interconnection between the iRadio deal and the other parts of the Apple – other arrangements Apple has with the majors are too intertangled to really get a reliable number here using these deals."); *see also id.* at 4529:22-4530:24.

- Warner: [redacted] Shapiro SWRT p. 4; SX Ex. 2072.
- Universal: [redacted] Shapiro SWRT p. 4; NAB Ex. 4205.

347. As each of these examples makes plain, the iTunes Radio agreements were not negotiated in a vacuum – the agreements clearly are interconnected with other agreements, particularly the Cloud Service agreements, between the Majors and Apple. Indeed, Professor Rubinfeld candidly acknowledged that [redacted]. 5/6/15 Tr. 2063:19-2064:1 (Rubinfeld). Despite this recognition, Professor Rubinfeld gave the Cloud Service agreements, as well as the other agreements between Apple and the Majors, no consideration whatsoever. Shapiro SWRT pp. 4-5. As Professors Shapiro and Katz explained, simply ignoring the complexities that result from other interrelated agreements is not a valid form of analysis. To properly evaluate the iTunes Radio agreements, it is necessary to account for all of the other related agreements. Shapiro SWRT pp. 4-5; 5/11/15 Tr. 2912:8-2915:2 (Katz). Professor Rubinfeld's complete failure in this regard renders his analysis, at best, notably incomplete.

348. To be sure, this failure to account for the other agreements between Apple and the Majors is not a trivial matter. As the above examples demonstrate, some of the payments that are included in the iTunes Radio Agreements with the major labels – [redacted]

[redacted] – clearly relate, at least to some degree, to Apple's Cloud Service. Yet, rather than make any effort to investigate how to appropriately allocate these payments, Professor Rubinfeld simply assumed that these payments are entirely attributable to the iTunes Radio service. Shapiro SWRT pp 4-5; 5/11/15 Tr. 2912:8-2913:1 (Katz). This assumption is not only highly questionable, but is, in large part, what drives the per-play rates that Professor Rubinfeld calculates. *Id.* at 2910:25-2911:25 ([redacted]).

2. Professor Rubinfeld's Analysis is Riddled with Methodological and Computational Errors

349. Were Professor Rubinfeld's complete failure to account for the other intertwined agreements between Apple and the Majors not enough, Professor Rubinfeld also made significant methodological and computational errors in evaluating the Apple iTunes Radio agreements. First, Professor Rubinfeld used an *ex post*, rather than *ex ante*, approach to evaluating these agreements. By doing so, Professor Rubinfeld entirely ignored the expectations of the parties at the time they entered into the agreements – what the willing buyer and willing sellers agreed to at the time they struck their bargain – instead focusing on what happened after the deals were struck. This error has significant implications, and led to dramatically overstated rates. Second, Professor Rubinfeld made a significant computational error when converting the effective per-play rates called for in the iTunes Radio agreements into comparable rates for the statutory license. This too served to drastically inflate the resulting per-play rates that Professor Rubinfeld derived from the iTunes Radio agreements.

a. Professor Rubinfeld Failed to Account for the Expectations of the Parties

350. Rather than examine the expectations of the parties at the time they entered into the iTunes Radio Agreements (an *ex ante* analysis), Professor Rubinfeld focused solely on what happened after the agreements were signed (an *ex post* analysis). As Professor Shapiro explained, "[t]his is a very serious methodological error." Shapiro SWRT p. 8; *see also* Katz AWRT ¶¶ 222-27; 5/11/15 Tr. 2916:10-2919:3 (Katz) (describing Professor's Rubinfeld's use of an *ex post* approach rather than an *ex ante* approach as a "really serious flaw."). By focusing on what actually happened, rather than what the parties expected when they entered into the agreements, Professor Rubinfeld's analysis failed to reflect the price that the buyer (Apple) was willing to pay when it signed these agreements or the price that the sellers (Warner and Sony) expected to receive when they signed the deals. Shapiro SWRT p. 11.

351. Of course, had the expectations of the parties been close to what actually happened, this error would be of little consequence. But, as the record plainly demonstrates, all parties – Apple and each of the Majors – anticipated that the iTunes Radio service would be far more popular than it turned out to be. *See, e.g.*, Katz AWRT ¶¶ 225-27. As a result of this dramatic discrepancy between the expected and actual performance of the iTunes Radio service, Professor Rubinfeld's approach yields per-play rates that are dramatically higher than any party expected. Shapiro SWRT p. 9; 5/19/15 Tr. 4521:24-4522:10 (Shapiro). Accordingly, Professor Rubinfeld's analysis provides no information as to what willing buyers thought they were agreeing to pay willing sellers – just what they ended up paying when their expectations proved to be dramatically wrong.

b. Professor Rubinfeld's Analysis is Further Compromised by a Significant Computational Error

352. Even working within Professor Rubinfeld's flawed framework, his analysis still contains a significant computational error. In order to use the iTunes Radio agreements to calculate a per-play rate for a service paying pursuant to the statutory license, Professor Rubinfeld had to make an adjustment to account for the fact that certain performances that would be compensable under the statutory license [redacted] Shapiro SWRT pp. 11-12; Katz AWRT ¶¶ 230-34.

353. To perform this adjustment, Professor Rubinfeld should have compared the number of plays on iTunes Radio that would be compensable under the statutory license to the number of compensable plays as defined in the iTunes Radio agreements. Such a calculation is not difficult. Professor Rubinfeld had detailed royalty reports that Apple provided to the major labels that include all of the necessary information. Indeed, this is the same data otherwise used by Professor Rubinfeld to perform his *ex post* analysis. The data from these reports show that [redacted]. Shapiro SWRT pp. 11-12; Katz AWRT ¶¶ 230-34; 5/11/15 Tr. 2925:20-2927:1 (Katz).

354. Inexplicably, Professor Rubinfeld chose, in this one instance, not to use Apple data, but instead manufactured an adjustment ratio using the much lower number of plays per listener-hour *on Pandora*. This resulted in an adjustment ratio of [redacted] In fact, by using Pandora data rather than calculating a ratio that is specific to iTunes Radio, Professor Rubinfeld is effectively assuming [redacted]

[redacted] – an assumption that is blatantly contradicted by all available evidence (both *ex post* and *ex ante*) as well as by the terms of the iTunes Radio contracts themselves, [redacted] Shapiro SWRT p. 12; Katz AWRT ¶¶ 230-34.

355. This error alone leads Professor Rubinfeld to calculate dramatically inflated rates. Shapiro SWRT pp. 11-12; Katz AWRT ¶¶ 230-34; 5/11/15 Tr. 2925:20-2927:1 (Katz).

3. An Appropriate Ex Ante Analysis Yields Dramatically Lower Rates than those Calculated by Professor Rubinfeld

356. As noted above, Professor Rubinfeld inappropriately used an *ex post* approach in evaluating the iTunes Radio agreements with the Majors, focusing on what actually happened rather than on the expectations of the parties at the time they entered into the agreements. A properly constructed *ex ante* analysis, such as that performed by Professor Shapiro, tells a very different story.

357. The best available estimates of the expectations of the parties at the time they entered into the iTunes Radio agreements reveal that [redacted] Shapiro SWRT pp. 12-16. These effective per-play rates, after making an adjustment using the best available data to account for the differences in the number of compensable plays as between the statutory license and the iTunes Radio agreements, were reported by Professor Shapiro in Table 1 to his Supplemental Written Rebuttal Testimony. That table is reproduced below:

358. This Table includes not only the individual expectations of the parties , but also the midpoint between the rates anticipated by Apple and those anticipated by the label. As explained by Professor Shapiro, these midpoints provide useful information about the expectations of the buyers and sellers who were parties to the Apple-Major Agreements – and show how dramatically overstated are the rates calculated by Professor Rubinfeld. Shapiro SWRT p. 16; 5/19/15 Tr. 4527:12-4528:12 (Shapiro).

359. To be clear, Professor Shapiro . That said, and as Professors Shapiro and Katz both concluded, the sounder approach is to analyze the agreements . Shapiro SWRT p. 12-13; Katz AWRT ¶¶ 197-218; 5/19/15 Tr. 4528:3-12 (Shapiro) ("I describe in my written supplemental

testimony here that there's – this complicated set of arrangements between Apple and the majors makes it very questionable, in my view, whether the lump sum should properly be attributed to the radio product. And I think the more – the better way to go is to not attribute it. I think it's particularly clear for Universal, given the record there. So I would tend to look at the [numbers without the lump-sum payments], but I've provided both of them for you.").

360. As the above properly constructed *ex ante* analysis demonstrates, the Apple iTunes Radio agreements are in no way "corroborative" of the rates proposed by SoundExchange and Professor Rubinfeld – they are far more corroborative of the rates proposed by Pandora. In fact, the more appropriate analysis – one without the lump-sum payments – yields rates in year one of the Apple agreements of between [redacted] – precisely in line with the effective per-play rates called for in the Pandora-Merlin agreement.

E. It Is Not the Responsibility of Pandora or Any Other Statutory Webcaster to Make the Recording Industry Whole for Declines in Recording Industry Revenues Attributable to Unrelated Factors

361. In support of its fee proposal, SoundExchange bemoans a multi-billion dollar decline in recording industry revenues over the past 16 years. While the Judges should consider the extent to which non-interactive services are promotional or substitutional of other sources of record industry revenues, *see* 17 U.S.C. § 114(f)(2)(B)(i), the evidentiary record is devoid of any credible evidence that statutory webcasting is, in fact, substitutional.[51] In the absence of such evidence, the decline in industry revenues is irrelevant to rate-setting here. *See* Shapiro WRT p.

[51] On the contrary, Pandora has presented considerable empirical evidence that, far from being substitutional, it is *promotional* of sound recording sales, as reflected by, among other things, Dr. McBride's Music Sales Experiments, which are discussed in Section V, *infra*.

47. It is not incumbent on Pandora, or any other non-interactive service, to make up for revenue declines attributable to other factors.

362. SoundExchange's attempt to attribute the long-term decline in record industry revenues to the growth of statutory webcasting failed to withstand the slightest scrutiny at trial. While several SoundExchange witnesses testified that industry revenues have declined while Pandora and other webcasters have grown, *see, e.g.*, Blackburn WDT pp. 30-34, each conceded that they have no evidence that statutory webcasting has *caused* the decline. *See, e.g.*, 5/4/15 Tr. 1613:11-19 (Blackburn); 4/28/15 Tr. 425:21-426:8 (Kooker); 4/30/15 Tr. 1115:19-1116:24 (Harrison); 5/7/15 Tr. 2471:5-17 (Wilcox).

363. To the contrary, and as described in greater detail below, Dr. Blackburn repeatedly conceded that numerous other factors have contributed to recording industry revenue declines and that he made no effort to determine the extent to which the recording industry's declining fortunes are attributable to any of these other factors, rather than to the growing popularity of non-interactive streaming. *See, e.g.*, 5/4/15 Tr. 1647:2-20 (Blackburn). Indeed, the evidence shows that nearly all of the decline in industry revenues occurred prior to Pandora's founding or while its user base was still modest and that during the timeframe that Dr. Blackburn referred to as the "period of Pandora's rapid growth," industry revenues stabilized. *Id.* at 1644:11-22; *see also* SX Ex. 41 (revenue graph); Shapiro WRT p.54; 4/30/15 Tr. 961:24-962:7 (Harrison).

364. More specifically, while Dr. Blackburn's direct testimony concerning the decline in industry revenues focused on the period after 2005, *see* 5/4/15 Tr. 1632:2-5 (Blackburn); Blackburn WDT p. 31 & Fig. 8, he conceded on cross-examination that inflation-adjusted industry revenues peaked in 1999. *Id.* at 1632:16-21; *see also* SX Ex. 41 (revenue graph). He

further conceded that during the period from 1999-2004, during which recording industry revenues declined by 25% or some $5 billion:

- Pandora had not yet launched;
- Other licensed streaming services were still so small, and their payments so immaterial, that the RIAA did not even include them when reporting industry revenue data;
- Apple launched the iTunes store and began selling digital downloads; and
- The primary cause of this multi-billion decline was piracy.

See 5/4/15 Tr. 1632:16-1635:3 (Blackburn).

365. Dr. Blackburn further acknowledged that between 2005-2010, after Pandora's founding but prior to what he described as its period of "rapid growth," numerous other factors caused record industry revenues to decline. Specifically, Dr. Blackburn conceded:

- Piracy remained a major influence on record industry revenues;
- Apple began selling downloads of individual songs through the iTunes store;
- The disaggregation of record albums, so that consumers could purchase only the songs they wanted without buying songs they did not want, had a significant impact on industry revenues;
- The recorded music industry faced vigorous competition from other entertainment options;[52]
- There was significant growth in the use of YouTube;
- Vevo and Hulu were founded; and
- There was a massive global recession beginning in 2008.

Id. at 1635:4-1644:10.

[52] Dr. Blackburn testified to a decline in the average number of hours spent listening to music per person per year between 2002 and 2009. *See* 5/4/15 Tr. 1638:7-11, 1639:7-11, 1640:15-20 (Blackburn); PAN Ex. 5288.

366. While industry revenues declined by more than $7 billion – or some 50% – between 2005 and 2010, neither Dr. Blackburn nor any other SoundExchange witness did any analysis to determine whether and to what extent any of these numerous other factors, rather than non-interactive streaming services, were causing recording industry revenues to decline. *See, e.g.*, 5/4/15 Tr. 1647:2-20 (Blackburn) (conceding that his analysis did not try "to isolate the relative impact of any of these factors that have had a downward influence on recorded music industry revenues"); *see also id.* at 1644:3-10 (professing not to know whether "7 million people streaming music on Pandora or the most devastating economic downturn in the United States since the Great Depression" had a greater impact on industry revenues in 2008).

367. Further undermining Dr. Blackburn's unsupported attempt to link the long-term decline in industry revenues to the increase in streaming on Pandora, the RIAA data on which Dr. Blackburn relies shows that industry revenues were stable between 2011 and 2013, a timeframe Dr. Blackburn described as the "period of Pandora's rapid growth." 5/4/15 Tr. 1644:11-22 (Blackburn). Dr. Blackburn conceded that total industry revenues were stable even though:

- Piracy continued to be viewed by record labels as having a major impact on industry revenues;
- The record industry continued to face vigorous competition from "a lot of other entertainment options," including new competition from mobile video games and video streaming;
- Apple and other retailers continued to sell individual song downloads in addition to the bundled album format

Id. at 1645:19-1646:12; *see also* Shapiro WRT pp. 49-62 (explaining that Pandora and other webcasters have helped stabilize record-industry revenues, following a precipitous decline caused by myriad other factors).

368. While Dr. Blackburn was the chief proponent of SoundExchange's dubious effort to link the long-term decline in industry revenues to the growth of non-interactive streaming services, he was not the only one. None of SoundExchange's other witnesses could point to any evidence that non-interactive streaming had caused any decline in industry sales either. Indeed, SoundExchange's witnesses from each of the three Majors conceded that they had neither presented nor even encountered any such evidence:

> Q: [Y]ou include a chart . . . showing that download sales for top tracks were less in 2014 than in 2013; is that correct?
> A: Yes.
> Q: But you have presented no evidence that statutory Webcasting is the cause of the declining sales data in Figure 20, correct?
> A: Correct.
>
> . . .
>
> Q: You've presented no empirical evidence in your testimony that statutory Webcasting acts as a substitute for on-demand services like Spotify?
> A: No known empirical evidence.

4/28/15 Tr. 426:5-12, 435:18-22 (Kooker).

> Q: [Y]ou're actually suggesting that Pandora is substitutional in sales, correct?
> A: Correct.
> Q: And I think Ms. Ehler on direct asked you . . . what evidence you have related to that question. Do you remember that?
> A: Yes.
> Q: And I believe your answer was the fact that sales have been declining in the last few years at the same time that listeners' shift to streaming services has increased; is that right?
> A: That's right.
> Q: All right. But you've got no evidence that listening to statutory webcasting is *actually the cause* of the decline in sales of permanent downloads and CDs; is that right?
> A: Right.

4/30/15 Tr. 1115:19-1116:14, 1123:21-1124:7 (Harrison) (emphasis added).

> Q: You've presented no empirical evidence in your written testimony that people are not subscribing to an on-demand service because they are using Pandora or some other noninteractive [service]; is that right?
> A: There were no surveys or such that I presented associated with that, correct.

> Q: You presented no evidence that if Pandora users were not listening to Pandora, they would instead devote that time to listening to Spotify or Rhapsody or Rdio or some on-demand service, correct?
> A: Correct.

5/7/15 Tr. 2471:5-17 (Wilcox).

369. Perhaps most telling, outside of this proceeding, Professor Rubinfeld and SoundExchange's counsel (then acting on behalf of UMG), [redacted]. *See* PAN Ex. 5349 (White Paper) pp. 2-3, 38-49; PAN Ex. 5025 pp. 14-15; NAB Ex. 4129, pp. 24, 28, 33.

370. In the absence of evidence that non-interactive streaming is *causing* declines in sound recording owners' revenues, as opposed to merely happening at the same time, those revenue declines have no bearing on rate-setting here. *See* 17 U.S.C. § 114(f)(2)(B)(i) (relevant standard is whether the "*use of the service*" is substitutional of "sound recording copyright owner's other streams of revenue," not simply whether there has been a decline in such revenue streams) (emphasis added).

371. As Professor Shapiro further explained, "there is no sound economic rationale supporting the notion that the statutory rates should be set at a level to make the record companies whole." Shapiro WRT p. 47. While the aspirations of record-label executives for higher statutory rates "may be understandable in an industry that has experienced a large decline in revenue as a result of piracy, technological change, and shifting consumer tastes, these aspirations are entirely disconnected from the willing buyer/willing seller standard that all parties agree should be used to set the statutory rates." *Id.* at 47-48.

372. Technological change and shifting consumer tastes, combined with competition, often cause the revenue of entire industries to decline. This is simply a result of normal economic forces at work. Shapiro WRT p. 48.

V. PANDORA'S STEERING EXPERIMENTS AND MUSIC SALES EXPERIMENTS

373. Pandora witness Dr. Stephen McBride is a member of Pandora's Science Team, which performs research and analyses to measure the effectiveness of Pandora features to improve the listening experience. McBride WDT ¶¶ 1, 5. The Science Team is composed of 15 individuals, 13 of whom hold doctorate degrees in computer science, engineering, statistics, or economics from leading academic institutions. *Id.* at ¶ 5.

374. The Science Team has primary responsibility for designing and analyzing controlled experiments, the most rigorous approach to data analysis. *Id.* at ¶ 7. Pandora's controlled experiments are comparisons between randomly selected groups of listeners, one of which receives a manipulated experience (the "treated" group) and the other of which receives the standard Pandora experience (the "control" group). *Id.* When experiments are (1) randomized, (2) controlled, and (3) blind,[53] they represent the "gold standard" for determining the causal impact of the manipulated experience. McBride WDT ¶ 7. All Pandora experiments meet these gold-standard experimental requirements, ensuring that comparisons between the treated and control groups provide the most rigorous estimate of the effect of the changed experience. *Id.*; *see* 5/18/15 Tr. 4464:17-4465:15 (McBride).

[53] "Randomized" means assignment of listeners to treatment is ultimately random, in contrast to deterministic assignment by the researcher. McBride WDT ¶ 7 n.1. "Controlled" means the primary outcome is a comparison between those receiving the exposure and those not to account for the 'placebo effect'. *Id.* "Blind" means experimental subjects are unaware of their assignment to the treatment or control. *Id.* In digital experimentation, blinding goes further by masking subjects from their participation in the experiment. *Id.* Random assignment is critical to a well-designed experiment to remove researcher bias, to balance other factors that could affect the result (confounders), to ensure valid causal inference (whether A did or did not cause B, with what level of statistical confidence), and, most importantly, to ensure the generalizability of results. *Id.*

375. Pandora's capacity to conduct rigorous experiments using listener data allows it to assess and improve both the targeting of its advertising and the service it provides to listeners. McBride WDT ¶ 10.

376. Two sets of experiments conducted by Dr. McBride and his team—the Steering Experiments and the Music Sales Experiments—have particular relevance in this proceeding, and are discussed below.

A. The Steering Experiments

377. As a non-interactive internet radio service that selects the music to be played for its listeners, Pandora has a capability that interactive services lack: the ability to "steer" its performances toward music owned by a particular record company. Shapiro WRT pp. 22-25. As a result, Pandora can choose to perform more of one record company's sound recordings than another's. In the Steering Experiments, Pandora demonstrated its ability to steer performances in this way without negatively affecting listenership. *See* Herring WDT ¶¶ 22, 31-32; McBride WDT ¶¶ 12-22; Shapiro WDT p. 27; Shapiro WRT pp. 22-25.

1. The First Set of Steering Experiments

378. In 2013, when Pandora was exploring the feasibility of negotiating direct licenses with record labels, Pandora investigated whether it would be possible to steer its performances toward recordings owned by certain record labels. Herring WDT ¶ 22. Pandora wanted to understand whether it could realize a financial benefit by securing performance rights at economically advantageous rates; that is, if Pandora had an economic incentive to perform certain sound recordings more than others, could Pandora actually perform (or "spin") those sound recordings more frequently without affecting listenership? *Id.*

379. Pandora's engineers designed an initial series of experiments to test whether steering more of Pandora's performances toward a selection of independent record labels would

affect listener retention. In particular, Pandora was interested in how such steering might affect the number of times listeners returned and how long they listened. 5/18/15 Tr. 4197:11-4198:20, 4200:8-19 (Herring); *see also* Herring WDT ¶ 22; McBride WDT ¶ 13.

380. Pandora had a measurable "natural" spin rate at which its algorithm performed the recordings of each record label. 5/18/15 Tr. 4201:5-11 (Herring). The steering experiments effectively put extra weight in the algorithm on a particular label's songs, in order to "overspin" those recordings by a given percentage (*e.g.*, 20%) above the natural spin rate. *Id*. at 4201:12-18. The results of these experiments – discussed in the written testimony of Pandora CFO Mike Herring and Pandora Scientist Steve McBride – showed that Pandora could overspin the recordings of certain independent labels by as much as [redacted] above their natural spin rate. *Id*. at 4202:3-18; Herring WDT ¶ 22; McBride WDT ¶ 13.

2. The Second Set of Steering Experiments

381. In 2014, at Professor Shapiro's direction, Pandora conducted a second set of steering experiments, this time to test its ability to overspin recordings owned by each of the Majors. As described in the testimony of Professor Shapiro and Dr. McBride, Pandora determined that it can increase or decrease each of the Majors' shares of performances by [redacted], without adverse consequences for the popularity of its service. *See* Shapiro WDT pp. 39-40; Shapiro WRT p. 23; McBride WDT ¶¶ 5-22.

382. From June to September 2014, Dr. McBride and his colleagues at Pandora conducted a series of randomized, controlled, blind experiments in order to answer two questions: (1) whether increases or decreases in performances of sound recordings owned by a particular record company would have a measurable impact on a key listener metric, specifically,

average hours listened per registered user;[54] and (2) whether Pandora's engineers could precisely manipulate the share of music played according to the record company that owns the recordings. McBride WDT ¶¶ 7, 12, 15.

a. Methodology

383. To answer those questions, pursuant to instructions from Professor Shapiro, Dr. McBride's team intentionally manipulated the share of music played on the service for test groups of listeners based on the companies that own the sound recordings. McBride WDT ¶ 13; Shapiro WDT Appendix F at 11.

384. The Steering Experiments consisted of a group of 12 experiments, each defined by a combination of a target ownership group (UMG/Sony/WMG) and a target deflection in share of spins (treatment group) as compared to spins that would occur according to the standard Pandora music recommendation results (control group). McBride WDT ¶ 15. The requested spin share deflections (the "steering") were: -30%, -15%, +15%, and +30% for each of the three ownership groups manipulated. *Id*. These percentage deflections comprised the experimental manipulations. *Id*. The experiments started on June 4, 2014 and ended on September 3, 2014 (13 weeks). *Id*.

385. The Steering Experiments operated through Pandora's "A/B Framework." McBride WDT ¶ 16. Pandora uses its A/B framework for conducting randomized, controlled, and blind experiments in which a Pandora Scientist or Engineer intentionally changes one aspect of the Pandora experience for a sample group of listeners (the "B" group, or treated group) and then compares the effects to groups of listeners who did not experience the change (the "A"

[54] Average hours listened per registered user is the most commonly studied measure Pandora uses for assessing changes to the core Pandora music recommendation algorithms. Almost all listening on Pandora is by users who are registered. McBride WDT ¶12 n.6.

group, or control group). *Id.* at ¶¶ 7-8. Pandora constructed its A/B framework to support controlled experimentation that takes advantage of Pandora's large user base and two-way communication with its users. *Id.* at ¶ 8. As explained by Dr. McBride, this has enabled, for the first time in a radio environment, the use of controlled experimentation to investigate, with sufficient power and reliability, how changes in programming and service features (among other things) affect listening behavior. *Id*.

386. The experimental subjects of the Steering Experiments were all Pandora listeners, each of whom was randomly assigned to one of the 12 treatment groups, to the single control group, or were included in the portion of listeners excluded from all experiments. McBride WDT ¶ 16. The treatment groups for UMG each had 5% of listeners, the treatment groups for Sony each had 7% of listeners, and the treatment groups for WMG each had 8% of listeners; the control group had 10% of listeners. *Id.*[55]

387. The Steering Experiments were implemented by manipulating the probability that any song from the target music group would play on Pandora using a single manipulation factor. McBride WDT ¶ 17. The single manipulation factor applied to all situations – ignoring all information about listener, sound recording, and station – and thus was a "naïve" manipulation, producing the largest reasonable estimate of listening impact. *Id*.

b. Results

388. Dr. McBride illustrated the results of the Steering Experiments in Figure 1 and Figure 2 of his written direct testimony. McBride WDT ¶¶ 20-21; *id.* at Figs. 1-2.

[55] To increase statistical reliability, the treatment group sizes varied across target music group to account for differences in share of music played on Pandora, having larger sample sizes for the smaller major music groups. *Id*. at ¶16 n.8.

389. As detailed in Dr. McBride's testimony, the Steering Experiments demonstrated that Pandora can precisely manipulate the share of music played based on the owner of the sound recording. McBride WDT ¶ 20; *id.* at Fig. 1; 5/18/15 Tr. 4332:16-4333:12 (McBride).

390. The Steering Experiments further demonstrated that Pandora is able to steer both toward and away from music of the three investigated music groups with minimal or no effect on the Pandora's listenership. McBride WDT ¶ 21; *id.* at Fig. 2; 5/18/15 Tr. 4336:7-18 (McBride).[56] The experimental manipulations had very minor, and in most cases, statistically insignificant impacts on average hours listened between each of the 12 treatment groups and the control. McBride WDT ¶ 21.

B. The Music Sales Experiments

391. The Music Sales Experiments conducted by Dr. McBride show that Pandora's Internet radio service promotes, rather than substitutes for, sales of phonorecords.

392. The Music Sales Experiments were designed to test whether performances of sound recordings on Pandora have a positive or negative impact on sales of those sound recordings. McBride WDT ¶ 23. As described in Dr. McBride's testimony, Pandora intentionally manipulated the availability of certain recordings on its service in certain locations and measured the effect on sales of the same music. *Id.* at ¶¶ 23-35. Specifically, the experimental manipulation was *not* to spin the referenced sound recordings on Pandora during an eight-week period, thus completely disabling those recordings in the randomly selected geographic regions. *Id.* at ¶¶ 24, 26. For listeners not treated with the experimental manipulation (the control group), music played according to standard processes by which

[56] Since implementing the Merlin Agreement [redacted]. *See* ¶ 121, *supra*.

Pandora creates playlists. *Id.* at ¶ 24. Pandora then analyzed the data to compare music sales of each album or song where it was playing on Pandora with sales of that album or song where it was not playing on Pandora. Shapiro WDT App'x E at 1.

393. The Music Sales Experiments were randomized, controlled, and blind, consistent with Pandora's practice of conducting "gold standard" scientific experiments. McBride WDT ¶¶ 7-8, 28; *see* ¶ 374, *supra*. This allowed Dr. McBride to determine whether Pandora's manipulations *caused* (rather than merely were correlated with) an increase or decrease in sales of the affected sound recordings. McBride WDT ¶¶ 9-11; 5/18/15 Tr. 4464:17-4465:15 (McBride). The robustness of the study design, and the rigor applied to the analysis, distinguish these results from any previous study of the promotional impact of a radio service. McBride WDT ¶ 49; 5/18/15 Tr. 4367:7-12 (McBride).

394. Dr. McBride's experiments demonstrated that music sales are *higher* when that same music plays on Pandora than when it does not—confirming that that Pandora's Internet radio service is promotional (not substitutional) of music sales for the music it performs. McBride WDT ¶ 49.

1. Methodology

395. Dr. McBride's team tested the effect of the experimental manipulation – *not* spinning particular music on Pandora within a randomly selected geographic region – on aggregate sales of that music in the region as reported by Nielsen SoundScan ("SoundScan"). McBride WDT ¶¶ 25-27. Pandora used SoundScan to measure sales because it is the industry standard – for example, it is the data used by the recording industry itself to measure and report sales. *Id.* at ¶ 29. The experiments included all Pandora listeners with a zip code mapping to one of the 228 mutually-exclusive US regions tracked by SoundScan. *Id.* at ¶ 27.

396. The music chosen for the experiments included both recordings new to Pandora ("New MSEs") and on catalog recordings long spinning on Pandora ("Catalog MSEs"). McBride WDT ¶ 24. For the Catalog MSEs, Pandora used songs included in the *Rolling Stone Top 500 Songs* and the *Pitchfork 500* (both lists of music deemed significant by critics) in order to test Pandora's capacity to promote music that is already broadly familiar and widely available from other sources. *Id.* at ¶¶ 33-34. Those characteristics could be expected, if anything, to decrease the measured promotional effect of Pandora: because the music is familiar, one would assume it is harder for Pandora to introduce / re-introduce the music to listeners than it would be to introduce new music to listeners. *Id.* at ¶ 34.

397. Dr. McBride and his team also estimated the effect of Pandora performances on music sales separately for music owned by the Majors and music owned by independent record companies. *Id.* at ¶¶ 41, 43, 48 & Tables 4, 6.

398. There were 1,215 experiments (814 New MSEs; 401 Catalog MSEs) with at least one unit sold during the experimentation period, which usually lasted eight weeks. *Id.* at ¶ 26.

399. Dr. McBride explained in detail the rigorous methodology of the Music Sales Experiments – including, for example, the ways in which Dr. McBride's team guarded against selection bias and controlled for predictable sales patterns. *See* McBride WDT ¶¶ 24-40.

400. Dr. McBride also examined whether the *amount* of airplay on Pandora affects music sales. *Id.* at ¶ 40. Specifically, he used the ratio of Pandora spins to SoundScan sales as an index of Pandora exposure, calculating the average promotional effect of Pandora along a spectrum of exposure. *Id.* By this measure, Pandora would be expected to have greater promotional impact in experiments with greater exposure (*i.e.* more airplay on Pandora). *Id.*

2. Results

401. Dr. McBride's testimony details the effect of Pandora performances on sales of sound recordings. McBride WDT ¶ 41. Positive estimates mean that music sales are greater when the music is spinning on Pandora, that is, Pandora is promotional; negative estimates mean that Pandora substitutes for music sales. *Id.* For each group of experiments, Dr. McBride measured the average impact of Pandora on sales overall, as well as the impact on the sales of major label recordings and, separately, on the sales of independent label recordings. *Id.* In addition, Dr. McBride calculated average promotional impact on a per spin basis, separately for major label recordings and other recordings. *Id.*

402. The data from these experiments reflect that Pandora has a net positive promotional effect. As shown in Table 3 of Dr. McBride's written direct testimony, spinning on Pandora *increases* music sales by +2.31% for music new to Pandora, and increases music sales by +2.66% for catalog music on Pandora. Both results are statistically significant. McBride WDT ¶ 42 & Table 3; 5/18/15 Tr. 4344:18-4345:12 (McBride). Thus, whether the music is new or is already broadly familiar, airplay on Pandora increases sales. McBride WDT ¶ 43.

403. Table 4 of Dr. McBride's written direct testimony breaks out Pandora's promotional effect on sales of major label recordings versus independent label recordings. McBride WDT ¶ 43 & Table 4. The results show that Pandora increases music sales for new music from the Majors by a statistically significant +2.82%. *Id.*; *see* 5/18/15 Tr. 4345:13-4346:13 (McBride) ("[W]e found that Pandora causes music sales for [new] music released *on major labels to rise by a higher amount . . . a very highly significant figure.*"). For newly released albums on Pandora, the estimated net promotion effect is larger for the Majors than for independent record companies by 1.2 songs sold per 1,000 spins on Pandora, though that difference is not statistically significant. *See* Shapiro WDT Appendix E at 2; McBride WDT

Table 6. For catalog music, Pandora has a promotional effect for major label recordings of +2.36% and a promotional impact on independent recordings of +3.85%. McBride WDT ¶ 43 & Table 4.

404. Figures 3a and 3b of Dr. McBride's written direct testimony present the promotional impact of Pandora for experiments meeting minimum Pandora exposure thresholds, for all New MSEs and Catalog MSEs, and separately by major record company versus independent. McBride WDT ¶ 44 & Figs. 3a-3b. These results show that increased exposure on Pandora is associated with even greater promotional impact. 5/18/15 Tr. 4347:5-8, 4348:3-14 (McBride). For example, for the 409 New MSEs in which Pandora spins were at least 25 times the number of sales, Pandora is +5% promotional. McBride WDT ¶ 44 & Figs. 3a-3b. For the 214 New MSEs in which Pandora spins were at least 150 times number of sales, Pandora is +15% promotional. *Id.*[57]

3. SoundExchange's Critiques

405. Dr. McBride's testimony, along with that of expert witnesses Dr. Peterson and Professor Katz, responded fully to the criticisms raised by SoundExchange as to the validity of Dr. McBride's conclusion that Pandora is promotional of music sales.

406. First, by ensuring that the Music Sales Experiments were controlled and randomized, Dr. McBride was able to balances differences between the groups subject to the study, so that the comparison between treated and control groups reflected *only the difference caused by the manipulation* of turning the tracks on and off. *See* McBride WDT ¶ 9; 5/18/15 Tr. 4464:17-4465:15. This approach assured that other factors posited by SoundExchange as

[57] These levels of Pandora exposure are not rare: over 50% of New MSEs had at least 25 spins per sale, and over 25% of New MSEs had over 150 spins per sale. *Id.* at ¶ 44 n.32.

contributing to the effect did *not* in fact cause the observed difference in sales of sound recordings. *Id*. As Dr. McBride explained at the hearing:

> Because it is a randomized study, all sorts of distinctions between how often somebody purchased it, whether or not they just recently watched a TV show, whether or not they heard this on an on-demand service, all of that is balanced because of randomization, which I'm passionate about, it's really important to distinguish correlation and causation, and because we're randomized, doing gold standard research, we can say that we account for those distinctions.

Id. at 4465:2-11. Indeed, "[s]tatisticians have developed the randomized controlled trial as a method for estimating exactly this kind of causal effect." Peterson CWRT ¶ 50.

407. Second, SoundExchange contended that by testing Pandora's impact on sales of the particular songs and albums manipulated in the experiments, Dr. McBride failed to examine whether Pandora's presence promotes *industry-wide* sales. *See* Blackburn WRT ¶¶ 6-14. In other words, the Music Sales Experiments may demonstrate only that Pandora can increase sales of certain repertoire at the expense of others; the experiments do not prove that Pandora increases overall consumer spending on recorded music. *See id.* But as explained by Professor Katz at the hearing, Pandora's proven ability to promote the particular repertoire that it plays is *precisely* the ability that would be relevant when negotiating direct licenses with individual record labels. *See* 5/26/15 Tr. 5663:17-5668:4 (Katz). Professor Katz illustrated:

> If I am a record company and I am competing, that [promotion of my own repertoire]'s a good thing from my perspective. If I can shift share from my rivals to me and make money on it, I'm going to count that . . . when I'm thinking about what sort of deals I'm going to enter into.

Id. By contrast, SoundExchange's preferred test—whether Pandora can promote record sales for the *entire industry*—would be of little concern to an *individual* record label negotiating a direct license in competition with other labels. *See id.* at 5665:9-5668:4. Only a *monopoly* record label that dominates the industry would be concerned with maximizing industrywide sales. *See id.*

And as discussed in Section II above, the Judges' task is to set rates that would be agreed-to in an effectively competitive market, not rates that would be demanded by a monopolist.

408. Finally, Dr. McBride explained during the hearing why SoundExchange's remaining critiques of the Music Sales experiments are without merit and do not affect the validity of the results. *See* 5/18/15 Tr. 4349:10-4354:18 (McBride) (responding to questions about Pandora's "Buy Button," experiments with zero sales, and the geographic accuracy of Pandora's data).

VI. PANDORA'S PROPOSED REGULATIONS

409. Pandora's modest revisions to the Section 380 regulations governing statutory webcasters should be adopted by the Judges. The proposed changes are chiefly intended to conform the regulations in that Section to Pandora's rate proposal (and Professor Shapiro's underlying analysis), and include the following:

410. **Definition of "Revenue"**: Pandora's rate proposal includes a percent-of-revenue component (specifically, 25%). In conjunction with that proposal, Pandora proposes a simple definition of "Revenue" (a definition that has not previously been included in the webcasting regulations) that is carefully limited solely to revenue earned by services for making eligible transmissions subject to the Section 112 and 114 statutory licenses:

> For purposes of this section 380.8, "*Revenue*" means all money earned by a Licensee consistent with Generally Accepted Accounting Principles ("GAAP"), which is derived by the Licensee from making Eligible Transmissions in the United States, and shall be comprised of the following:
>
> (a) Subscription revenue earned by a Licensee directly from U.S. subscribers for making Eligible Transmissions; and
>
> (b) Licensee's advertising revenues, or other monies received from sponsors, if any, attributable to advertising on channels making Eligible Transmissions, other than those that use only incidental performances of sound recordings, less advertising agency and sales commissions.

> For the avoidance of doubt, Revenue shall exclude revenue from activities other than making Eligible Transmissions, as well as sales and use taxes, shipping and handling, credit card, invoice, and fulfillment service fees.

411. Pandora's proposed definition accounts for the possibility that a service such as Pandora may be involved in multiple lines of business that fall outside of the scope of the statutory license, and may earn revenues from the operation of such services that are entirely distinct from the operations for which the Judges are currently establishing a royalty rate. Herring AWRT ¶ 59. In order to ensure that SoundExchange is only paid on the portion of revenues derived by a licensee from operations under the statutory license, Pandora's proposal thus includes all money earned according to GAAP derived from making eligible transmissions in the United States, and excludes revenue earned from other activities outside the statutory license. Herring WDT ¶ 37; Herring AWRT ¶ 60.

412. This approach is consistent with the definition of "Gross Revenues" for satellite radio and other statutory licenses. For example, the satellite radio revenue definition at 37 C.F.R. § 382.11 includes: "(i) Subscription revenue recognized by Licensee directly from residential 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." The satellite radio revenue definition at 37 C.F.R. § 382.11 *excludes* revenue from sale and/or license of equipment and/or other technology, including bandwidth and receiving devices ((3)(i)); revenue from intellectual property licenses ((3)(ii)); revenue for "products and/or other services offered for a separate charge where such channels use only incidental performances of sound recordings" ((3)(vi)(B)); and revenue from "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" (3(vi)(D)).[58]

413. The satellite radio revenue definition, including the above-mentioned exclusions, grew from the Judges' stated recognition in the *Satellite I* proceeding that "[i]n order to properly implement a revenue-based metric, a definition of revenue that properly relates the fee to the value of the rights being provided is required." *Satellite I*, 73 Fed. Reg. at 4087. The Judges accordingly defined "Gross Revenue" through a variety of exclusions in order to "more clearly delineate the revenues related to the value of the sound recording performance rights at issue." *Id*. Notably, when SoundExchange attempted to *eliminate* those exclusions in the later *Satellite II* proceeding, the Judges rejected that attempt, explaining that they were "driven by the admonition in SDARS–I to include only those revenues related to the value of the sound recording performance rights at issue in this proceeding. The Judges are satisfied that the exclusions permitted in the current Gross Revenues definition remain proper." *Satellite II*, 78 Fed. Reg. at 23072 (citing *Satellite I*, 73 Fed. Reg. at 4087) (internal citations omitted);[59] *see* Herring AWRT ¶ 58. SoundExchange's witnesses do not explain why the situation should be different here as to webcasters.

414. **Per-Performance Fee vs. Percent-of-Revenue**: Pandora's proposal provides that statutory licensees shall pay the greater of a per-performance fee or 25% of revenue. The determination of which "prong" of the rate formula applies is made *prior* to any deductions for

[58] These types of exclusions are also typical with the music industry. Professor Lys admitted that the agreements that he has reviewed exclude revenues earned by entities from other nonmusic streaming products and services, including exclusions for revenue earned from sales of hardware or equipment. *See* 5/4/15 Tr. 1488:23-1490:16 (Lys).

[59] The Judges continued: "In defining *Gross Revenues*, the Judges plainly stated that it was their intention to unambiguously relate the fee charged for a service provided by an SDARS to the value of the sound recording performance rights covered by the statutory licenses." *Satellite II*, 78 Fed. Reg. at 23072 (citing *Satellite I*, 73 Fed. Reg. at 4087).

directly licensed performances. This ensures an "apples-to-apples" comparison when determining whether the royalty due under the per-performance prong or the percent-of-revenue prong is greater.

415. **Direct-license credit**: Consistent with the Judges' ruling in the *Satellite II* proceeding, the regulations should provide an exclusion from fees owed so that the Licensee is not double paying for directly licensed performances (*i.e.*, one payment to the direct licensor, one payment to SoundExchange). *See* 37 C.F.R. § 380.3(d)(2) (direct license credit); Herring WDT ¶ 37. If the licensee service is paying under the per-performance prong, directly licensed performances will be excluded automatically by virtue of the existing definition of "Performance," which excludes "a performance of a sound recording for which the service has previously obtained a license from the Copyright Owner of such sound recording." (Neither Pandora nor SoundExchange proposes a change to this definition). For situations where the licensee is paying under the percent-of-revenue prong of Pandora's proposed rate formula, Pandora has included a definition of "Direct License Share" in its proposed regulations ("the result of dividing (1) a Licensee's Performances of directly licensed sound recordings by (2) the total number of Licensee's Performances of all sound recordings during the payment period") and provided that the licensee's payments shall be reduced by such Direct License Share to avoid double-payment. Notably, SoundExchange appears to agree with this approach in principle, and has included a direct-license exclusion in its own rate proposal.

416. **Ephemeral recording fee:** Consistent with past proceedings and the Merlin Agreement (which has no separate ephemeral recordings fee), Pandora proposes that the royalty payable for ephemeral recordings be included within the Section 114 royalty. There is no dispute on this point: SoundExchange has proposed the same. That said, as Mr. Herring

testified, a modification to current language prescribing a royalty for ephemeral recordings to be used "solely to facilitate transmissions for which [Licensee] pays royalties" is required for two reasons. Herring WDT ¶ 37; Herring AWRT ¶ 62. First, the phrase "for which it pays royalties" appears to permit the making of ephemeral recordings only for sound recordings for which a performance royalty is paid. However, the definition of "Performance" proposed by both Pandora and SoundExchange (which mirrors the current definition) exempts certain performances from payment, for example, "incidental" performances including "transitions in and out of commercials." *See* 37 C.F.R. § 380.2. This creates the possibility (likely unintended) that ephemeral copies of sound recordings that are used by a service for non-compensable performances under Section 114 might not be authorized under the regulations. The simple change to Section 380.3 proposed by Pandora would remedy this issue:

> *Ephemeral recordings*. The royalty payable under 17 U.S.C. 112(e) for the making of all Ephemeral Recordings used by the Licensee solely to facilitate transmissions ~~**for which it pays royalties**~~ ***made pursuant to 17 U.S.C. 114*** shall be included within, and constitute 5% of, the total royalties payable under 17 U.S.C. 112(e) and 114.

This edit clarifies that a webcaster is licensed to make ephemeral copies of sound recordings the performances of which are either payable or exempted from payment under Section 114. Herring AWRT ¶ 62.

417. In addition, the regulations adopted by the Judges should affirmatively state that statutory licensees are permitted to make as many ephemeral phonorecords of sound recordings as the licensee needs to optimize their statutory service. Clarification of this point is important because the statute provides that a statutory licensee is entitled "to make no more than 1 phonorecord of the sound recording (*unless the terms and conditions of the statutory license allow for more*)." 17 U.S.C. § 112(e)(1) (emphasis added). The terms of the statutory license should call for "more," for the obvious reason that statutory internet radio streaming necessarily

involves making multiple copies to facilitate transmissions in different streaming formats and at different bit rates, to have backup copies available for disaster recovery purposes, and to handle the volume of a popular national streaming service, among other reasons. Herring AWRT ¶ 63. To eliminate any doubt, the following sentence should be added to Section 380.3: "A Licensee is authorized to make more than one Ephemeral Recording of a sound recording as it deems necessary to make noninteractive digital audio transmissions pursuant to 17 U.S.C. 114." Herring AWRT ¶ 63.

418. [redacted].

419. **Definition of "Performance":** Because Pandora and other Internet radio providers may offer transmissions to listeners outside the U.S. (where they will be licensed according to the legal requirements of the foreign country), the regulations should make clear that only those transmissions to users in the United States are properly compensable under the Section 112 and 114 licenses. *See* Herring WDT ¶ 37. This is consistent with the definition of "Gross Revenues" from the *Satellite II* proceeding, which are limited to United States revenue. *See* 37 C.F.R. § 382.11 ("Gross Revenues' shall mean revenue recognized by the Licensee in

accordance with GAAP from the operation of an SDARS, and shall be comprised of the following: (i) Subscription revenue recognized by Licensee directly from U.S. subscribers for Licensee's SDARS . . . .").

420. **Late payment fee**: In the event the Licensee's payment and statement of account are late, only a single late fee should be assessed. A single late fee is more than sufficient to motivate licensees to make timely payments and accounting; duplicative payments (which would add up to 3.0% per month, or 36% per year) are unnecessary, and would be unreasonable and usurious. Herring WDT ¶ 37. SoundExchange appears to agree that in situations where the statement of account and payment are both late, but received on the same date, only a single late fee is due. *See* Bender WRT p.4 n.2. Pandora agrees. Mr. Bender contends, however, that if both the payment and statement of account are late, but submitted on different days, then two late payments should kick in. Respectfully, this does not make sense. First, if a service submits a statement of account 30 days late, but the payment isn't delivered until the 31st day, it would be entirely unfair to assess a second, 31-day late fee solely on account of the additional one-day delay in payment, when delivery of the payment just one day earlier would have resulted solely in a single, 30-day late fee. The much more sensible approach would be to assess a single late fee, calculated as of the date when both the payment and statement-of-account have been delivered (in the example above, 31 days). Moreover, assessing a second fee as SoundExchange proposes would also provide an incentive to services not to deliver their payment until the statement of account is ready, or vice versa, so as not to incur double-penalties: in the example above, the service would rationally not deliver its statement of account until day 31, when the payment was ready. Again, this makes no sense, and is counterproductive.

421. SoundExchange has failed to demonstrate that such a double-fee is necessary. Mr. Bender asserted in response that "payments and statements of account serve distinct functions and create distinct administrative costs," Bender WRT p. 3, and argued that having a statement of account is beneficial because having a royalty payment or a statement of account enables SoundExchange to go to the service "and say we received your payment, when can we get the calculation and the statement of account" or "you filed this statement of account for this amount, can you tell us when this payment will be forthcoming." 6/2/15 Tr. 7137:1-7138:12 (Bender). This explanation does nothing to counter the unfairness and disincentives described above. Mr. Bender's contention that if this provision were revised, SoundExchange would "get a lot more late payments" – is nothing more than speculation. *See* 6/2/15 Tr. 7139:3-8 (Bender).

422. **Statement of account signature:** SoundExchange has recently taken the position with Pandora that it cannot revise or adjust a previously submitted statement of account because the first version submitted was certified as accurate under the existing signature requirement in the regulations. Herring WDT ¶ 37. Licensees should not be prevented from revising and resubmitting statements if, in good faith, the licensees discover that they have miscalculated their statutory liabilities in some way – whether by underpaying or overpaying. The regulations should be revised consistent with Pandora's proposal to address such a situation. Herring WDT ¶ 37. SoundExchange's request to have corrections flow solely in one direction – where underpayments by licensees require upward adjustment and additional payment to SoundExchange, but overpayments are simply retained by SoundExchange and its members without recompense – should be rejected for the unfair, indefensible, and frankly cynical proposal that it is. SoundExchange has completely failed to demonstrate that the "operational burdens" involved in dealing with a corrected overpayment are materially greater than dealing

with a corrected underpayment. Indeed, Mr. Bender conceded that SoundExchange can (and does) debit member accounts where an overpayment has been made, and need not physically claw back money previously paid out. *See* 6/2/15 Tr. 7131:23-7132:21 (Bender). Even if the burdens of rectifying overpayments are somewhat greater than underpayments, that should not be an excuse for unfairly keeping payments that SoundExchange and its members do not deserve; such burdens are a cost of doing business that SoundExchange, like any other business that spreads such costs across its customer base, should expect and shoulder in the normal course.

423. **Unclaimed Funds**: Current regulations provide that in the event a sound recording copyright owner or featured artist entitled to a portion of a pool of royalties (presumably the royalties for a calendar month) fails to register with the collective within three years of the date of first distribution of all or any portion of that pool of royalties by SoundExchange, SoundExchange may retain those unclaimed funds. Herring AWRT ¶ 77. Pandora has proposed the following amendment to 380.8:

> If the Collective is unable to identify or locate a Copyright Owner or Performer who is entitled to receive a royalty distribution under this subpart, the Collective shall retain the required payment in a segregated trust account for a period of 3 years from the date of distribution. No claim to such distribution shall be valid after the expiration of the 3-year period. After expiration of this period, the Collective ***shall handle such funds in accordance with*** ~~**may apply the unclaimed funds to offset any costs deductible under 17 U.S.C. 114(g)(3). The foregoing shall apply notwithstanding the**~~ common ***or State*** law ~~**or statutes of any State**~~.

Herring AWRT ¶ 78.

424. This amendment is required because the current regulations permit SoundExchange to retain unclaimed funds for its own purposes, notwithstanding the common law or statutes of any State, which typically separately provide for the handling of unclaimed funds. *See* 37 C.F.R. § 380.8. There is no basis to believe that the Copyright Royalty Board has

been granted the authority to preempt state statutes in this fashion. *Cf.* Exec. Order No. 13132, § 4(a)-(b) (Aug. 4, 1999), *printed in Federalism*, 64 Fed. Reg. 43255, 43257 (Aug. 10, 1999).

CONCLUSION

For the reasons set forth herein, the Judges should adopt Pandora's Second Amended Proposed Rates and Terms.

Dated: June 19, 2015

Respectfully submitted,

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APPENDIX A

Fact Witnesses

1. Timothy Westergren is the Founder of Pandora Media, Inc. ("Pandora") and also sits on Pandora' Board of Directors. He is a life-long musician and trained jazz pianist with more than twenty years of experience in the music industry in areas ranging from production and audio engineering to film scoring and live performance. Westergren WDT ¶ 2. The Written Direct Testimony of Timothy Westergren was admitted in accordance with the parties' stipulation as of June 3, 2015. 6/3/15 Tr. 7374:21-7375:25.

2. Simon Fleming-Wood is Chief Marketing Officer of Pandora. He has worked in this capacity since he joined Pandora in October 2011. Fleming-Wood WDT ¶ 2; 5/27/15 Tr. 6121:24-6122:2 (Fleming-Wood). Mr. Fleming-Wood directs a team currently consisting of thirty-four people who are responsible for four primary areas of Pandora: (1) marketing and brand strategy, (2) public relations and communications, (3) business development, and (4) the Pandora One subscription business. Fleming-Wood WDT ¶ 3; 5/27/15 Tr. 6122:10-16. He testified before the Judges on May 27, 2015. 5/27/15 Tr. 6121:3-6206:22.

3. Michael Herring is Chief Financial Officer of Pandora. He has worked in this capacity since he joined Pandora in February 2013. Herring WDT ¶ 1; 5/12/15 Tr. 3332:15-20. Mr. Herring oversees a staff of nearly 200 people who are responsible for all aspects of the Company's finances and accounting, including reporting to the Securities and Exchange Commission and investor relations. Herring WDT ¶ 3; 5/12/15 Tr. 3333:11-3334:3. He also plays an active role in planning the general business strategy of Pandora. Herring WDT ¶ 3. He testified before the Judges on May 12, 2015, May 13, 2015, and May 18, 2015. 5/12/15 Tr. 3332:5-3356:5 (Herring); 5/13/15 Tr. 3367:2-3560:17 (Herring); 5/18/15 Tr. 4194:14-18 (Herring).

4. Stephan McBride is a Researcher and Science Team Member at Pandora. He has held the title of Senior Scientist, Economics, since he joined Pandora in April 2014. McBride WDT ¶ 1; 5/18/15 Tr. 4324:18-23 (McBride). Prior to joining Pandora, he worked as a professional economist consulting companies on pricing, valuation, and intellectual property matters. McBride WDT ¶ 2; 5/18/15 Tr. 4325:12-14 (McBride). Mr. McBride testified before the Judges on May 18, 2015. 5/18/15 Tr. 4324:2-4465:19 (McBride)

Expert Witnesses

1. Larry Rosin is the president and co-founder of Edison Research, a survey research company. He has worked at Edison since its founding in 1994. Rosin WRT p. 1; 5/14/15 Tr. 3718:21-3719:2 (Rosin). Prior to founding Edison, Mr. Rosin worked for a number of years for Bolton Research, a media research firm. Rosin WRT p. 1. Mr. Rosin has performed survey research for entities involved in litigation. Mr. Rosin testified before the Judges on May 14, 2015. 5/14/15 Tr. 3717:1-3806:13. The Judges accepted Mr. Rosin as an expert in consumer survey research and market research. 5/14/15 Tr. 3721:17-22 (Rosin).

2. Professor Carl Shapiro is the Transamerica Professor of Business Strategy at the Haas School of Business at the University of California at Berkeley, where he also holds an appointment as Professor in the Department of Economics. He is an economist who has been studying antitrust economics, the economics of innovation and intellectual property rights, competitive strategy, and government policies to promote competition and innovation for over thirty years, and he has published extensively on these topics. Shapiro WDT p. 1; 5/8/15 Tr. 2597:9-17 (Shapiro). Professor Shapiro has severed on numerous occasions as an expert witness or consultant to the Antitrust Division or the U.S. Federal Trade Commission and has also consulted or served as an expert witness on numerous antitrust matters for private companies in a

wide range of industries. Shapiro WDT p. 2; 5/8/15 Tr. 2601:7-13. Mr. Shapiro testified before the Judges on May 8, 2015, May 18, 2015 and May 19, 2015. 5/8/15 Tr. 2596:8-2737:10; 5/18/15 Tr. 4468:3-4508:12 (Shapiro); 5/19/15 Tr. 4517:5-4741:2 (Shapiro). The Judges accepted Mr. Shapiro as an expert in industrial organization, economics, antitrust economics, and the economics of intellectual property. 5/8/15 Tr. 2602:23-2603:5 (Shapiro).

3. Dr. Steven R. Peterson is an Executive Vice President at Compass Lexecon, an economics consulting firm that specializes in the economics of competition, finance, and regulation, among other areas. During his career, he has consulted on the economics of antitrust and competition, mergers, estimation damages, and the economics of valuation, and on regulation and public policy. Peterson CWRT ¶ 2; 5/14/2015 Tr. 3873:20-3874:6 (Peterson). He has also worked in the area of intellectual property and has testified on market power issues arising from the licensing of intellectual property. Peterson CWRT ¶ 2; 5/14/2015 Tr. 3874:7-9. Dr. Peterson testified before the Judges on May 14, 2015. 5/14/15 Tr. 3872:10-3916:22. The Judges accepted Dr. Peterson as an expert in applied economics. 5/14/15 Tr. 3874:24-3875:3 (Peterson).

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
THE LIBRARY OF CONGRESS
Washington, D.C.

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

REDACTION LOG FOR PANDORA MEDIA, INC.'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Pursuant to the requirements of the Protective Order entered by the Copyright Royalty Judges on October 10, 2014 (the "Protective Order"), Pandora Media, Inc. ("Pandora") hereby submits the following list of redactions from its Proposed Findings of Fact and Conclusions of Law, and the undersigned certifies, in compliance with 37 C.F.R. § 350.4(e)(1), that the listed redacted materials meet the definition of "Restricted" contained in the Protective Order.

Page/Paragraph	General Description
Page iii	Reflects material designated by SoundExchange as "Restricted."
Page 4	Reflects material designated by SoundExchange as "Restricted."
Page 9-10, ¶ 7	Reflects commercially-sensitive, non-public information concerning average Pandora listener hours by active listeners and number of tracks submitted to Pandora by artists and record labels.
Page 10, ¶ 8	Reflects commercially-sensitive, non-public information concerning amount of time and money invested in developing and improving the Music Genome Project.

Page/Paragraph	**General Description**
Page 10 ¶ 8	Reflects commercially-sensitive, non-public information concerning number of analyzed tracks within Music Genome Project database.
Page 11, ¶ 11	Reflects commercially-sensitive, non-public information concerning number of combined thumbs-up, thumbs-down and track skips.
Page 13, ¶ 18	Reflects commercially-sensitive, non-public information concerning proportion of Pandora listeners who use "thumbing" feature.
Page 15, ¶ 23	Reflects non-public information that was the subject of testimony during restricted session.
Page 17, ¶ 27	Reflects commercially-sensitive, non-public information concerning royalty payments made to SoundExchange.
Page 32, ¶¶ 59-61	Reflects material designated by SoundExchange as "Restricted."
Page 32, ¶ 62	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Pages 33-34, ¶¶ 63-65	Reflects material designated by SoundExchange as "Restricted."
Page 34, ¶¶ 66-67	Reflects material designated by SoundExchange as "Restricted."
Page 35, ¶ 69	Reflects material designated by SoundExchange as "Restricted."
Page 36, ¶ 72	Reflects non-public information that was the subject of testimony during restricted session.
Page 38, ¶ 75	Reflects non-public information that was the subject of testimony during restricted session.
Pages 38-39, ¶ 77 & n.15	Reflects material designated by SoundExchange as "Restricted."
Page 39, ¶ 78	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Page 39, ¶ 79	Reflects material designated by SoundExchange as "Restricted."

Page/Paragraph	**General Description**
Page 40, ¶ 80	Reflects material designated by SoundExchange as "Restricted."
Page 41, ¶ 81	Reflects non-public information that was the subject of testimony during restricted session.
Page 42, ¶ 83	Reflects material designated by SoundExchange as "Restricted."
Page 44, ¶ 88	Reflects material designated by SoundExchange as "Restricted."
Pages 44-45, ¶ 90	Reflects non-public information that was the subject of testimony during restricted session.
Pages 45-46, ¶ 92	Reflects non-public information that was the subject of testimony during restricted session.
Page 46, ¶ 93	Reflects material designated by iHeartMedia, Inc. as "Restricted."
Page 48, ¶ 99	Reflects non-public information that was the subject of testimony during restricted session.
Page 49, ¶ 104	Reflects material designated by SoundExchange as "Restricted."
Page 50, ¶ 106	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Page 50, ¶ 109	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora.
Page 51, ¶¶ 110-111	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora.
Page 51, ¶ 110 n.19	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora and non-public information that was the subject of testimony during restricted session.
Page 51, ¶ 111	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora, material designated by SoundExchange as "Restricted," and non-public information that was the subject of testimony during restricted session.

Page/Paragraph	**General Description**
Pages 51-52, ¶ 112	Reflects material concerning the terms of the confidential license agreement between Merlin and Pandora and non-public information that was the subject of testimony during restricted session.
Page 52, ¶ 112 n.20	Reflects commercially-sensitive, non-public information regarding Pandora's increased percentage of spins of Merlin artists and reflects non-public information that was the subject of testimony during restricted session.
Page 52, ¶ 113	Reflects non-public information that was the subject of testimony during restricted session.
Pages 52-53, ¶¶ 113-114	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora.
Page 53, ¶ 115	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora.
Pages 54-55, ¶ 119	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Pages 55-57, ¶¶ 120-122, 124	Reflects non-public information that was the subject of testimony during restricted session.
Page 59, ¶ 128	Reflects commercially-sensitive, non-public information concerning terms of the confidential license agreement between Merlin and Pandora and reflects non-public information that was the subject of testimony during restricted session.
Pages 59-60, ¶ 129 & figure	Reflects commercially-sensitive, non-public information concerning terms of the confidential license agreement between Merlin and Pandora.
Page 60, n.23	Reflects non-public information that was the subject of testimony during restricted session.
Pages 60-61, ¶ 131	Reflects non-public information that was the subject of testimony during restricted session and commercially-sensitive, non-public information concerning terms of the confidential license agreement between Merlin and Pandora.
Page 61, ¶ 132	Reflects non-public information that was the subject of testimony during restricted session.

Page/Paragraph	**General Description**
Page 61, ¶ 133	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora.
Pages 61-62, ¶ 134	Reflects non-public information that was the subject of testimony during restricted session.
Page 62, ¶ 135	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora.
Page 62, ¶ 135 n.25	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreement between Merlin and Pandora.
Page 64, ¶ 140	Reflects non-public information that was the subject of testimony during restricted session.
Page 64, ¶ 141	Reflects commercially-sensitive, non-public information concerning terms of confidential license agreement with Merlin and reflects non-public information that was the subject of testimony during restricted session.
Page 65, ¶ 142	Reflects non-public information that was the subject of testimony during restricted session.
Page 69-70, ¶ 154 n. 28	Reflects non-public information that was the subject of testimony during restricted session.
Pages 69-70, ¶¶ 154-155	Reflects commercially-sensitive, non-public information concerning results of Pandora steering experiments, Sony's share of performances on Pandora, and potential savings in royalty payments to the major record labels.
Page 71, ¶ 159	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Page 72, ¶ 160-161	Reflects material designated by SoundExchange as "Restricted."
Page 72, ¶ 162	Reflects material designated by SoundExchange as "Restricted."
Pages 72-73, ¶ 163	Reflects non-public information that was the subject of testimony during restricted session.
Page 74, ¶ 167	Reflects non-public information that was the subject of testimony during restricted session.

Page/Paragraph	**General Description**
Page 76, ¶ 176	Reflects material designated by SoundExchange as "Restricted."
Pages 76-77, ¶177	Reflects non-public information that was the subject of testimony during restricted session.
Page 77, ¶ 179	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Page 78, ¶ 180	Reflects non-public information that was the subject of testimony during restricted session.
Page 78, ¶ 181	Reflects material designated by SoundExchange as "Restricted" and material non-public information concerning the negotiation and confidential terms of a license agreement between Pandora and Merlin.
Page 78, ¶ 182	Reflects non-public information that was the subject of testimony during restricted session.
Page 78-79, ¶ 183	Reflects material designated by SoundExchange as "Restricted."
Page 79, ¶ 184	Reflects non-public information that was the subject of testimony during restricted session.
Page 79, ¶ 185-186	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Page 81, ¶ 191	Reflects commercially-sensitive, non-public information concerning the terms of a confidential license agreement with Naxos.
Page 81, ¶ 192	Reflects commercially-sensitive, non-public information concerning the terms of a confidential license agreement with Naxos and reflects non-public information that was the subject of testimony during restricted session.
Page 82, ¶¶ 193-194	Reflects commercially-sensitive, non-public information concerning terms of confidential license agreements between Pandora and Merlin, and Pandora and Naxos.
Page 82, ¶ 194 n.33	Reflects non-public information that was the subject of testimony during restricted session.
Page 85, ¶ 203	Reflects commercially-sensitive, non-public information concerning the terms of a confidential license agreement between Pandora and Merlin.

Page/Paragraph	**General Description**
Page 91, ¶ 216	Reflects non-public information that was the subject of testimony during restricted session.
Page 92, ¶ 218	Reflects material designated by SoundExchange as "Restricted" and reflects non-public information that was the subject of testimony during restricted session.
Pages 92-93, ¶ 219	Reflects material designated by SoundExchange as "Restricted."
Page 94, ¶ 223	Reflects material designated by SoundExchange as "Restricted" and non-public information that was the subject of testimony during restricted session.
Page 95, ¶ 226	Reflects non-public information that was the subject of testimony during restricted session.
Page 96, Heading IV.A.3	Reflects material designated by SoundExchange as "Restricted" and non-public information that was the subject of testimony during restricted session.
Page 96, ¶¶ 229-230	Reflects non-public information that was the subject of testimony during restricted session.
Pages 96-98, ¶¶ 231-233	Reflects material designated by SoundExchange as "Restricted" and non-public information that was the subject of testimony during restricted session.
Page 98, ¶ 235	Reflects non-public information that was the subject of testimony during restricted session.
Pages 99-100, ¶¶ 237-238	Reflects non-public information that was the subject of testimony during restricted session.
Page 100, ¶ 239	Reflects commercially-sensitive, non-public material concerning the terms of the confidential license agreements between Merlin and Pandora and Naxos and Pandora, and contains information designated by SoundExchange and iHeartMedia as "Restricted."
Page 102, ¶ 244 n.35	Reflects material designated by SoundExchange as "Restricted" and non-public information that was the subject of testimony during restricted session.
Page 104, ¶ 248	Reflects commercially-sensitive non-public information regarding Pandora's increased percentage of spins of Merlin artists, terms of the confidential license agreement with Merlin, and the percentage of spins on Pandora of Merlin artists.

Page/Paragraph	**General Description**
Page 104, ¶ 248	Reflects material designated by iHeartMedia, Inc. as "Restricted."
Page 104, ¶ 249	Reflects non-public information that was the subject of testimony during restricted session and material designated by SoundExchange as "Restricted."
Page 104-05, ¶¶ 250-251	Reflects material designated by SoundExchange as "Restricted" and commercially-sensitive, non-public information concerning steering and promotional activities by services.
Pages 106-07, ¶ 256	Reflects material designated by SoundExchange as "Restricted" and non-public information that was the subject of testimony during restricted session.
Page 110, ¶ 268	Reflects material designated by SoundExchange as "Restricted" and non-public information that was the subject of testimony during restricted session.
Pages 117-18, ¶ 287	Reflects non-public information that was the subject of testimony during restricted session.
Page 120, ¶ 293 n.37	Reflects commercially-sensitive, non-public information concerning proportion of Pandora listeners who use "thumbing" feature.
Pages 123-24, ¶¶ 301-02 & figure 2	Reflects non-public and proprietary information regarding listener habits.
Pages 124-25, ¶ 303	Reflects non-public information that was the subject of testimony during restricted session.
Pages 125-26, ¶ 306	Reflects non-public information that was the subject of testimony during restricted session.
Pages 128-129, ¶ 312	Reflects non-public information that was the subject of testimony during restricted session.
Pages 136-37, ¶ 335	Reflects non-public information that was the subject of testimony during restricted session.
Page 137, ¶ 336	Reflects non-public and proprietary information from a commercially-sensitive, internal Pandora document and reflects non-public information that was the subject of testimony during restricted session.
Pages 137-38, ¶ 339 n.47	Reflects material designated by SoundExchange as "Restricted."

Page/Paragraph	**General Description**
Pages 138-39, ¶ 340	Reflects non-public information that was the subject of testimony during restricted session.
Pages 140-41, ¶ 346	Reflects material designated by SoundExchange as "Restricted."
Pages 140-41, ¶ 346	Reflects material designated by SoundExchange as "Restricted."
Page 141, ¶ 347	Reflects non-public information that was the subject of testimony during restricted session.
Pages 141-142, ¶ 348	Reflects material designated by SoundExchange as "Restricted" and non-public information that was the subject of testimony during restricted session.
Pages 144-145, ¶¶ 352-354	Reflects material designated by SoundExchange as "Restricted."
Page 145, ¶ 357	Reflects material designated by SoundExchange and Apple as "Restricted."
Page 146, Table 1	Reflects material designated by SoundExchange and Apple as "Restricted."
Page 146, ¶¶ 358-59	Reflects material designated by SoundExchange as "Restricted."
Page 147, ¶ 360	Reflects material designated by SoundExchange as "Restricted."
Page 152, ¶ 369	Reflects material designated by SoundExchange as "Restricted."
Page 155, ¶ 380	Reflects non-public, commercially-sensitive information concerning steering experiment results and reflects non-public information that was the subject of testimony during restricted session.
Page 155, ¶ 381	Reflects non-public, commercially-sensitive information concerning steering experiment results.
Page 158, ¶ 390 n.56	Reflects non-public information that was the subject of testimony during restricted session.
Page 169, ¶ 418	Reflects material designated by SoundExchange as "Restricted."

Dated: June 24, 2015

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on June 24, 2015, I caused a copy of the foregoing public version of Pandora Media Inc.'s Proposed Findings of Fact and Conclusions of Law and accompanying Redaction Log to be served by email and first-class mail to the participants listed below:

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