Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
The Library of Congress
Washington, D.C.

In the Matter of: **Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)**	**Docket No. 16-CRB-0003-PR (2018-2022)**

SERVICES' JOINT PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

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INTRODUCTION

Amazon Digital Music LLC ("Amazon"), Google Inc. ("Google"), Pandora Media, Inc. ("Pandora"), and Spotify USA Inc. ("Spotify") (collectively, the "Services") respectfully submit this Joint Proposed Findings of Fact and Conclusions of Law. This joint filing consolidates various points that would otherwise be repeated in the Services' individual submissions, which include Proposed Rates and Terms.

The Services' rate proposals vary, but they share the following core assertions: (1) the rate for the compulsory license for mechanical rights for musical works in connection with interactive streaming under Section 115 of the Copyright Act should continue to be set as part of an "all-in" rate for musical works licenses that permits the services to deduct royalties paid to the same rightsholders and their agents for performing rights; (2) the rate should continue to be structured as a percentage of revenue, subject to certain minima; and (3) the "all-in" headline rate should be 10.5% of revenue, a rate that rightsholder and licensee representatives have voluntarily agreed to accept in settlements of two prior Copyright Royalty Board proceedings and that has been adopted in thousands of direct license agreements. The Services are united in opposition to the Copyright Owners' rate proposal, which calls for a "one-size-fits-all" rate set at the greater of a $0.0015 per-play rate or a monthly per-user rate of $1.06, without regard to service type and with no deduction for performing rights royalty payments. The Copyright Owners' proposal would radically alter the rate structure under which the streaming industry has developed and operated, would impose massive rate increases, and would cause entire product categories to vanish from the marketplace. Primarily for these reasons, it should be rejected out of hand.

The Copyright Owners have tried for generations to convince Congress to eliminate the compulsory license for mechanical rates and allow them to set prices without regulation. Time and again, those efforts to achieve what they euphemistically call "free market" pricing—but which in reality would be pricing infected with market power—have failed. More recently, the Copyright Owners have tried to convince Congress to replace the governing rate-setting standard of Section 801(b)(1) with a "willing buyer/willing seller" standard precisely because, in their view, the Section 801(b)(1) policy objectives compel "below market" rates. Congress rebuffed those entreaties as well. The Copyright Owners' rate proposal in the current proceeding is an unabashed attempt to achieve what Congress has been unwilling to grant.

The primary benchmark on which the Copyright Owners rely—royalties paid by interactive streaming services to record labels for the rights to publicly perform sound recordings and the associated rights of reproduction and distribution that operating the services requires—is not a rate designed to accomplish the objectives of Section 801(b)(1). It is not even a "willing buyer/willing seller" rate. The record evidence conclusively demonstrates that those royalties are set in a marketplace subject to a complementary oligopoly, rather than in one that reflects effective competition, as required to meet the "willing buyer/willing seller" rate-setting standard. The Copyright Owners' problematic reliance on a deeply flawed benchmark is compounded by their economic experts' failures to make any adjustments to account for those flaws. The Copyright Owners fare no better with their reliance on attempts by other retained economists to justify the Copyright Owners' proposal with misguided and blatantly biased "Shapley value" analyses.

As shown at trial and summarized below, the Copyright Owners' rate proposal fails to meet the objectives of Section 801(b)(1) in every respect: (1) it would not maximize the availability of creative works to the public, but rather would cause a significant contraction of the customer base for interactive streaming; (2) it would not provide a fair income to streaming services, which to date have generally been unprofitable even at existing rates; (3) it would not reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets; and (4) it would not avoid disruption, but rather would cause disruption by leading the Services and other licensees to shutter entire product categories. Accordingly, for the reasons set forth in their respective individual filings and in this joint filing, the Services respectfully submit that the Copyright Owners' rate proposal must be rejected.

The Services' Joint Proposed Findings of Fact and Conclusions of Law are summarized as follows:

Section I: Interactive Streaming Has Revolutionized the Music Landscape and Stabilized the Music Industry After Years of Decline

Interactive streaming has single-handedly reversed the fortunes of a music industry wracked by disruptive technological and social change. Section I recounts the events that led to the rise of music streaming. Section I.A describes how music piracy devastated the music industry, including the music publishers, in the first decade of the 21st century. Section I.B explains how the shift from album sales to individual digital downloads allowed consumers to purchase specific songs and meant the loss of "album cuts"—mechanical royalties from the less popular songs included in an album. The combined loss of sales due to piracy and the disaggregation of the album made it more difficult for many songwriters to sustain their livelihoods in the same way they did at the turn of the century. Section I.C describes how the growth of interactive streaming services has finally allowed the revenues of the music industry, including the music publishers, to stabilize and start to grow again. Interactive streaming is the only business model that has proven it can compete with music piracy and succeed.

Section II: Interactive Streaming Makes Creative Works Available to the Public Like Never Before to the Benefit of All Parties

This section discusses how interactive streaming services benefit publishers, songwriters, and consumers. Sections II.A-B explain the virtuous dynamic at the heart of the streaming business model. Interactive streaming services put tens of millions of works at the fingertips of every subscriber—an unprecedented wealth of music. To keep listeners engaged, the services invest heavily in tools to help users explore their catalogs and discover great new music. In turn, this benefits the "long tail" of songwriters and artists who did not receive airplay on terrestrial radio or shelf space in retail stores by introducing them to new fans, enabling them to earn royalties. Section II.C describes how streaming services provide artists with analytic tools to inform their business decisions, and fans with social features to share music with their friends. Section II.D details the wide range of business models the services employ to price discriminate and get business from consumers with a range of willingness to pay. Between full-price subscriptions, limited offerings, ad-supported service tiers, bundles, student plans, and family plans, interactive services have products available to appeal to the widest variety of consumers. This diversity—fostered and encouraged by the flexibility of the current rate structure—allows services to monetize the entire demand curve, which in turn "grows the pie" of industry revenues and the royalties paid to music publishers and songwriters.

Section III: Publishers and Songwriters Are Thriving in the New Digital Economy

This section explains how music publishers and songwriters benefit from streaming services. Sections III.A-C describe the positive effects on music publishers. Streaming has ended the decline in music publishing revenues caused by piracy, and publishing revenues have stabilized and are now growing again. Small publishers show the greatest growth as streaming services introduce the listening public to a "long tail" of artists and recordings that did not receive radio airplay or a place in the limited shelf space available in physical retail outlets. Music publishing is a low-risk, high-margin business, and music publishers are significantly more profitable than record labels or streaming services. Streaming services help publishers discover new writers, and do not interfere with publishers' role of providing advances to writers.

Section III.D discusses the impact of streaming on songwriters and music. Although piracy and the loss of album cuts led to a decline in professional songwriters, renewed growth in the music industry has led to renewed investment in songwriting talent. Uncontroverted record evidence shows that the number of songwriters and the number and rate of growth of new musical compositions are all increasing. Indeed, the overall supply of musical works and sound recordings available for streaming (and any other form of delivery to the public) is both unprecedented and overwhelming.

Section IV: Despite Reversing the Decline in Music Industry Revenues, Interactive Streaming Services Have Struggled to Achieve Sustained Profitability on a Standalone Basis

This section explores the effect of the current rate structure on interactive streaming services. The Section 801(b)(1) policy objectives are designed, in part, to achieve an equitable division of profits between rightsholders and licensees, but to date there has been no division at all: music publishing is generally profitable, and interactive streaming is not. Almost twenty years since the advent of interactive streaming, no interactive streaming service has attained sustained profitability on a standalone basis. Instead, the companies that run streaming services have lost hundreds of millions of dollars, and most of the entities that have entered the marketplace have failed. Section IV.A describes how paying for content is the biggest cost facing streaming services, and high royalties are a barrier to profitability and continued operation. Section IV.B shows that the streaming services spend the rest of their revenues on innovation in the hopes of gaining market share in the face of ferocious competition. Drawing on the testimony of venture capitalist David Pakman, Section IV.C explains that high royalty rates and low margins lead to an abnormally high failure rate for streaming services. This makes them unattractive investments and stifles growth in the industry. Lower royalty rates would lead to more growth, more innovation, and, in turn, higher revenues and higher royalty payments.

Section V: The Development of the Current Rates and Terms

Section V places the current rate structure into historical context, and shows that it is a good fit for the industry as it exists today. Section V.A establishes that industry participants realized the importance of interactive streaming more than a decade ago, and that large, diversified technology companies with far-ranging consumer offerings have been involved in operating interactive streaming services since the mid-2000s.

Sections V.B-D cover the history of the mechanical rights at issue in this proceeding. Uncertainty over whether streaming requires a mechanical license led to a historic compromise between publishers and the streaming services, in which the latter agreed to pay for mechanical rights. During the *Phonorecords I* proceeding, the publishers and the services agreed on rates adopted by the Board in January 2009 as Subpart B of 37 C.F.R § 385. The key features of the settlement were that (1) the new rate was set as part of an "all-in" rate for musical works licenses that permitted the services to deduct royalties paid to the same rightsholders and their agents for performing rights; (2) the new rate was structured as a percentage of revenue, subject to certain per-subscriber and other minima, rather than as a per-play rate; and (3) the "all-in" headline rate was set at a level (10.5%) that all parties deemed acceptable. In 2012, with streaming services firmly established as a fixture (and the future) of the music industry, the parties agreed to continue the Subpart B rates in *Phonorecords II*. The parties negotiated a similar set of rates for new service types, which the Board adopted as Subpart C of 37 C.F.R. § 385.

Sections V.E-G explain why the Copyright Owners' attempts to disavow the *Phonorecords I* and *Phonorecords II* settlements are unpersuasive. The market conditions they claim justify a radical departure from the existing rate structure were apparent to the parties in 2008 or at the latest in 2012. *Phonorecords II* lacks a non-precedential provision, and the non-precedential provision in *Phonorecords I* is irrelevant to this proceeding. Large numbers of private agreements between publishers and services more or less track the provisions of Subpart B and Subpart C of 37 C.F.R. § 385. Moreover, the Copyright Owners recently agreed to roll over the longstanding Subpart A rates until 2022 without seeking a single change.

Section VI: The Licensing of Other Rights Needed by Services to Offer Interactive Streaming

This section discusses the other rights needed to stream music, including the rights to reproduce, distribute, and publicly perform sound recordings, and the right to publicly perform musical works. Mechanical rights alone do not permit a service to stream a musical work; they are literally worthless to streaming services without the other rights needed to operate. For this reason, reasonable fees for mechanical rights that satisfy the Section 801(b)(1) policy objectives cannot be assessed without considering other payments made by the same licensees to the same rightsholders. Section VI.A explains that the sound recording rights interactive services need—the payments which are central to the error-riddled and biased benchmarking analysis proffered by the Copyright Owners' principal economic expert, Dr. Jeffrey Eisenach—cannot be obtained via compulsory license. Rather, as the Judges recently recognized in the *Web IV* rate proceeding, royalty rates in the marketplace for sound recording rights for interactive streaming are the product of a complementary oligopoly and are substantially higher than the rates that would be set in an effectively competitive market. Section VI.B describes how the Services must obtain blanket licenses to publicly perform music compositions from performing rights organizations ("PROs") mostly operating under antitrust consent decrees. After decades of stability, however, the performing rights marketplace has begun to fragment, leading to rising prices and the prospect of steeper increases in the future that result from market power, rather than any increase in the value of the licensed rights.

<u>Section VII: The Copyright Owners' Proposed Rate Structure Is Not Appropriate for the Marketplace for Interactive Streaming</u>

Setting aside the sheer magnitude of the rate increase sought, the Copyright Owners' proposal is also structured to clash with longstanding industry practices and would create needless disruption to established streaming business models. This section reviews the major structural changes proposed by the Copyright Owners and explains the problems they would cause. Section VII.A describes the terms the Copyright Owners propose. Section VII.B addresses the problems that ineluctably flow from the Copyright Owners' proposed "one size fits all" rate structure. The current differentiated rate structure has allowed services to create diverse offerings to serve consumers across a wide spectrum of preferences for features and willingness to pay—precisely the result sought by those who negotiated it. An inflexible "one size fits all" rate structure would shutter many types of services, stifling the growth of interactive streaming and reducing payments to music publishers and songwriters.

Section VII.C considers the proposed "per-play" rate structure. First, a per-play mechanical royalty structure does not make sense for the many services that seamlessly blend interactive streaming with non-interactive, radio-style listening, because the latter does not implicate any mechanical right. Indeed, for some of the products at issue, as few as [redacted] of the streams are ones that implicate any interactivity, rendering a per-play rate that applied to all plays nonsensical and absurd. Second, because the subscription cost is fixed, introducing a variable royalty based on number of plays creates uncertainty and volatility. Worse, it could force subscription services to limit listening, which in turn would reduce engagement with and demand for the product. Third, any concerns about measuring royalties based on a percentage of revenues can be alleviated by per-subscriber or other minima.

Section VII.D explains that the proposal to remove the performance rights royalty deduction is unreasonable because the two rights are perfect complements. There is no economic reason to separate the two, and the fairness and economic impact of mechanical royalty rates cannot be understood in isolation from performing rights royalties.

Section VIII: Adoption of the Copyright Owners' Rate Proposal Will Dramatically Disrupt the Industry

In pursuit of higher royalty rates, the Copyright Owners now propose rates and terms that would destroy the very businesses that only just recently revitalized the industry. Section VIII.A describes how these terms would cause royalty payments to balloon and force many services to shutter entire product categories: [redacted], become sure-fire money-losing propositions that services could not possibly sustain under the Copyright Owners' inflexible "one size fits all" rate proposal. Sections VIII.B-C explain why the services cannot compensate for such a steep rate hike. Raising prices or reducing functionality would cause subscribers to leave interactive streaming services in favor of piracy or other forms of media. Cutting marketing and sales expenses may lead to a decrease in subscribers as well. If the statutory rate is set too high, the services will have to make deals for mechanical rights with individual publishers. In addition to handling bargaining power to the publishers, this would be prohibitively expensive because streaming services use not just the works of the three major music publishers that collectively control the majority of musical works, but also music from tens of thousands of indie publishers that own rights to musical works to millions of sound recordings already embedded in interactive service product offerings. Indeed, as Copyright Owners have conceded, there is no industry-wide source of reliable data about ownership of musical works, further complicating the process of recalibrating rates through direct licenses if the statutory rate is set too high.

The burden of a rate spike would fall heaviest on certain categories of services, rendering them economically unsustainable. Section VIII.D explains that the impact of the Copyright Owners' rate proposal [redacted]. Similarly, Section VIII.E explains that the rigid royalty rates proposed by the Copyright Owners would [redacted].

<u>Section IX: Dr. Eisenach's "Market-based" Benchmark Analysis Is Entirely Unreliable</u>

Section IX shows that the benchmark analysis of the Copyright Owners' primary expert witness, Dr. Eisenach, is so unreliable as to be useless. Section IX.A points out that Dr. Eisenach misapprehends the Section 801(b)(1) rate-setting objectives. Section IX.B explains why the sound recording royalties used by Dr. Eisenach are not an appropriate benchmark under Section 801(b)(1). First, those rates are inflated by the record labels' market power, and Dr. Eisenach made no attempt to adjust for this. Second, his data points are blatantly cherry-picked; most egregiously, he omits data for Spotify, which is by far the largest interactive service. Section IX.C exposes the problems with the conversion ratio Eisenach used to change his sound recording data into numbers relevant to mechanical rights in music compositions. Once again, Dr. Eisenach's work is unreliable because he engages in unacceptable cherry-picking of his comparison points. Section IX.D critiques Dr. Eisenach's methods for calculating per-play performance royalties. Both of his methods contain critical faulty assumptions. Both also suffer from "garbage in, garbage out," because they rely on the cherry-picked data and improper conversion ratios exposed in the preceding sections. When properly adjusted to remove errors and inconsistencies, Dr. Eisenach's benchmarks suggest rates many times lower than what he calculates. Finally, Section IX.E concludes that, as a result of the various flaws exposed at trial, Dr. Eisenach's analysis is wholly unreliable.

Section X: The Economic Models and Arguments Presented by the Copyright Owners' Other Experts do not Support Their Rate Proposal

This section contains the Services' response to the Copyright Owners' other expert witnesses. Sections X.A-C critique the testimony of Dr. Gans and Dr. Watt. Both of their economic analyses are fundamentally unsound. They perform Shapley value analyses that incorrectly model the market in ways that skew the division of total surplus in favor of the Copyright Owners and against interactive streaming services. They also use inaccurate revenue and cost numbers based on global instead of U.S. data, and rely on invalid projections rather than actual data. The results are absurd and contradictory. Dr. Gans' Shapley analysis calls for much higher royalty rates than the current rates, which allocate negative surplus to the Services and would result in some paying [redacted] in royalties. Dr. Watt's Shapley analysis, by contrast, concludes that total musical works royalties paid by the Services as a percentage of revenue should decrease—an outcome completely incompatible with the Copyright Owners' proposal.

Section X.D examines the testimony of Dr. Rysman. Responding initially to pure percentage-of-revenue proposals, Dr. Rysman argued that a rate structure based on a per-play rate, rather than a percentage of revenue, is necessary because the Services have incentives to defer and displace revenue and profits. However, his conclusions ignore the minima proposed by the Services and are not supported by empirical evidence. Additionally, they are based on unreliable data and rely on calculations riddled with undisputed and uncorrected mistakes and inaccuracies.

Section XI: Apple's Proposal Is Also Flawed

This section discusses Apple's proposal for a flat, all-in, per-play royalty rate of 9.1 cents per 100 streams. For the same reasons why a per-play rate would be inappropriate, Apple's proposal should be rejected. Section XI.A explains that Apple's proposal would severely disrupt ad-supported interactive streaming services, causing them a massive and disproportionate rate hike. Section XI.B shows that the benchmark offered in support of Apple's proposal by Dr. Ramaprasad is critically flawed because it relies on a stream to download conversion ratio of 100:1. This ratio is unsupported by evidence; if the correct ratio were used, Apple's proposed rates would be much lower.

Section XII: Under United States Copyright Law, the "Mechanical" Right Has Never Existed Without the Protections of the Compulsory License

Section XII begins the Services' proposed conclusions of law. Section XII.A recounts the development of the compulsory license for mechanical reproductions of musical works—which is as old as the mechanical right itself—since its creation in 1909. Congress has repeatedly revisited and refined the compulsory license over the decades, most recently in 1998. Although rightsholders have often asked Congress to eliminate the compulsory license—invoking many of the same arguments made by Copyright Owners here—Congress has always refused because of the public interest in preventing copyright owners from abusing the market power that would result from deregulation. Congress similarly has rejected repeated requests from Copyright Owner representatives to change the Section 801(b)(1) rate-setting standard to a "willing buyer/willing buyer" standard. Section XII.B explains that, unlike the blanket Section 114 compulsory license, the Section 115 license is a work-by-work license that authorizes only the use of individual compositions.

<u>Section XIII: Interpretation of the Section 801(b)(1) Policy Objectives</u>

Congress created the four Section 801(b)(1) objectives to guide the determination of a reasonable rate in the absence of a voluntary agreement. This section discusses how those objectives should be interpreted within the context of this proceeding. Section XIII.A interprets the first objective, maximizing the availability of creative works to the public. This objective is intended to foster both the creation and the dissemination of creative works to the public.

Section XIII.B discusses the second factor, affording copyright owners a fair return and copyright users a fair income. Contrary to the Copyright Owners' claims, a fair rate under the statute need not match either creators' subjective views of their works' "inherent value," or the value that would be set in a free market. Instead, Section 801(b)(1) requires a rate that balances the owners' right to compensation with the users' need for access to the works at a price that would not hamper their growth.

Section XIII.C deals with the third factor, reflecting the relative roles of the copyright owner and user in the product made available to the public. The product being made available to the public is the digital music service as a whole, not the creative works alone.

Section XIII.D addresses the final factor, minimizing disruptive impact on the structure of the industry and prevailing industry practices. This factor requires a rate that does not hamper the arrival of new technologies and threaten the viability of current music delivery offerings. Forcing the closure of an entire tier or type of music service would be disruptive, as would forcing the Services to design their products to discourage consumer engagement. As licensees are already struggling to maintain sustainable, profitable businesses, raising rates would be disruptive to the industry and hamper further development.

<u>Section XIV: The Copyright Owners' Rate Proposal Does Not Satisfy the Section 801(b)(1) Objectives</u>

This section explains why the Copyright Owners' proposal does not satisfy the statutory objectives of Section 801(b)(1) and, accordingly, must be rejected. This is unsurprising, given Copyright Owners' and Dr. Eisenach's open hostility towards the compulsory license, judicial rate setting, and the 801(b)(1) factors themselves. Indeed, the NMPA recently fantasized that replacing the 801(b)(1) factors with a "willing buyer/willing seller" standard [redacted]. Undeterred by the continued application of the 801(b)(1) factors, Copyright Owners propose even greater increases here.

Section XIV.A asserts that the Copyright Owners' proposal would not maximize the availability of creative works to the public. Interactive streaming services drive music availability through their massive on-demand libraries, music discovery tools, and products targeting all types of consumers. A fixed one-size-fits-all royalty rate constricts availability because it prevents the Services from offering a diverse array of products that would expand the customer base for music streaming and maximize royalties. Indeed, the Copyright Owners' one-size-fits-all proposal is high enough to cause several prominent services to close their doors. A per-play rate also constricts availability because it incentivizes services to limit listening. There is no credible evidence that greater returns to the Copyright Owners are needed to improve the availability of musical works.

Section XIV.B demonstrates that the Copyright Owners' proposal would deny copyright users a fair income. Royalty rates are already very high and represent a massive portion of the Services' costs. The revenues not put towards royalties go towards innovating in order to hold on to customers in a hypercompetitive marketplace. As a result, digital music businesses suffer from high failure rates and low rates of investment that threaten to stifle growth and constrict royalty payments to rightsholders. On top of this already inequitable situation, the Copyright Owners propose a massive increase in royalty rates, representing a [redacted] increase for some services. This would prevent the services from earning a fair income. The Copyright Owners' revenues are increasing as a result of the growth of interactive streaming, reversing a long decline. There is no evidence that a rate is needed to provide the Copyright Owners a fair return.

Section XIV.C explains how the Copyright Owners' proposal does not reflect the relative roles of rightsholders and services to the interactive streaming products. The existing rates and terms were negotiated by the parties to reflect their relative roles in providing a range of digital music services to the public. In the interim, however, the record shows that the streaming services have taken the lead role on most of the key contributions highlighted by the statute: technical innovation, capital investment, cost, risk, and the opening of new markets. The Services have even contributed value creatively through the design of their products. The Copyright Owners, on the other hand, have not taken on a greater relative role—at best, their role has remained unchanged. The proposed increase in rates would not meet this statutory objective.

Section XIV.D addresses the disruptive impact the Copyright Owners' proposal would have on the Services. Their proposed rates would [redacted]. There is no evidence that the Services can compensate for higher royalties by raising prices or serving more ads. Even if they could, both of these tactics would cause more problems for the Services than they would solve. Given that the streaming industry still struggles to become profitable, increasing the rate would be disruptive.

Finally, Section XIV.E argues that any rate proposal that would [redacted] would *per se* fail to satisfy any of the Section 801(b)(1) objectives. [redacted] reduces the availability of creative works because [redacted]. It fails to afford a fair income to copyright users because a rate fixed higher than the market can bear allocates too much surplus to copyright owners, and a [redacted] provides no return to copyright owners. It fails to reflect relative roles because it [redacted]. Finally, the [redacted]. Because the Copyright Owners' proposal would lead to [redacted], it cannot satisfy the Section 801(b)(1) objectives.

Section XV: The Board Should Set an "All-In" Headline Rate for Musical Works Rights

This section discusses the Board's precedents that support setting an "all-in" rate that includes both mechanical and performance rights. An all-in rate was set in *Phonorecords I* and *Phonorecords II*. Furthermore, the Board has made similar determinations for reproductions and performances in connection with streaming sound recordings.

Section XVI: The *Web IV* Proceeding Does not Support Imposing a Per-Play Rate for Musical Works Here

This section distinguishes the *Web IV* proceeding and explains that, although the Board adopted per-play rates in that proceeding, it should not do so here. First, unlike in *Web IV*, the Copyright Owners have presented no reliable benchmarks indicating that a per-play rate is appropriate. Second, *Web IV* was decided under a "willing seller, willing buyer" standard. This proceeding will be decided under Section 801(b)(1), and a per-play rate does not satisfy that provision in the context of this marketplace and the business models that have gained widespread consumer adoption. Finally, the per-play rate structure was necessary in *Web IV* in part to accommodate radio stations who primarily attract listeners with non-music content. The Services in this proceeding all rely primarily on music to attract listeners.

Section XVII: There Is No Such Thing as a "Late" Payment Under the Statute Other Than Payment of Amounts Owed to Rightsholders Identified in the Copyright Office Records Prior to Distribution

Section XVII covers the Copyright Owners' proposed late fee. There is no evidence that late royalty payments are a significant issue in practice. Section XVII.A describes Section 115(c)(1), which provides that no royalties are payable under the compulsory license unless the copyright owner is identified in the registration or other public records of the Copyright Office. The Copyright Owners have presented no evidence that rightsholders who meet this standard are not being paid in a timely fashion. Section XVII.B explains that insofar as the services are making "late" payments under direct licenses, the timing of those obligations and the remedy for late payments are determined by the specific agreements at issue. Section XVII.C observes that even if late payments under private agreements were relevant to this proceeding, , the Copyright Owners' lack of transparency regarding ownership information for musical works is a major impediment to timely payment that the services cannot ameliorate on their own. Finally, Section XVII.D explains why the late payment provision under Subpart A does not justify a similar provision in this proceeding. Unlike in the proceeding establishing the Subpart A late fees, here there is no evidence of late payments under the compulsory license.

Section XVIII: Defining "Plays" as Streams of 30 Seconds or More, and Excluding Fraudulent Streams, Avoids Disruption and Allocates Fair Returns to Copyright Owners

This final section addresses the Services' proposal to insert a clarifying term defining a "play" as a stream of 30 seconds or more. Section XVIII.A explains that it is a common industry practice in interactive streaming only to allocate royalty payments based on streams of 30 seconds or more, and that a rule changing this would disrupt the Services' accounting systems. These agreements generally include 30-second thresholds for royalty allocations. Section XVIII.B adds that the 30-second rule allocates fair returns to Copyright Owners by making sure that only those works that are actually played and enjoyed by a listener, rather than skipped, are adequately compensated. The 30-second rule also protects both streaming services and Copyright Owners from royalty payments for fraudulent plays.

PROPOSED FINDINGS OF FACT

I. INTERACTIVE STREAMING HAS REVOLUTIONIZED THE MUSIC LANDSCAPE, AND STABILIZED THE MUSIC INDUSTRY AFTER YEARS OF DECLINE

A. Piracy Devastated the Music Industry

JPFF1. According to the Recording Industry Association of America (the "RIAA"), the U.S. recorded music industry saw an astounding 47% decline in the decade after the launch of Napster, a notorious music piracy service that facilitated the digital transmission of song files. Trial Ex. 1061, Page WDT ¶ 5; *see also* 3/20/17 Tr. 1679:19-1680:4 (Page) (revenues from CD sales in the U.S. began to decline around 1999, the time of Napster's launch); 3/20/17 Tr. 1835:18-1836:10 (Marx) (showing increase in music industry revenue until 1999 and then a large decline for the next decade, upon the launch of Napster).

JPFF2. Indeed, the Copyright Owners themselves have acknowledged that the advent of piracy had negatively impacted the publishing industry—including mechanical royalties—and that it had created great concern within the industry. *See, e.g.*, 3/28/17 Tr. 3528:19-22 (Miller) (songwriting paid well until piracy, which "quickly hurt [songwriters] badly"); 3/29/17 Tr. 3694:6-3695:10 (Israelite) (the NMPA was "very concerned" about piracy, which was rampant in the marketplace in 2006). Mr. David Israelite, the president and CEO of the National Music Publishers Association ("NMPA"), testified that mechanical royalties "dropped significantly during what [the NMPA] would call…the theft period, where there [were] a lot of theft of copies." 3/29/17 Tr. 3752:9-18 (Israelite). Likewise, Mr. Bart Herbison, Executive Director of the Nashville Songwriters' Association International ("NSAI"), acknowledged that piracy was a major cause of diminished mechanical royalties for songwriters. 3/23/17 Tr. 2941:11-16 (Herbison). Even the Copyright Owners' songwriter witnesses, including

Mr. Steve Bogard, testified that mechanical royalties began dropping significantly with the advent of piracy. 3/27/17 Tr. 3000:7-10, 3023:1-6 (Bogard).

JPFF3. This negative impact of piracy on the music industry was highlighted in even greater detail in the 2006 *Phonorecords I* proceeding, where industry participants, such as Mr. Roger Faxon, the CEO of EMI Music Publishing, cited statistics showing that the value of pirated music worldwide at that time was *$5 billion*. *See* Proposed Findings of Fact of the Digital Media Association pp. 20-21 (July 3, 2008), Docket No. 2006-3 CRB DPRA. The all-pervasiveness of piracy in that proceeding was unavoidable: other music publisher witnesses provided evidence that for every one song that was legally purchased, approximately five to seven were illegally downloaded. *Id.*

JPFF4. The positive impact that interactive streaming has had on the music industry is undeniable. David Israelite, one of the Copyright Owners' key witnesses, has heralded the Services as "important partners" to the publishers that have "played a positive role" in stemming piracy. 3/29/17 Tr. 3769:1-8 (Israelite). Further, as will be discussed in Section II, *infra*, the Services have undoubtedly "increased the availability of works" to the public, by using the same technology that facilitated piracy making all the world's music instantly accessible to consumers in a way that compensates rightsholders. 3/29/17 Tr. 3769:9-18 (Israelite) ("Oh, there is no doubt that [the services] have increased the availability of works, just by virtue of if you have 40 million songs in a library, it is certainly more accessible than if you were to try to find a physical version of those 40 million songs, no question.").

JPFF5. As further acknowledged by Mr. Israelite, the Services have worked alongside the Copyright Owners to combat piracy, which had previously devastated the music industry. Indeed, the evidence has shown that it was interactive streaming services, rather than legal downloads, that adapted to technological change, stemmed the tide of losses caused by piracy, and began the first prolonged reversal of the music industry's fortunes since industry revenue began to plummet in 1999. 3/20/17 Tr. 1835:18-1836:17 (Marx); Trial Ex. 1065, Marx WDT ¶ 28; Trial Ex. 1061, Page WDT ¶¶ 5, 32-33. Indeed, only on the growing strength of interactive streaming has the music industry begun to see positive momentum in overall revenue and profitability, after years of declines. *See* Section I.C, *infra*.

B. Downloads Unbundled the Album and Failed to Reverse the Decline in Industry Revenues Caused by Piracy

JPFF6. Using the same underlying technology, legal downloading emerged onto the scene after piracy, but it did not reverse the industry's fortunes. When legal downloading of music took hold in the early 2000s, consumers shifted their buying habits from purchasing albums to purchasing individual songs, a shift in purchasing habits sometimes referred to as the "disaggregation" or the "unbundling" of the album. *See* 3/23/17 Tr. 2940:9-16 (Herbison). This disaggregation of the album had grave consequences for the publishing industry. For example, Mr. Herbison noted in his written testimony that "songwriters depended on the mechanical royalties they earned on album cuts to sustain their livelihood." Trial Ex. 3015, Herbison WDT ¶ 14. These "album cuts" were "career-sustaining" even though they were *not* "big radio hit[s]," because bundled together with other hits on an album, the tracks generate mechanical royalties for the songwriter. *Id.*; *see also* 3/23/17 Tr. 2939:3-14 (Herbison).

JPFF7. When downloads unbundled the album, all of that changed. Consumers started purchasing individual tracks, rather than albums, and mechanical income for songwriters eroded substantially. *See* 3/23/17 Tr. 2941:5-10 (Herbison); *see also* Trial Ex. 1067, Page WRT ¶ 18 ("[I]f anything, the introduction of PDDs likely contributed to decreasing revenues by allowing consumers to spend only $0.99 on the song they actually want to listen to, rather than

$11.99 on an album just for one song they want to listen to and 11 other songs they did not want.").

JPFF8. Furthermore, the Copyright Owners' own expert, Dr. Eisenach, likewise targeted "unbundled tracks" as one of the "changes [that] have profoundly affected the way in which music is distributed and consumed, disrupted traditional business models, and reduced overall revenues" for the publishing industry. Trial Ex. 3027, Eisenach WDT ¶ 41. Spotify's Director of Economics, Mr. Will Page, provides data from the U.S. recorded music industry showing that recorded music revenues were *not* saved by the launch of digital downloads, made famous by Apple's iTunes in 2003. Trial Ex. 1067, Page WRT ¶ 18; 3/20/17 Tr. 1680:23-1681:13 (Page).

JPFF9. Dr. Gans also acknowledged the effect of disaggregation of the album on revenues, but his testimony suggests that the music industry should have priced *downloads* differently to account for the effects of unbundling. *See* Trial Ex. 3028, Gans WDT ¶ 24 ("The per-track mechanical rates should have been adjusted upwards for downloads to account for the change in the mix of tracks being sold."). This would have had the effect of increasing compensation to songwriters and publishers for sales of hit songs, but would have done little for the songwriters of unbundled "album cuts" that consumers no longer purchased. In all events, as discussed below, the Copyright Owners have voluntarily left the per-track mechanical rates for downloads in place through 2022.

JPFF10. Thus, the erosion in mechanical royalties occurred before the rise of on-demand streaming. 3/23/17 Tr. 2941:5-10 (Herbison). Indeed, one of the Copyright Owners' key witnesses, Mr. Herbison, acknowledged that the free-fall in mechanical royalties—by a count of *70 percent*—was primarily attributable to the combination of the unbundling of the album *and* piracy. *Id.* at 2945:4-14. Likewise, Mr. Israelite noted that the disaggregation of the album caused further decline—*not* a rebound—in mechanical royalties. 3/29/17 Tr. 3752:19-24 (Israelite); *see also* 3/27/17 Tr. 3000:7-22 (Bogard) (discussing how mechanical royalties for songwriters continued to fall with the unbundling of the album, such that "album cuts…didn't really matter."); Trial Ex. 3028, Gans WDT ¶ 25 ("The shift from physical to digital sales not only reduced the number of unique tracks from albums being bought by each user on which a mechanical royalty was being paid, but also concentrated royalties that were paid within the set of top tracks.").

C. Development of Interactive Streaming Services as a Legal Alternative to Piracy

JPFF11. It was only with the growing strength of interactive streaming that overall music industry revenues began to stabilize, and even grow. 3/20/17 Tr. 1682:23-1683:14 (Page); 3/20/17 Tr. 1835:18-1836:10 (Marx); Trial Ex. 1065, Marx WDT ¶ 28 & fig. 2 ("[B]y 2016, industry revenue had grown for two years in a row for the first time since their peak in the late 1990s. This growth has been attributed in part to streaming services.").

JPFF12. Indeed, the Copyright Owners themselves do not dispute that interactive streaming has helped combat piracy. Mr. Israelite acknowledged that "legal digital services…are and were an important factor in combating piracy." 3/29/17 Tr. 3698:13-16 (Israelite). Mr. Israelite further acknowledged that it was not enough for the Copyright Owners to fight piracy in the courts, but the availability of "legal alternatives was clearly an important factor" in the fight against piracy. 3/28/17 Tr. 3700:17-18 (Israelite).

JPFF13. Using some of the same technology that made piracy possible, interactive streaming was developed generally with an eye towards combating piracy and, in fact, in the early 2000s it was the record companies that attempted to develop interactive streaming as an alternate form of music distribution to advance this objective. *See* 3/8/17 Tr. 149:4-10 (Levine). Piracy was especially important to Spotify's story because the company was founded in Sweden, which is home to some of the biggest piracy sites in the world. Trial Ex. 1061, Page WDT ¶ 6; 3/20/17 Tr. 1665:21-1666:14 (Page). The discussion of developing legal service "carrots" to offer consumers as alternatives to the blunt "sticks" of copyright infringement lawsuits was a conversation that few were having even by 2006 when Spotify was founded. 3/20/17 Tr. 1666:18-24 (Page). Spotify specifically was founded to "beat piracy at its own game." Trial Ex. 1061, Page WDT ¶ 4 (citing Daniel Ek's belief that if Spotify "create[s] the right product, better than piracy…people will come.").

JPFF14. That "carrot" approach has had a profound effect on piracy. A study that Spotify conducted in the Netherlands demonstrates streaming's impact. As a case study, the Netherlands piqued Mr. Page's interest precisely because piracy was *fair use* at the time—a legal oddity that made the results from the Netherlands even more persuasive. *See* 3/20/17 Tr. 1669:13-23 (Page); *see also id.* at 1674:18-23 (the results of the Netherlands study could be extrapolated out to the U.S. because if Spotify could "crush piracy in a country where piracy wasn't against the law, then it would therefore hold that there's a considerable chance we can crush piracy here in America, where it is against the law."). The results of the study showed a decline in piracy where streaming was an available alternative. *See* 3/20/17 Tr. 1668:21-1670:5 (Page); Trial Ex. 1061, Page WDT ¶¶ 15-19.

JPFF15. While interactive streaming has undoubtedly helped the industry rebound—as verified with the Copyright Owners' own financial information (*see* Section III.A, *infra*)—piracy still exists and its threat continues. *See* 3/27/17 Tr. 3263:11-15 (Kokakis) (the threat of piracy has existed for a long time and continues to exist). Absent legal alternatives, *users will migrate back to piracy*, which remains an available technological alternative. *See id.* at 3263:20-23 ("[T]here may be some users who wind up shifting to BitTorrent sites" absent an alternative to piracy); Trial Ex. 1067, Page WRT ¶ 21 ("[C]ross-usage levels between Spotify ad-supported and lesser-valued options are high, and switching costs are low—if users have begun the process of moving from piracy…then they also know how to move back."); *see also* Trial Ex. 249, Klein WRT ¶ 68 (survey results showing that [redacted] of paid streaming respondents who [redacted]). The interactive streaming Services in this proceeding continue to innovate with new pricing plans that ensure users do not *choose* to resort back to piracy. *See* 3/30/17 Tr. 3984:11-16 (Gans) (discussing bundling as a way of dealing with piracy). If the Services are forced to raise prices and/or change functionality as a result of untenably high rates, consumers know how to—and will—return to piracy. *See* Trial Ex. 1067, Page WRT ¶ 21.

II. INTERACTIVE STREAMING MAKES CREATIVE WORKS AVAILABLE TO THE PUBLIC LIKE NEVER BEFORE TO THE BENEFIT OF ALL PARTIES

JPFF16. Interactive streaming services play an indispensable role in the value and distribution chain of the music industry. *See* 3/23/17 Tr. 2843:21-22 (Ghose). On the most basic level, they provide consumers with the infrastructure and the technological means to access an unprecedented library of songs. *Id.* at 2843:22-25. But in addition to connecting consumers to a massive catalog of music, interactive streaming services provide immense value to the Copyright Owners and music consumers in other ways, including through music discovery tools, leveraging social media networks, and using price discrimination to capture lower willingness-to-pay consumers. Indeed, the Copyright Owners' own witnesses acknowledge many of these benefits. *See, e.g.,* Trial Ex. 3026, Rysman WDT ¶ 15 ("Streaming services may allow users to follow the listening habits of their friends or of musicians and celebrities. Spotify was an early adopter of the social media aspect of streaming services."); *id.* at n.2 (describing how when President Barack Obama "released his personal playlist on Spotify," it "became the most listened-to user-generated playlist on Spotify within one day of being released").

A. Streaming Services Encourage Listener Engagement Through the All-You-Can-Eat Model

JPFF17. Interactive streaming services maximize the availability of creative works to the public by providing access to an unprecedented music library. For example, in 2005 the average physical store—such as a Wal-Mart—carried about 4,200 CDs, or a total of about 50,000 tracks. *See* Trial Ex. 1061, Page WDT ¶ 65. By contrast, a service like Spotify or Google Play Music offers over 30 million tracks that can be almost instantly delivered to a user's computer or mobile device. *Id.*; Trial Ex. 693, Joyce WDT ¶ 9. Indeed, Mr. Israelite conceded that "there is *no doubt* that [the interactive streaming services] have increased the availability of works, just by virtue of if you have 40 million songs in a library, it is certainly more accessible than if you were to try to find a physical version of those 40 million songs, *no question*." 3/29/17 Tr. 3769:9-18 (Israelite) (emphasis added).

JPFF18. The work-by-work nature of the Section 115 compulsory license means that, as far as that license is concerned, it is the service, and not the copyright owner, that contributes the value of accessing a large catalog of works. 3/29/17 Tr. 3795:18-3796:1 (Israelite). This is a key difference between the Section 115 license and many of the true "blanket" licenses analyzed in this proceeding. 4/4/17 Tr. 4853:19-23; 4854:18-20; 4856:19-4857:11 (Eisenach).

JPFF19. But the Services have done much more than increase the availability of works to the public. They also enabled the *consumption* of a significantly greater variety of works, thus dramatically increasing the number of works on which royalties are paid compared to the old CD/PDD regime. *See* Trial Ex. 1061, Page WDT ¶¶ 66-67 (citing a study of U.K. PDD data from 2008 that found that over 80 percent of the digital inventory went untouched, *i.e.*, of the approximately 13 million tracks available on the digital shelf at that time, 10 million were dormant and hadn't received a single purchase, as compared to the click-rate of Spotify tracks five years after launch, showing that, in 2013, of the over 20 million tracks then available on Spotify, *80%* had been streamed at least once); Trial Ex. 1064, Lucchese WDT ¶¶ 18-19 ("Before Spotify and streaming, the means to build a commercially-sustainable audience was defined by scarcity," and further discussing scarcity in terms of "physical inventory in record stores").

JPFF20. Services have incentive to increase additional consumption because "increase[d] engagement with the service" increases the "lifetime value" of the user—an incentive that both increases returns to the Copyright Owners in a percentage of revenue rate structure and one that would be threatened under a per-play structure. 3/8/17 Tr. 174:16-175:10 (Levine); *id.* at 175:11-15 ("So I feel that a royalty structure that discourages usage and engagement is counter to growing subscribers and getting more money, which is then shared with everybody, including the Copyright Owners"); *see also* 3/15/17 Tr. 896:1-6 (Herring) ("[I]f there's a per-play rate, my incentive is to reduce the hours people consume of music. So if I do that, it lowers engagement.").

JPFF21. Specifically, the Services facilitate consumption by providing consumers with immediate access to an extensive catalog of songs far beyond what individual consumers could ever hope to accumulate through physical acquisition, allowing them to sample and experiment with new music. Trial Ex. 1065, Marx WDT ¶ 38; 3/21/17 Tr. 2004:8-2005:15 (Marx); *see also* Trial Ex. 1061, Page WDT ¶¶ 64-65. The Services also offer a host of music discovery tools, often tailor-made to the user, that encourage this sampling and experimentation. For example, Spotify provides a variety of popular discovery products, such as Discover Weekly, Release Radar, and Daily Mix, all of which give users personalized feeds of recommendations every week—or day. *See* 3/21/17 Tr. 2261:24-2262:2 (Lucchese) (discussing Release Radar and its "personalized feed of recommendations"); *id.* at 2262:22-2263:1 ("Daily Mix is—is all technology-based. So it's taking your taste profile, listening and understanding your listening contexts, and then using a series of different technological approaches to generate a constantly updated playlist"); *id.* at 2263:14-19 ("Discover Weekly, another personalized algorithmic recommendation product, probably the most well-known and, I believe, the most popular on Spotify. The goal of Discover Weekly is to recommend music to you that you've never heard before.").

JPFF22. Google Play Music offers users a proprietary "music quiz" on its homepage that prompts users to provide information about their listening preferences so that Google can make customized music recommendations. Trial Ex. 693, Joyce WDT ¶ 10. With Google's acquisition of the popular music service Songza for [redacted] in 2014, Google Play Music users can now request playlists honed to specific moods or based on a specific activity. *Id.* at ¶ 7.

JPFF23. For Pandora, music discovery forms the core of the service. From the outset Pandora's mission has been to connect listeners with the music they love and help them discover new music while helping artists "find the audiences they deserve." 3/14/17 Tr. 852:3-13 (Herring). Even as Pandora's service continues to evolve with the launch of Pandora Premium, non-interactive radio will remain the dominant form of listening on that tier of service. *Id.* at 3/14/17 Tr. 852:3-18. This means that the highly personalized, music discovery tools Pandora has developed and refined over the years—including the Music Genome Project (MGP), through which Pandora has meticulously analyzed the individual musicological traits of approximately 1.5 million tracks—will remain essential features of the service. Trial Ex. 880, Herring WDT ¶¶ 13-18. Pandora's fully interactive service, Pandora Premium, leverages off its existing "database of musical preferences (both personal to the user and collective across [its] user base) and its proprietary algorithms," such that users will not just be searching for their requested artists, song, or album, but will see, as part of that search, "stations…that are created using the Music Genome Project and [Pandora's] proprietary algorithms." Trial Ex. 877, Phillips WDT ¶ 29. Other features on Pandora Premium like its auto-fill function gives users the ability to "populate playlists based on whatever information the user has provided in starting the list and Pandora's knowledge of his or her music preferences and the preferences of similar users." *Id.* at ¶ 31.

JPFF24. The Copyright Owners' experts acknowledge that these discovery tools undoubtedly generate additional value for consumers. *See* Trial Ex. 3026, Rysman WDT ¶ 20 ("Services can use this [consumer] information in several ways. One is to tailor the offerings of the service to consumers to make the service more valuable to them. For instance, Spotify provides an individualized weekly playlist to users called Discover Weekly that contains a list of new songs for the user to try. The list is determined by the listening habits and other characteristics of the users."). As with the costs of licensing and assembling comprehensive catalogs, it is the Services, not the Copyright Owners, who have solely contributed, both technologically and in terms of capital investment and cost, to the development of instant and easy access to tens of millions of songs and music promotion and discovery tools. *See* 3/21/17 Tr. 2265:8-13 (Lucchese) (describing how Spotify's unique algorithmic playlists are generated);

Section IV.B, *supra*. These costs will continue to grow as users' demands evolve: for example, Spotify anticipates incurring non-R&D infrastructure costs of [redacted]. Trial Ex. 1063, Harteau WDT ¶ 15. These costs include those associated with collecting and analyzing vast quantities of user data to allow Spotify to make personalized listening recommendations and identify the needs of its users, for example, detecting when a user is in a car versus somewhere else where they may want different music suggestions. *Id.* at ¶ 16. Pandora alone has devoted "hundreds of thousands of hours listening to and cataloging the musicological traits of approximately [redacted] tracks in the MGP," Trial Ex. 880, Herring WDT ¶ 17; *see also* 3/14/17 Tr. 856:20-25 (Herring) (noting that Pandora spends between 20 minutes to one hour analyzing each song in the MGP). Pandora has "spent more than [redacted] creating and refining the MGP, its proprietary algorithms, and the...infrastructure, hardware, and software" necessary to create the personalized lean-back experience that has defined Pandora's non-interactive, radio service and that differentiates Pandora Premium from other interactive products on the market. Trial Ex. 880, Herring WDT ¶ 27; 3/14/17 Tr. 851:25-853:6 (Herring); *see also id.* at Tr. 857:4-858:24 (noting that Pandora's interactive products rely on the MGP and existing algorithms).

B. The Long-Tail Effect: Producing More Revenue for More Songwriters

JPFF25. In particular, streaming services encourage music experimentation by lowering the cost of listening to unfamiliar music, thereby benefitting songwriters through increased access of their musical works. Trial Ex. 1065, Marx WDT ¶ 40; 4/7/17 Tr. 5568:19-21 (Marx). For example, more than [redacted] of Spotify users have increased their time spent discovering music from artists/songwriters new to the user through the service. Trial Ex. 1065, Marx WDT ¶ 40. Part of the reason for this paradigm shift towards new and lesser known music, or, the "long tail" of songwriters and artists, is interactive streaming's elimination of the scarcity problem of terrestrial radio. *See* 3/21/17 Tr. 2260:8-16 (Lucchese) (describing the spectrum scarcity in terrestrial radio, the limited number of radio formats, and a Future of Music Coalition study that cited that in "some markets, there will be overlap of 75 percent in a given market."). In the new streaming paradigm, services like Spotify can essentially build "a personalized radio [station] for every [] listener, personalized to their taste," resulting in "essentially a limitless number of slots." *Id.* at 2260:16-19; *see also* 4/13/17 Tr. 5914:20-5915:17 (Hubbard) (noting that "you are seeing a great deal more spread out...in terms of diversity of interest," and that "much of the growth has been in the non-popular artists"); 3/21/17 Tr. 2261:15-2264:16 (Lucchese) (describing Spotify's music discovery products, including how Discovery Weekly identifies tracks that are "a bit below the radar, [and] are not necessarily mainstream tracks"); *id.* at 2268:3-2269:18 (describing how Fresh Finds identifies "deeply below the radar artists," and that "the vast majority of these artists are before they have a publishing deal, [and] before they have a record deal"); *id.* at 2265:18-2266:10 (describing how across all of Spotify's discovery products, "every month Spotify is introducing a fan to an artist they hadn't listened to before [redacted] times"); *see also* 3/14/17 Tr. 867:2-869:18 (Herring) ([redacted]); Trial Ex. 880, Herring WDT ¶¶ 40-43 (Pandora's custom sponsored events, live streaming of shows, and Artist Marketing Platform "AMP" helps songwriters, composers and music publishers increase exposure and sales); Trial Ex. 880, Herring WDT ¶¶ 13-28 (describing Pandora's investments in music discovery tools, including the Music Genome Project which "helps expose artists to millions of new listeners"); Trial Ex. 1066, McCarthy WRT ¶ 60 ("[I]f Digital Services moved away from offering music recommendation products, like Discovery Weekly, it would mean fewer streams and fewer artists and songwriters receiving exposure…. Spotify's music discovery products result in exposure for many "long-tail" artists and songwriters who may otherwise not receive any exposure.").

JPFF26. Quite simply, interactive streaming's discovery tools provide exposure to a variety of music on a scale and breadth never previously realized. *See id.* at 2265:22-24 (describing how Discover Weekly alone had recommended 95,000 different artists to fans); *id.* at 2266:3-7 ("We also took a look…across all the discovery products and saw that every month Spotify is introducing a fan to an artist they hadn't listened to before 3 billion times. I'm sure the number is larger now. But the scale and breadth of introducing new artists, new songs to -- to new fans is at a level that I found really exciting and I think probably unprecedented.").

JPFF27. Streaming's promotion of the long tail is a fact widely acknowledged in the industry. For example, top label executive Per Sundin has called streaming "the most democratic tool we have ever been part of. The range of artists being listened to is wider. Swedish hip-hop artists are making money again. We've been able to invest in them because of Spotify." *See* Trial Ex. 82 p. 82; *see also* Trial Ex. 1067, Page WRT ¶ 31. Similarly, an executive from Sony Music Entertainment has stated: "The barrier to listen to a new artist is lower than it was when you had to buy their album. We now pay out royalties to more artists than ever before. Ten years ago, the vast majority of our revenue came from a smaller number of artists." *See* Trial Ex. 82 p. 82; *see also* Trial Ex. 1067, Page WRT ¶ 31.

C. Streaming's Social Dimensions Give Artists and Songwriters Insights into Their Fans and Provide Users with the Ability to Share Music and Recommendations with Friends and Others

JPFF28. Streaming services also provide artists and songwriters with valuable insight into their fans by allowing them to track user listening behavior in ways not previously possible. For example, Spotify offers artists a free product called Spotify Fan Insights, a collection of data points free to artists that gives these artists insight into global listening activity and insight into what types of fans are listening. *See* 3/21/17 Tr. 2257:1-3 (Lucchese) ("[T]here's an 80/20 rule in many cases, where 80 percent of your revenue could come from your top 20 percent of your fans….So we spent a lot of time analyzing listening activity to do segmentation."); *id.* at 2255:24-2256:5. Similarly, Pandora offers artists free access to the Artist Marketing Platform ("AMP"), a program that provides artists with usage metrics to "understand how their music performs on Pandora." Trial Ex. 880, Herring WDT ¶ 42; *see also* 3/14/17 Tr. 870:2-21 (Herring). AMP enables artists to promote their work directly to listeners through unique features such as Artist Audio Messages, which allow artists to record a short, customized audio message, "set it to play before or after a specific track and geotarget fans in specific markets," and AMPcast, which enables artists to "spontaneously communicate with fans, right from the Pandora application." Trial Ex. 880, Herring WDT ¶ 42; Trial Ex. 882 (describing AMP). Pandora continues to refine and expand the data it makes available to artists through AMP, including through its acquisition and integration of Next Big Sound (NBS), a data analytics platform, which has enabled Pandora to provide artists detailed analytics on music preferences, patterns, and trends on Pandora, social media platforms, and YouTube. Trial Ex. 880, Herring WDT ¶ 44.

JPFF29. Streaming's social dimensions also give value to consumers that would not be possible without the innovations of the streaming services. *See* Trial Ex. 3026, Rysman WDT ¶ 15 ("Streaming services may allow users to follow the listening habits of their friends or of musicians and celebrities. Spotify was an early adopter of the social media aspect of streaming services."); *id.* at ¶ 26 ("Moreover, consumers may have established connections through the social media element of a service that make the service more valuable to them."). Prior to deciding to launch its new interactive service, Pandora conducted consumer surveys to identify the most important features in a streaming service and discovered that listeners valued the ability to share music with their friends. Trial Ex. 877, Phillips WDT ¶ 12; 3/9/17 Tr. 391:11-25 (Phillips). As a result, Pandora Premium now offers "the ability to create and manage playlists and share them with other Pandora Premium subscribers." Trial Ex. 877, Phillips WDT ¶ 27.

D. Services Use Price Discrimination to Monetize Those Consumers with Lower Willingness to Pay

JPFF30. Record evidence in this proceeding also shows that the variety of plans offered by the Services—*e.g.,* ad-supported, student plans, family plans, full-price subscriptions, and bundles—make efficient use of price discrimination to capture varying types of consumers. *See* 3/15/17 Tr. 1117:23-1118:25 (Leonard) (describing how, under the existing structure, a variety of differentiated product offerings have flourished, and that such differentiated offerings are valuable to consumers because products with different attributes appeal to consumers with different preferences and desires); 3/21/17 Tr. 2176:1-16 (Hubbard) (concluding that the market consists of different customer segments differentiated by tastes and preferences and willingness-to-pay, and that Amazon has a varied product offering that appeals to these different segments); 4/7/17 Tr. 5499:10-16 (Marx) ("And we've talked about the value of price discrimination as far as reducing deadweight loss, that it would be valuable in an economic efficiency sense to be able to provide access to low willingness-to-pay consumers, to provide a way to monetize low willingness-to-pay consumers and to bring them into music streaming."); 3/21/17 Tr. 2020:11-16 (Marx) ("And so having additional price discrimination such as student discounts, family discounts, ad-supported streaming, that allows you to try to chip away at that deadweight loss and to bring those consumers who still have positive value into music consumption."); 3/22/17

Tr. 2457:17-2459:12 (Dorn) (describing how the family and student plans exist for younger consumers with lower willingness-to-pay); 3/14/17 Tr. 892:14-894:8 (Herring) (Pandora's student discount targets customers with low budget and willingness to pay, and family plans "target[] those incremental subscribers out of pools that are hard to monetize...with advertising" like adolescents and seniors); 3/15/17 Tr. 1321:11-1323:12, 1324:6-16 (Mirchandani).

JPFF31. Spotify, for example, offers a discounted student plan that is priced at $4.99 per month and a family plan that is priced at $14.99 per month for up to six users for its subscription service. Trial Ex. 1060, McCarthy WDT ¶¶ 51, 69; *see also* 3/20/17 Tr. 1834:17-21 (Marx). These alternative pricing plans allow Services to reach consumers with lower willingness-to-pay, monetize those users and convert some of these users to paid subscriptions. Trial Ex. 1065, Marx WDT ¶¶ 14, 96, 132; Trial Ex. 1060, McCarthy WDT ¶ 67 ([redacted] 3/21/17 Tr. 2053:22-2054:4 (McCarthy); Trial Ex. 1060, McCarthy WDT ¶ 67.

JPFF32. [redacted]. 3/21/17 Tr. 2053:22-2054:4 (McCarthy); Trial Ex. 1060, McCarthy WDT ¶ 67; 3/14/17 Tr. 892:14-893:6 (Herring) (stating that having a student plan allows students, who have a smaller budget, "to be a paying customer, teaches them about paying for music, builds that habit, and then when they graduate and enter the workforce or, you know society generally, then they upgrade...more naturally into being paying a standard price"); 3/14/17 Tr. 892:14-893:6 (Herring).

JPFF33. Family plans likewise generate incremental revenue for both Services and the Copyright Owners. 4/06/17 Tr. 5327:4-14 (Vogel); Trial Ex. 1062, Vogel WDT ¶¶ 30, 32. A Spotify internal study showed that [redacted] 3/21/17 Tr. 2140:8-16 (McCarthy); *see also* 3/14/17 Tr. 893:7-16 (Herring) (stating that offering family plans allows for services to "add to the overall revenue pie, also engage with listeners at a younger age or an older age....People who we can add to the subscription roles who wouldn't necessarily do their own subscription.").

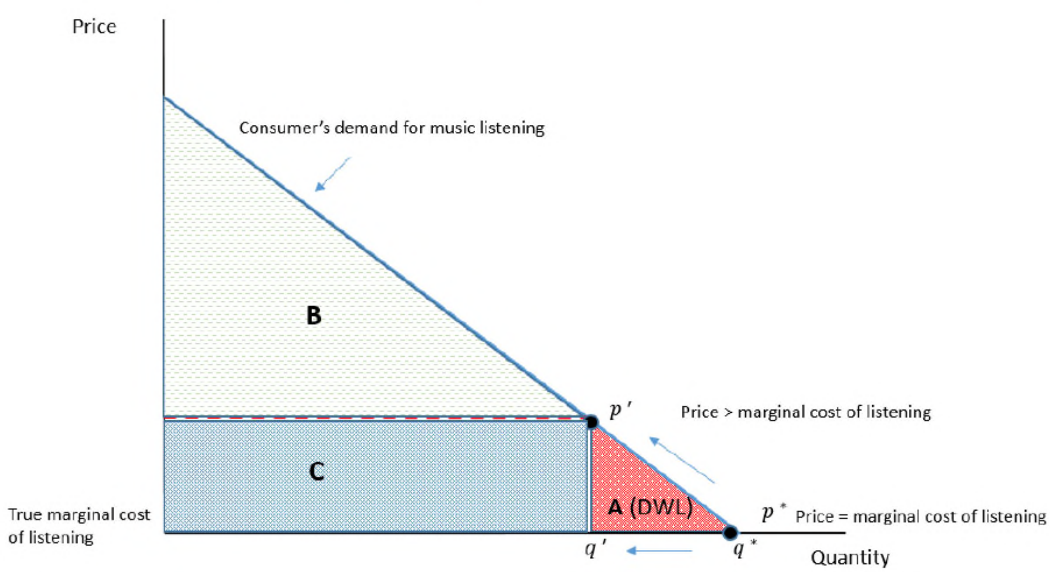
JPFF34. These multiple tiers are important because not only do consumers get the benefit of product diversity, but the Copyright Owners share in the upside through growth of the overall pie. 3/14/17 Tr. 885:12-16 (Herring); *see also* Trial Ex. 1062, Vogel WDT ¶ 32; 03/21/17 Tr. 2053:22-2054:4 (McCarthy) (ability to target lower willingness-to-pay consumer groups results in significantly higher lifetime value). Specifically, discounted tiers drive revenue growth by capturing those consumers further down the demand curve with lower willingness-to-pay. *See* 3/14/17 Tr. 885:4-11 (Herring) (describing how having just "one price is going to suboptimize the environment," because "[t]here are people who would pay $4.99 but wouldn't pay $9.99. If you don't have an offering at the $4.99 level…those people don't pay $9.99. They choose other offerings. Whether it's free offerings or piracy or whatever."); 3/20/17 Tr. 1717:5-16 (Page) (describing consumer study showing that consumer willingness-to-pay drops considerably at two price points—[redacted]; 3/21/17 Tr. 2189:7-14 (Hubbard) (expanding the customer base by offering services at different price points increases the total revenue pool for the Copyright Owners); 3/15/17 Tr. 1224:7-1225:2 (Leonard) (discussing how bundling sorts customers according to willingness-to-pay by moving down the demand curve, and getting as many consumers through the door as possible at different price points generates revenue for the Copyright Owners).

JPFF35. In fact, the variety of offerings available in this proceeding—which range from ad-supported, student discounts, and family plans—*can capture 100% of the consumers along the demand curve*, as shown by internal research findings that revealed that [redacted] *See* Trial Ex. 1067, Page WRT ¶ 50 (chart showing research findings, reproduced below); 3/20/17 Tr. 1715:11-1717:16 (Page).

[redacted]

JPFF36. Such pricing flexibility is especially efficient where, as here, the marginal cost of providing a stream, once a user gets access to the service, is zero. 3/15/17 Tr. 1122:19-1123:4 (Leonard) ("[T]he incremental cost or marginal cost to a musical works rights owner of having one more stream is…zero….[W]e can't have, obviously, the price for streaming be zero….But the right way to price it is to…price for access to the library and then let somebody listen as much as they want."); *id.* at 1124:16-1125:10 (setting up different types of plans, such as ad-supported and family, is price discrimination at the access point). As such, a rate structure that allows for pricing flexibility—by allowing Services to follow an all-you-can-eat-model and charge for access—increases efficiency, thereby increasing the volume and variety of consumer listening relative to a model in which consumers pay "cost plus markup" on each song or album purchased. *See* Trial Ex. 1065, Marx WDT ¶¶ 123-126 & fig. 25 (reproduced below).

Figure 25: Efficiency of pricing marginal consumption at zero



JPFF37. The benefit of targeting these groups of consumers with low (or zero) willingness-to-pay from a business perspective is twofold. First, "you get the benefit of -- of monetizing in a subscription environment an audience that would otherwise not subscribe. So

you're adding incremental subscribers to the pool." 3/14/17 Tr. 893:17-24 (Herring). Second, "you're targeting those incremental subscribers out of pools that are hard to monetize anyway," for example 13-17 year olds and people 55 and older. *Id.* at 893:25-894:4.

JPFF38. The Copyright Owners' witnesses admit that this variety of product offerings—for example bundles and ad-supported plans—are themselves forms of price segmentation. 3/30/17 Tr. 3981:7-3983:11 (Gans) (admitting, in response to a question from Judge Strickler, that bundling "is a form of discrimination."). They further admit that Services could be offering discounts to create *more* revenue, not less. 4/3/17 Tr. 4293:8-23 (Rysman) (acknowledging it is a "good point," in response to a question from Strickler, that the "discounts created more revenue rather than less."); *see also* 4/6/17 Tr. 5400:4-25 (Klein) ([redacted]).

JPFF39. And fundamentally, the variety of product offerings is meant to tap into this indisputable fact: *different consumers value music—the same music—differently*. *See* 3/15/17 Tr. 1125:22-1126:3 (Leonard); 3/20/17 Tr. 1894:19-1895:2 (Marx); 3/15/17 Tr. 1343:3-5 (Mirchandani) ([redacted]; *id.* at 1343:6-23 ([redacted]); 4/6/17 Tr. 5396:7-24 (Klein) (describing survey results showing that: [redacted] 3/20/17 Tr. 1717:5-16 (Page) (describing consumer study showing that consumer willingness-to-pay drops considerably at two price points—[redacted]; Trial Ex. 877, Phillips WDT ¶ 9 ("In my experience, there is a broad spectrum of consumer desires for music consumption, ranging from consumers with little or no interest in music consumption to music 'aficionados' who…are willing to spend more money on music than casual listeners."). The same musical work doesn't have one flat, "inherent" value—it's the value that the marketplace, the *consumers*, place on the work. *See* 3/15/17 Tr. 1126:1-3 (Leonard) (where consumers are placing a lower value on music, the "musical work should get a lower dollar royalty because the work [has] less value in that context.").

JPFF40. Nor could the Copyright Owners themselves define "inherent" or "intrinsic" value, despite the Board asking several times. 3/8/17 Tr. 98:4-99:25 (Judge Strickler, asking counsel whether any witnesses would be testifying "as to the intrinsic value of the licensed property in this case?"); 3/9/17 Tr. 480:6-8 (Judge Strickler, asking George Johnson about the definition of "intrinsic value"); 3/29/17 Tr. 3707:13-14 (Judge Strickler, asking David Israelite about the definition of "inherent value" of music). David Israelite first said the value is "[w]hat someone is willing to license it for," and later equated it to market value. 3/29/17 Tr. 3707:15-3707:25 (Israelite). Liz Rose, an individual songwriter, was asked to describe the value of songs, she said she could not do so. 3/28/17 Tr. 3538:9-20 (Rose) ("I don't know if you can put a value on a song. [….] I don't know how you value that. It is pretty invaluable, I think."); *see also id.* at 3520:15-17 (Miller).

JPFF41. In short, the Copyright Owners use the phrase "intrinsic" or "inherent" value as a mantra to support the drastic rate increases they seek, but when pressed cannot define it with anything approaching precision. In fact, the value of a musical work is defined by its particular use, and a percentage of revenue captures that perfectly. With a rate structure that permits for proper price discrimination, the Services are able to tailor different product prices to consumers with different willingness-to-pay, thus expanding the total number of consumers that will be able to listen to creative works on interactive streaming services.

III. PUBLISHERS AND SONGWRITERS ARE THRIVING IN THE NEW DIGITAL ECONOMY

A. Publisher Financials Show a Healthy Industry with Increasing Revenues

JPFF42. The Copyright Owners baldly assert that the publishing industry is in crisis due to the advent of interactive streaming. *See, e.g.*, Trial Ex. 3017, Kelly WDT ¶ 62; Trial Ex. 3016, Brodsky WDT ¶ 57. However, the industry's own financials show increasing revenues and overall health.

JPFF43. One of the Services' experts, Dr. Mark Zmijewski, a professor at the University of Chicago Booth School of Business, submitted two written reports and testified at trial regarding his expert analysis of financial data provided by the NMPA and its member publishers. *See generally* Trial Ex. 1070, Zmijewski WRT; Trial Ex. 1691, Zmijewski SWRT; 4/12/17 Tr. 4748 *et seq.*; *see also* 4/12/17 Tr. 5753:10-15 (recognizing Dr. Zmijewski as an expert in financial accounting and financial economics). Dr. Zmijewski testified that the objectives of his analysis included, among other things, determining, both for individual publishers and the industry as a whole, (1) whether total music publishing revenues were increasing, and (2) whether any decrease in mechanical revenues from physical phonorecords and digital downloads was offset by mechanical and performance revenues attributable to streaming. 4/12/17 Tr. 5757:3-25 (Zmijewski). In addition to data from the NMPA (for the industry as a whole), his analysis included Sony, UMPG, Warner, BMG, Downtown, Kobalt, Reservoir, SONGS, and ABKCO. 4/12/17 Tr. 5758:17-5759:3 (Zmijewski). Dr. Zmijewski testified that he separately analyzed both Sony/ATV and Sony/EMI (*see, e.g.*, Trial Ex. 1070, Zmijewski WRT ¶ 14), even though both are wholly owned by Sony Corporation (*see*, *e.g.*, Trial Ex. 1070, Zmijewski WRT ¶¶ 44, 61 (citing Trial Exs. 1053 & 1740)).

JPFF44. [redacted]. 4/12/17 Tr. 5769:20-5770:22 (Zmijewski); Trial Ex. 1070, Zmijewski WRT ¶ 17; Trial Ex. 1691, Zmijewski SWRT ¶ 13.

JPFF45. The fact that the publishing industry is growing is corroborated by the NMPA's own data. David Israelite, President and CEO of the NMPA, admitted that from 2014 to 2015 (the most recent time period for which the NMPA has data), total industry revenue [redacted]. 3/29/17 Tr. 3724:4-17 (Israelite).

JPFF46. Dr. Zmijewski observed that industry revenues were concentrated in the "big three" music publishers, with a "long tail" of smaller publishers. 4/12/17 Tr. 5764:22-5765:17 (Zmijewski) (Sony, UMPG, and Warner/Chappell, the "big three," have a market share globally of [redacted] (citing Trial Ex. 1056)); *id.* at 5765:14-17 ("[T]here's a big hump of revenues from…a handful of companies and then there's a long tail of everybody else because there are many, many small publishing companies.").

JPFF47. He further observed that the slowest growth was at the larger companies, and the highest growth was at the smaller companies. 4/12/17 Tr. 5570:12-5571:2 (Zmijewski). He explained that if there was a shift in demand from the big three publishers to the long tail of smaller publishers, "you'd expect to see" the percentage changes in revenue he observed. 4/12/17 Tr. 5772:7-13 (Zmijewski).

JPFF48. And indeed, the testimony establishes that streaming spreads the wealth around by funneling listening to a long tail of artists and songwriters. *See* Section II.B, *supra*.

JPFF49. While no witnesses appeared on behalf of many of the smaller publishers Dr. Zmijewski analyzed (Kobalt, Reservoir, SONGS, and ABKCO), Justin Kalifowitz (the CEO of Downtown, the smallest NMPA member publisher testifying) admitted that [redacted]. 3/30/17 Tr. 3939:24-3940:2 (Kalifowitz); *see also id.* 3940:3-6 ([redacted]).

JPFF50. Further, as discussed above, the evidence shows that industry revenues—and in particular mechanical revenues—had been declining well before the advent of interactive streaming, and it was in fact interactive streaming that stabilized the decline. *See* 3/29/17 Tr. 3752:3-19 (Israelite) (mechanical income had been dropping since before 2013, and "significantly" during the "theft period," "where there was a lot of theft of copies"); 3/20/17 Tr. 1679:4-1683:25 (Page) (explaining Trial Ex. 1021, which shows that recorded music revenues—including pass-through publishing revenues—for physical peaked in 1999 and declined, but have grown over the past five years [during the end of the *Phonorecords I* rate period and the first three years of the *Phonorecords II* rate period], with half-year results for 2016 showing the strongest growth signal since 1998); 3/20/17 Tr. 1835:15-1836:17 (Marx) (explaining the RIAA data in Trial Ex. 1065, Marx WDT ¶ 28 fig. 2, which shows an increase in music industry revenue until 1999 when Napster launched, and then a decline until 2011 when Spotify launched in the U.S., followed by a level off as streaming revenue increased); 3/20/17 Tr. 1841:21-1842:8 (Marx) (explaining Trial Ex. 1065, Marx WDT ¶ 35 fig. 3, which shows publisher revenue from 2006 to 2011, which also illustrates a decline level out in 2011, followed by growth); 3/13/17 Tr. 610:22-612:2 (Katz); Section I.C, *supra*.

JPFF51. Dr. Zmijewski's second analysis showed that mechanical and performance revenues followed a similar trend to total revenues, where the larger publishing companies significantly underperformed the smaller publishing companies. *See, e.g.*, 4/12/12 Tr. 5781:8-16 (Zmijewski).

JPFF52. Just looking at mechanical revenue, only [redacted] saw declines since 2014, whereas [redacted] saw double digit growth. 4/12/17 Tr. 5779:18-5783:12 (Zmijewski); Trial Ex. 1070, Zmijewski WRT ¶¶ 52, 67, 79, 92, 105, 112; Trial Ex. 1691, Zmijewski SWRT ¶¶ 35, 40, 43, 47; *see also* 3/30/17 Tr. 3940:7-11 (Kalifowitz) ([redacted]).

JPFF53. Moreover, Dr. Zmijewski observed that when performance revenues from streaming were added in, only [redacted] saw any decline at all. 4/12/17 Tr. 5782:13-19 (Zmijewski); Trial Ex. 1070, Zmijewski WRT ¶ 14; Trial Ex. 1691, Zmijewski SWRT ¶ 11; *see also* 3/30/17 Tr. 3940:12-21 (Kalifowitz) ([redacted]).[1]

JPFF54. For the industry as a whole, Dr. Zmijewski observed a decrease of only [redacted] in mechanical royalties, which was much more than offset by significant increases in performance revenues for streaming, for a net change of [redacted] Trial Ex. 1070, Zmijewski

[1] While the publishing companies do not say whether their reported performance streaming revenues include non-interactive revenues, Dr. Zmijewski testified that he estimated what their maximum interactive performance revenues could be by setting performance streaming revenues to be no greater than mechanical streaming revenues. 4/12/17 Tr. 5803:12-5804:15 (Zmijewski). This is consistent with zero *non-interactive* mechanical streaming revenue (*see id.*) and a 50/50 split of performance and mechanical revenues for *interactive* streaming. *See, e.g.*, Trial Ex. 1062, Vogel WDT ¶ 23. Dr. Zmijewski testified that under these assumptions, his conclusions did not change. 4/12/17 Tr. 5803:12-5804:15 (Zmijewski).

WRT ¶¶ 38, 40 (*see* figures); *see also* 3/29/17 Tr. 3733:19-3734:23 (Israelite) ([redacted]).

JPFF55. The Copyright Owners complain that there is a difference between mechanical and performance revenue, because PROs pay the songwriter's share of performance revenue directly to the songwriter, and thus, recoupments are negatively affected when more performance revenue is paid and less mechanical revenue is paid. But as Dr. Zmijewski's testimony establishes, the declines in mechanical revenue are concentrated at the largest publishers, and these publishers have many revenue streams for recoupment. *See, e.g.*, Trial Ex. 3016, Brodsky WDT ¶ 29 ("[A]dvances are, for the most part, recouped from [*three* revenue streams] mechanical royalties, the [redacted] 'publisher's share' of performance royalties and synchronization royalties...."). 3/28/17 Tr. 3320:25-3321:13 (Kokakis); 3/30/17 Tr. 3951:17-3952:8 (Kalifowitz).

JPFF56. Moreover, the revenue at issue in this proceeding is a very small portion of total publishing industry revenue. Mr. Israelite admitted that in 2015 mechanicals only accounted for [redacted] of total industry revenue (3/29/17 Tr. 3750:14-19 (Israelite)), versus [redacted] for performance revenues, [redacted] for synchronization revenues, and [redacted] for other revenues (*id.* at 3750:20-3751:6). He further admitted that streaming mechanicals only accounted for [redacted] of mechanicals (*id.* at 3745:5-7), versus [redacted] for physical phonorecords, and [redacted] for permanent digital downloads (*id.* at 3744:18-25). Thus, the total revenue at issue in this proceeding is only [redacted] of publishing industry revenue. Further, Dr. Zmijewski testified that the Copyright Owners' own data does not support their argument that any decrease in mechanical revenues has negatively affected the ability of publishers to recoup advances. 4/12/17

Tr. 5783:13-5784:7 (Zmijewski); *see also, e.g.*, Trial Ex. 1070, Zmijewski WRT ¶ 127 [redacted].

JPFF57. The NMPA says that it represents "both small and large music publishers." *See, e.g.*, Trial Ex. 1070, Zmijewski WRT ¶ 4 n.3 (quoting Trial Ex. 1738); *see also* 4/12/17 Tr. 5765:4-7 (Zmijewski) (NMPA purports to represent 800+ publishers). However, at trial, George Johnson, himself a publisher, but the only publisher witness *not* called by the Copyright Owners, stated that:

> I don't feel like NSAI or NMPA, really, represents me. I think they represent the three major publishers, just like RIAA represents the three major labels, the NMPA represents those three major publishing companies, Sony/ATV, Warner/Chappell and Universal Music Publishing. And that is just kind of the way we all look at it, every songwriter, artist, publisher I know, that's the way we think.

3/9/17 Tr. 521:17-522:1 (Johnson).

JPFF58. The testimony of the NMPA and the largest music publishers does not reflect the industry as a whole. Rather, the evidence shows that the declines in mechanical royalties seen by some of the largest publishers are the result of their inability to adapt to technological advances in music discovery, which are driving listening (*see* Section II.B, *supra*) to the "long tail" of artists, songwriters, and publishers. As discussed, publishers in this long tail are experiencing rapid growth. Moreover, even the largest publishers are experiencing growth when performance royalties from streaming are added in. [redacted] has seen topline revenue growth—they just want a bigger piece of the pie.

JPFF59. Unlike the streaming industry, the publishing industry is healthy, profitable, and growing. *See, e.g.*, Trial Ex. 1058 p. 8 (Warner Music Group's CFO stating that "we think publishing is on a healthy upswing, and we're very confident in that business" (quoted in Trial Ex. 1070, Zmijewski WRT ¶ 97)); 4/7/17 Tr. 5528:21-5529:1 (Marx) ("[T]he Copyright Owners' proposal would increase transfers from entities currently earning negative profits to those earning significant positive profits, which is not what I would expect to represent a fair division of the surplus…."); 4/7/17 Tr. 5517:18-24 (Marx) (contrasting global publisher margins of positive [redacted] with negative profits for Pandora's and Spotify's businesses); 3/13/17 Tr. 618:4-619:13 (Katz) (noting that the publishers are profitable and music revenues have stabilized, but the Services are unprofitable); 3/20/17 Tr. 1694:12-16 (Page) ("[T]he publishing business looks to be in good health, and mechanical revenues do not look to be in the same level of decline that was portrayed in the Copyright Holders' written direct testimonies."); 4/3/17 Tr. 4557:17-4558 (Barron) (testifying that [redacted]); 4/3/17 Tr. 4372:7-11 (Rysman) ("Q. But you agree that overall payments to publishers and songwriters, considering all royalties due to streaming, have increased with the incease in streaming, correct? A. That is my understanding, yes."). 3/30/17 3939:24-3940:21) (Kalifowitz) (testifying that [redacted]).

JPFF60. Consistent with a healthy publishing industry, ASCAP and BMI, have reported record collections for most of the past 15 years. 3/20/17 Tr. 1687:2-6 (Page) ("[J]ust about every year without fail, both ASCAP and BMI have reported record collections and you would therefore assume record distributions to their U.S. songwriter and U.S. publisher members."). The main driver in revenue growth for ASCAP and BMI has been the interactive streaming services. *Id.* at 1688:22-1689:21; *see also* Trial Ex. 885, Katz WDT ¶ 55 ("In fact, the data and industry analyses indicate that streaming (including interactive streaming) is stabilizing industry revenues.”).

B. Publishing is a [redacted] Business

JPFF61. In addition to its growing revenues, the music publishing industry has also realized [redacted] in recent years. Music publishing is a “low risk” and [redacted] business,” with margins of [redacted] or higher. Trial Ex. 1115 pp. 2, 21; Trial Ex. 1069, Marx WRT ¶ 202; *see also* Trial Ex. 1118 p. 4 (describing publishing as [redacted]; *id.* at pp. 36, 38 ([redacted]); 4/3/17 Tr. 4513:9-20 (Brodsky).

JPFF62. [redacted]. Trial Ex. 1069, Marx WRT ¶ 202 (noting that “[redacted]”); *see also* 4/3/17 Tr. 4513:9-14 (Brodsky) (testifying that the statements in these decks were intended to “distinguish” Sony/ATV “from the recorded music business.”). These margins are reflected in the below table:

Entity	Percent of revenue
Publisher EBITA margins for subscription and ad-supported streaming	[redacted]
Label EBITA margins for subscription and ad-supported streaming	[redacted]
Pandora’s margin	[redacted]
Spotify’s EBIT margin	[redacted]

Trial Ex. 1069, Marx WRT ¶ 202.

JPFF63. Publishers could receive substantially lower mechanical royalties or drastically increase their payments to songwriters [redacted]

[redacted]. While publishers have margins upwards of [redacted], record labels' margins are only around [redacted]. *Id.*

JPFF64. Although publishers and record labels have positive margins, [redacted]. *Id.* (noting that the labels have EBITA margins of [redacted], Pandora's margin is -14.6%, and Spotify's margin is [redacted]).

C. The Primary Functions of the Publishing Industry Have Not Been Impeded by Streaming and in Many Cases Have Been Aided by Streaming

JPFF65. Publishers have always had two primary functions, neither of which has changed: (1) to discover and promote new songwriters; and (2) to smooth royalty payments to their songwriters through advances. Nor has either of these functions been impeded by streaming; in fact, in many cases streaming has actually aided these functions.

JPFF66. First, publishers leverage digital services to identify songwriters who they think will be successful. This helps them discover up-and-coming writers and helps mitigate the risk that advances to these writers will go unrecouped. 4/3/17 Tr. 4528:5-11 (Brodsky) (agreeing that Sony/ATV has a proprietary data research program for finding new talent that searches the platforms of services including Spotify, YouTube, Pandora, and Apple Music); *see also* Trial Ex. 3018, Kokakis WDT ¶ 19. As a result, streaming actually enhances the publishers' function of discovering and promoting new writers.

JPFF67. Streaming has also not affected the publishers' other primary function—smoothing royalty payments to their writers. Publishers "smooth" royalty payments to songwriters over time in order to enable songwriters to develop their craft and to reap the benefits of their creative contributions. Publishers accomplish this smoothing through advances. Trial Ex. 3016, Brodsky WDT ¶ 9 ("Music publishers…provide advances and other financial support to songwriters so that they can focus on writing music."); *id.* at ¶ 30 ("Advances are necessary to finance the day-to-day requirements of the songwriter's career, including for professional bills, management commissions, equipment costs, transportation to and from performances, taxes and general living expenses."); Trial Ex. 3018, Kokakis WDT ¶ 20 ("The purpose of the advance is to enable the songwriter to support herself while she writes, and to focus full-time on songwriting, before she has generated an income from license fees and other sources."); Trial Ex. 3022, Kalifowitz WDT ¶ 14 ("We make it possible for songwriters to work on their craft on a full-time basis by providing them significant advances on future royalties...").

JPFF68. Advances are an intertemporal reallocation of royalties. Trial Ex. 698, Leonard WRT ¶ 90 ("[P]ublishers could take it upon themselves to reallocate royalties intertemporally so as to smooth payments to songwriters over time. This is, in fact, actually done in the form of advanced payments that are made by publishers to songwriters."); Trial Ex. 1069, Marx WRT ¶ 224 ("These advances imply that payments to artists and songwriters are disconnected in time from when their musical works are experienced by consumers."). In fact, past songwriting success is often rewarded with larger future advances because publishers use a songwriter's historical performance as an indicator of potential future success. 4/6/17 Tr. 5283:16-22 (Leonard) ("[H]aving a [h]it song is a signal…that the songwriter…will write hit songs in the future.... [T]here's going to be competition for such songwriters and they would get paid bigger advances and more money in general."); *see also* 3/30/17 Tr. 3925:8-17 (Kalifowitz) (Downtown Music is "[redacted] before signing a known writer); *id.* at 3957:21-3958:14 (recent growth in Downtown is through focus on signing [redacted]).

JPFF69. Rather than songwriters receiving royalties based only on downloads or plays of their songs, the publisher pays songwriters upfront and then recoups those advances in the future. Trial Ex. 698, Leonard WRT ¶ 90 n.137 ("In an Exclusive Term Agreement, which was the most common kind of publisher-songwriter agreement for many years, the songwriter agrees to assign the exclusive right to administer all compositions that they write during a specified term. In return, the publisher pays a songwriter an advance at the beginning of the contract which is recoupable against the writer's royalties. Additional advance payments are usually due if the publisher exercises options to extend the contract.").

JPFF70. There is no evidence that streaming has impeded the publishers' function of providing advances to songwriters. As discussed in Section III.A, *supra*, industry-wide mechanical royalties are relatively stable and even a demonstrated drop in mechanical royalties alone would not permit an inference that publishers could no longer offer advances to songwriters. *E.g.*, Trial Ex. 1070, Zmijewski WRT ¶ 19 ("[It] is not possible to conclude that any decrease in the recoupment of Advances and/or any increase in the balance of unrecouped Advances are the result of the decrease, if any, in domestic Mechanical revenues associated with Physical Phonorecords and Digital Downloads not being offset by increases in domestic Mechanical revenues associated with Streaming."). In fact, as discussed in Section III.A, *supra*, in recent years publishers have seen their available funds for recoupment increase rather than decrease, and mechanical royalties from interactive streaming actually represent a very small portion of those funds. *See id*.

D. Despite Their Claims that Songwriters are Suffering, Publishers Continue to Invest in New Talent and Have Not Provided any Evidence that Supply of Musical Works Is Decreasing

JPFF71. The publisher revenue growth discussed above (*see* Section III.A, *supra*) has directly translated into more investment in talent and more opportunities for songwriters.

JPFF72. [redacted] Trial Ex. 1047; *see also* Trial Ex. 980; 3/30/17 Tr. 3944:16-3945:19 (Kalifowitz) ([redacted]; *id.* at 3947:18-3948:6 ([redacted]); *id.* at 3949:2-15 ([redacted]); *id.* at 3943:19-22 ([redacted]).

JPFF73. Likewise, the larger publishers have also been investing heavily in talent. [redacted] 3/27/17 Tr. 3261:17-22 (Kokakis); *see also* 3/28/17 Tr. 3318:8-3320:24 (Kokakis) ([redacted]).

JPFF74. To the extent there has been any decline in the number of songwriters, the Copyright Owners failed to connect that decline to streaming. Indeed, Bart Herbison conceded, "I'm not blaming the loss of songwriters on streaming." 3/23/17 Tr. 2955:25-2956:1 (Herbison). He further agreed that "most of the decline in professional songwriters occurred well before the rise in popularity of interactive music services." *Id.* at 2949:5-9.

JPFF75. There is, as Mr. Herring explained, no reason for concern about the supply of music at existing rates: supply is already overwhelming. Trial Ex. 888, Herring WRT ¶¶ 35-38.

JPFF76. Expert testimony further establishes that there is neither a dearth of songs nor of songwriters. *See, e.g.*, Trial Ex. 1069, Marx WRT ¶ 91 ("[T]he number of individuals in the U.S. Office of Employment Statistics category "music directors and composers" generally increased from 1999 to 2015. Likewise, the inflation-adjusted compensation of this category generally increased despite the overall music industry trend."); 3/27/17 Tr. 3118:15-21 (Watt) (admitting that he has not seen any evidence that there is an undersupply of songs, or that current rates are not properly incentivizing songwriters); 3/15/17 Tr. 1120:4-8 (Leonard) (no evidence that songwriters or publishers are being harmed under the current rates and rate structure); 4/7/17 Tr. 5532:21-24 (Marx) (no evidence of a dearth of songwriters or songs); 3/13/17 Tr. 617:9-618:19 (Katz) (concluding that collectively PROs are growing and the number of songs are increasing); Trial Ex. 885, Katz WDT ¶¶ 60-61 (the number of songwriters registering with U.S. PROs and the amount of musical works has increased significantly since the 2012 Settlement).

JPFF77. The evidence shows that, as one might expect, the fate of songwriters generally follows the fate of the publishing industry. Songwriter income declined with the rise of piracy in the late 1990s and early 2000s. *See, e.g.*, 3/23/17 Tr. 2952:22-2956:19 (Herbison). Now that streaming has stabilized the industry, publishers are investing in songwriters once again. But of course, as demand has shifted to longer-tail songs (*see* Section II.B, *supra*), it has shifted to longer-tail publishers and songwriters (*see* Section III.A, *supra*). Thus, songwriters focused on writing songs that traditionally received repetitive radio airplay, like Lee Thomas Miller, Liz Rose, and Steve Bogard may see an industry in decline, while other songwriters are getting their big breaks through streaming. *Compare, e.g.*, Trial Ex. 3023, Miller WDT; Trial Ex. 3024, Rose WDT; *and* Trial Ex. 3025, Bogard WDT; *with* Trial Ex. 1064, Lucchese WDT ¶¶ 29-30 (describing how Spotify broke singer-songwriter [redacted], among others); *and* Trial Ex.

1061, Page WDT ¶¶ 76-80 (describing how Spotify can break out an artist, and radio will follow); *see also* Trial Ex. 1064, Lucchese WDT ¶ 20 ("Before streaming, 'break on US radio, then we'll promote you elsewhere' was a very common marketing strategy that defined the industry for years."). Indeed, the tales of woe told by the Copyright Owners all involve hit songwriters and hit songs. *See, e.g.*, Trial Ex. 3018, Kokakis WDT ¶¶ 60-61; Trial Ex. 3016, Brodsky WDT ¶¶ 77-80.

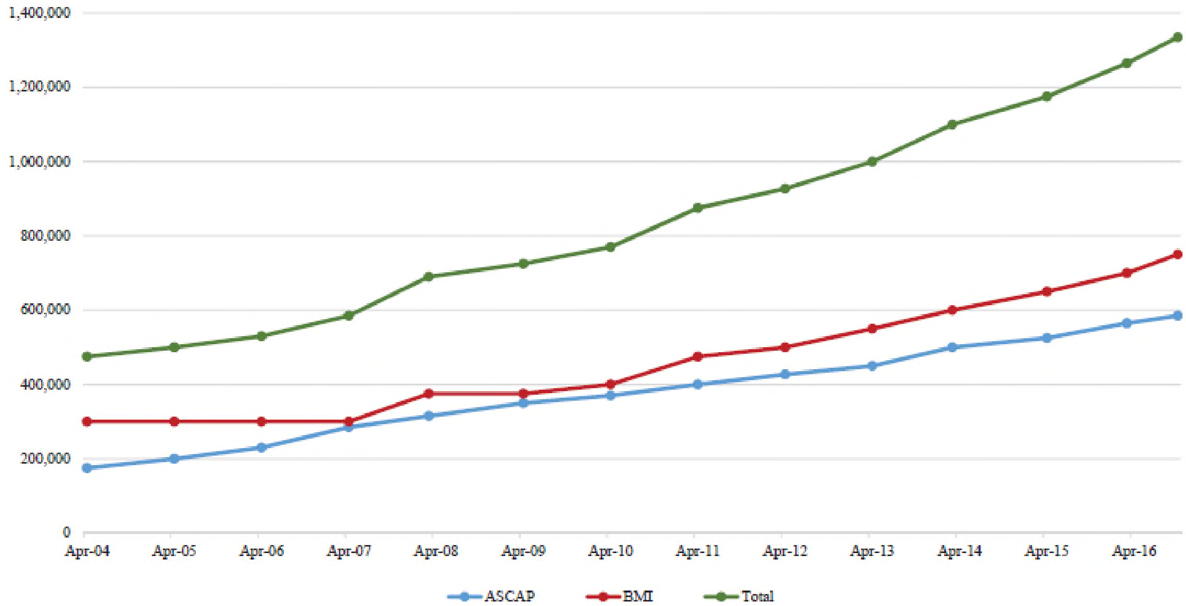
JPFF78. The Copyright Owners have offered no evidence that the number of songwriters or the compositions produced by songwriters has decreased, nor have they offered any evidence that there is a dearth of compositions or songwriters. 4/7/17 Tr. 5482:11-19 (Marx) (testifying that she "ha[s] not seen evidence" of "a reduction in the number of songwriters and songs produced"); *id.* at 5532:21-24 (no evidence of dearth of songwriters or songs).

JPFF79. To the contrary, the evidence shows that the total number of compositions added to the catalogs of PROs, which represent virtually all songwriters, has been increasing—not decreasing. *See, e.g.*, Trial Ex. 695, Leonard AWDT ¶ 94; Trial Ex. 698, Leonard WRT ¶ 108; Trial Ex. 885, Katz WDT ¶ 60; Trial Ex. 886, Katz CWRT ¶ 216.

JPFF80. And not only has the total number of compositions increased, the rate at which new compositions are added to the PROs has increased as streaming has become the more common form of music consumption. The annual number of musical works represented by a PRO has increased from under 15 million in 2010 to more than 20 million by 2015. Trial Ex. 695, Leonard AWDT; Trial Ex. 10.

JPFF81. The number of PRO affiliates has similarly increased, from under 800,000 in 2010 to close to 1.4 million in 2016, as shown in Exhibit 9 to Dr. Leonard's amended written direct statement. Trial Ex. 695, Leonard AWDT.

Exhibit 9
Number of Affiliated Songwriters, Composers, and Music Publishers
2004-2016



Note: Historical data for ASCAP and BMI retrieved from https://archive.org/web/.
Sources: "About ASCAP," ASCAP, http://www.ascap.com/about.
"About," BMI, http://www.bmi.com/about.

IV. DESPITE REVERSING THE DECLINE IN MUSIC INDUSTRY REVENUES, INTERACTIVE STREAMING SERVICES HAVE STRUGGLED TO ACHIEVE SUSTAINED PROFITABILITY ON A STANDALONE BASIS

JPFF82. While interactive streaming has reversed precipitous declines in music industry revenues, interactive streaming services are generally unprofitable. Trial Ex. 696, Pakman WDT ¶ 31; Trial Ex. 885, Katz WDT ¶¶ 64, 65. In fact, none of the streaming services offered by Amazon, Google, Pandora, or Spotify has attained sustained profitability on a standalone basis.[2] These companies have instead lost [redacted] on streaming music. Trial Ex. 1060, McCarthy WDT ¶ 55 ("Because Spotify has never turned a profit, it has accumulated a [redacted] global deficit: [redacted] by the end of 2013; [redacted] by

2 [redacted]. Trial Ex. 3005 (U.S. Financial Summary); 3/16/17 Tr. 1621:6-1624:24 (Mirchandani).

the end of 2014; and [redacted] by the end of 2015."); Trial Ex. 880, Herring WDT ¶ 54 ("Even though it earned more than [redacted] in 2015 alone, Pandora lost [redacted] that year and had suffered cumulative losses of more than [redacted] between 2005 and the end of 2015. Pandora expects to lose an additional [redacted] by the end of this year, for a cumulative loss of [redacted] through the end of 2016, according to GAAP."); Trial Ex. 694, Alyeshmerni WDT ¶ 17 ("In each quarter, the U.S. operations of Google Play's music-related offerings have incurred [redacted] estimated losses ranging from [redacted].").

JPFF83. A significant barrier to profitability for streaming services is the cost paid to license content—in particular, the payments to publishers for musical works rights and the payments to record labels for sound recording rights. Trial Ex. 692, Levine WDT ¶ 18; 3/21/17 Tr. 2047:1-3 (McCarthy); Trial Ex. 1060, McCarthy WDT ¶¶ 20-22 ([redacted]) (emphasis in original); Trial Ex. 880, Herring WDT ¶¶ 53-56.

JPFF84. In addition to the costs to license content, interactive streaming services incur numerous costs related to infrastructure, personnel, and developing new features to improve the user experience. *See, e.g.*, Trial Ex. 1, Mirchandani WDT ¶ 55; 3/14/17 Tr. 850:6-10 (Herring) ("So over the last 17 years, we've made a lot of investments in innovation and product, and it has come a long way. It's critical for our ability to grow our business and serve our listeners as well as possible."); Trial Ex. 1063, Harteau WDT ¶ 17 ("Spotify also has substantial infrastructure costs unrelated to data. These costs are incurred to improve, broaden, and deepen the user experience."); 3/21/17 Tr. 2044:2-24 (McCarthy) (explaining the types of costs including the costs of delivering revenue, sales and marketing expense, R&D costs, and G&A

costs); Trial Ex. 880, Herring WDT ¶¶ 13-56 (describing Pandora's extensive investments and ongoing costs).

JPFF85. Because of the high cost structure and lack of profitability, interactive streaming services are not seen as profitable by investors. 3/22/17 Tr. 2301:18-25 (Pakman) ("My research showed that companies in [the digital music] space have royalty obligations and the payment of those royalties leaves very little margin left for the company. They experience low gross margins. These low gross margins result in a lack of profitability, and the lack of profitability leads to an inordinately high failure rate, particularly when compared with other industries."); Trial Ex. 696, Pakman WDT ¶ 31. This, in turn, has chilled investments in the music space, leaving consumers with fewer choices than would exist in a healthy market. *Id.* at ¶ 33; 3/22/17 Tr. 2302:1-3 (Pakman) ("This high failure rate has led to a disfavoring of this sector from venture capital investors.").

A. Content Costs Represent the Single Greatest Cost Facing the Services

JPFF86. Of the costs faced by interactive streaming services, by far the largest cost is for content. Trial Ex. 692, Levine WDT ¶ 16; Trial Ex. 694, Alyeshmerni WDT ¶ 13; 3/21/17 Tr. 2045:17-23 (McCarthy) ([redacted]. Interactive streaming services face two primary types of music-related content costs: (1) payments to music publishers for the performance and mechanical rights in musical works; and (2) payments to record labels for the performance and reproduction rights in sound recordings. Trial Ex. 693, Joyce WDT ¶ 16; *see also* Trial Ex. 696, Pakman WDT ¶ 20 ("There are a variety of reasons for the difference in rates paid to sound recording and musical work rights owners. However, music service operators and their investors view these royalties as a combined cost that they must pay in order for the services to operate lawfully."). These payments, which are made on a percentage-of-revenue basis, often amount to [redacted] or more of a service's revenue. Trial Ex. 693, Joyce WDT ¶ 16; 4/7/17 Tr. 5508:17-5509:6 (Marx) ([redacted].

JPFF87. The largest of these costs is for sound recording rights, which are often [redacted] or more of a service's revenue. Trial Ex. 694, Alyeshmerni WDT ¶ 13; 4/7/2017 Tr. 5509:19-20 (Marx) ([redacted]). But even though sound recording payments are the largest, payments for the mechanical and performance rights in musical works are a significant contributor. *Id.* at 5508:23-24 ([redacted]). Because the Services have very low gross margins, even a small cost change could have a significant impact. 4/3/17 Tr. 4416:11-18 (Rysman).

JPFF88. High royalty costs are a substantial barrier to the profitability and continued operation of streaming services. Trial Ex. 692, Levine WDT ¶ 16; Trial Ex. 693, Joyce WDT ¶ 12; 3/21/17 Tr. 2047:1-3 (McCarthy) ([redacted]); Trial Ex. 880, Herring WDT ¶ 54; 3/14/2017 Tr. 876:18-21 (Herring). Indeed, most services that were in existence in the early 2000s have gone bankrupt or been absorbed by larger services. Trial Ex. 692, Levine WDT ¶ 16. Recently, Rdio, which launched in Aug. 2010, filed for bankruptcy, and Rara.com, which launched in Dec. 2011, closed. Trial Ex. 692, Levine WDT ¶ 17.

B. Services Must Use the Remaining Revenue to Constantly Innovate

JPFF89. After paying content costs, services spend more than the remainder of their revenues on other costs not borne by the Copyright Owners or the record labels, such as innovation, infrastructure, and personnel in order to remain competitive against piracy. *See, e.g.*, Trial Ex. 1060, McCarty WDT ¶ 39 ("Spotify spent approximately [redacted] of global revenue on R&D in 2015 and [redacted]. In my experience, this is at the [redacted] of what is necessary to remain competitive as a tech company. Other tech companies typically spend at least 7.5-10% globally…."); 3/21/17 Tr. 2044:2-24 (McCarthy) (explaining the types of costs including the costs of delivering revenue, sales and marketing expense, R&D costs, and G&A costs); Trial Ex. 1, Mirchandani WDT ¶ 55.

JPFF90. In fact, despite their lack of profitability, services have continued to invest in their product, in the hopes that innovation will attract potential subscribers who have never used interactive streaming to the services, including ones abandoning piracy. 3/13/17 Tr. 560:5-12 (Katz) ("[A]t least a firm like Spotify, is not profitable. They have been willing to invest and appear to be continuing to be willing to invest for the prospect of future profits, and that they have been a growing and increasingly important source of music distribution."); *id.* at 619:4-13; 3/14/17 Tr. 850:6-10 (Herring) (noting that innovation is crucial for a service's ability "to grow our business").

JPFF91. Just to launch a service requires significant investments in research, business planning, technical development, content acquisition (including license negotiations and Notice of Intent-related efforts), legal compliance, advertising, marketing, and promotion. Trial Ex. 1, Mirchandani WDT ¶ 55. Further, once a service is launched, it faces costs associated with operating a service and continually modifying and updating it, including costs related to publishing administration, lyric licensing, patent and software licensing, music curation and analysis, personnel, advertising, marketing, and promotion. *Id.*; *see also* 3/21/17 Tr. 2070:25-2071:5 (McCarthy) [redacted]

JPFF92. Each of Amazon, Google, Pandora, and Spotify have invested [redacted] in innovation for their music services in an effort to grow the market. These investments have helped to develop streaming from a nascent industry to an industry that generates more than $1.6 billion in annual revenue. Trial Ex. 1065, Marx WDT Appendix B at 1.b.

1. *Amazon*

JPFF93. One unique feature to Amazon is the integration of its music service with Alexa, its cloud-based, voice-activated virtual assistant software. Trial Ex. 1, Mirchandani WDT ¶ 30. Alexa is capable of voice interaction and music playback, can keep track of shopping and to-do lists, and can report the daily news, weather forecasts, traffic patterns, and sports scores and schedules. *Id.* at ¶ 31. Amazon has found that the integration of Alexa with music attracts more customers to its music service. *Id.*; 3/16/17 Tr. 1410:5-1411:14 (Mirchandani).

JPFF94. In addition to the innovative Alexa technology, Amazon has invested in other streaming-related technologies, including curated playlists, personalized stations, recommendation tools to facilitate music discovery, expanded availability across multiple platforms, and functionalities like offline playback and synchronized lyrics. Trial Ex. 1, Mirchandani WDT ¶ 64; 3/16/17 Tr. 1396:4-1397:14 (Mirchandani).

JPFF95. Collectively, Amazon has invested over [redacted] over the last 5 years to offer its digital music services. Trial Ex. 1, Mirchandani WDT ¶ 55; *see also* 3/16/17 Tr. 1396:4-1397:14 (Mirchandani).

2. *Google*

JPFF96. Google has also invested [redacted] of dollars to grow the Google Play Music subscription service and to differentiate it from other interactive streaming services. Trial Ex. 693, Joyce WDT ¶ 11.

JPFF97. Google has found that ensuring users are engaged with the service is a key way to retain and grow its subscriber base. Trial Ex. 697, Levine WRT ¶ 12. To that end, Google has developed a number of unique features for its music service, such as a proprietary "music quiz" used to make customized music recommendations and technology that evaluates a listener's location, time of day, and activity to customize music recommendations. Trial Ex. 693, Joyce WDT ¶ 10. Another feature of Google Play Music is its human-curated playlists. *Id.* at ¶ 14. Google acquired many of these features when it purchased Songza in 2014 for almost [redacted]. *Id.* at ¶ 7.

JPFF98. Many of Google's innovations and investments have been geared towards developing its "subscription funnel"—the pool of users of its free, non-interactive music offering and locker service offering that convert to paying subscribers of Google's interactive subscription service. Trial Ex. 693, Joyce WDT ¶ 8. The funnel is an important mechanism for converting casual music listeners into paying subscribers, and combating a reluctance to pay for music. *Id.* One of the primary ways that Google has grown this funnel is investing in and developing Google Play Music's radio features. Trial Ex. 693, Joyce WDT ¶ 7. Google has found that users of its free radio service are more likely to become paying subscribers of its interactive service.[3] Trial Ex. 693, Joyce WDT ¶ 8.

JPFF99. Around [redacted] Google engineers work on Google Play Music. *Id.* Google has also worked continually to grow the catalog of songs available on the service, and Google has devoted significant advertising resources to promoting the service, including more than [redacted] in advertising inventory to promote Google Play Music. Trial Ex. 693, Joyce WDT ¶ 11; Trial Exs. 557, 559.

3. *Pandora*

JPFF100. Pandora has also invested hundreds of millions in its streaming services. 3/14/17 Tr. 872:3-12 (Herring) (testifying that Pandora has spent more than [redacted] to develop the interactive features of Pandora Plus and Pandora Premium); *see* Trial Ex. 880, Herring WDT ¶¶ 13-56. One feature that distinguishes Pandora is its investment in the proprietary Music Genome Project (MGP). 3/9/17 Tr. 398:23-399:12 (Phillips). As part of the MGP, Pandora's team of over [redacted] highly trained music analysts have devoted hundreds of thousands of hours to analyze and code more than [redacted] tracks in Pandora's catalog on up to 450 song characteristics. Trial Ex. 880, Herring WDT ¶¶ 15, 17, 27; 3/14/17 Tr. 855:21-858:10 (Herring).

JPFF101. In addition to the Music Genome Project, Pandora has made significant investments in its playlist algorithms and in its "thumbs up" or "thumbs down" rating system. 3/14/17 Tr. 850:3-851:24 (Herring).

JPFF102. Pandora has also invested [redacted] to integrate its products into mobile devices, automobiles, and various consumer electronic products (such as home entertainment

[3] This statement only pertains to Google, not the other Services. Google has not experimented with converting users through a Section 115 free service like, for example, Spotify has done quite successfully.

devices, gaming consoles, and even refrigerators). Trial Ex. 880, Herring WDT ¶¶ 29-34; 3/14/17 Tr. 861:9-862:17 (Herring). In total, Pandora has invested [redacted] on the accessibility side of the business alone. 3/14/17 Tr. 863:24-864:4 (Herring).

4. *Spotify*

JPFF103. Likewise, Spotify has spent [redacted] in developing and growing its streaming service. Spotify prides itself on its unique music discovery features. Trial Ex. 1064, Lucchese WDT ¶ 23; 3/21/17 Tr. 2251:18-24 (Lucchese) ("So could we apply this understanding of each individual fan of music trends in ways to build tools and capabilities for artists, songwriters, producers, to do a better job doing those things I mentioned before, understanding their fans, engaging with their fans, ultimately generating more money from their fans."). Spotify accomplishes music discovery in three ways: playlists created by Spotify's Shows & Editorial team (Spotify-curated playlists), user-created playlists, and playlists that draw upon audience-understanding technology to algorithmically generate playlists, often personalized to the individual user (algorithmically-driven playlists). Trial Ex. 1064, Lucchese WDT ¶ 23; 3/21/17 Tr. 2261:20-2262:2 ("Release Radar is a weekly updated playlist of new releases that are personalized to you…. Release Radar gives you that personalized feed of recommendations every week. The -- music that's -- that's recommended is limited to -- to new releases."); *id*. at 2262:22-2263:2 ("Daily Mix is—is all technology-based. So it's taking your taste profile, listening and understanding your listening contexts, and then using a series of different technological approaches to generate a constantly updated playlist, like a radio station basically, of relevant music.").

JPFF104. Discover Weekly is one of Spotify's most popular music discovery products. *See* 3/21/17 Tr. 2263:21-2264:2 (Lucchese) ("Discover Weekly is recommending music with lower familiarity. So these are tracks that -- that, though we do see listening activity for them, are a bit below the radar, are not necessarily mainstream tracks and certainly not -- they're artists typically that -- that you probably haven't heard of before."). Using machine learning techniques, Discover Weekly brings each user two hours of custom music recommendations, tailored specifically to each and every user and delivered at the beginning of each week as a unique Spotify playlist. *See* 3/21/17 Tr. 2265:1-7 (Lucchese) ("Mondays are the days that Discover Weekly comes out. One of the ways that Spotify realized they had something on their hands is when people started freaking out early on in the product launch where things did not go out on Monday morning. So it has become a consumption habit for a lot of the listeners on Spotify."); Trial Ex. 1064, Lucchese WDT ¶ 26. Because Discovery Weekly is unique to each user's tastes, its personalized playlists evolve as a user's tastes evolve. *Id.*

JPFF105. Innovation has required enormous investment. *See* Trial Ex. 1060, McCarthy WDT ¶ 39 ([redacted]). Spotify's most significant expenses were sales and marketing and research and development. 3/28/17 Tr. 3436:11-16 (Barry). The data infrastructure that allows Spotify to make personalized listening recommendations (powering, just as one example, Discover Weekly) costs an estimated [redacted] per year. Trial Ex. 1063, Harteau WDT ¶ 16. The infrastructure for providing real-time data to make listening recommendations costs another [redacted] per year. *Id.*

JPFF106. Spotify invested [redacted] from January 2011 to June 2016 in infrastructure research and development costs alone. Trial Ex. 1063, Harteau WDT ¶ 8. This number is projected to continue to rise to [redacted] for all of 2016 and [redacted] for 2017—representing a year-on-year growth of [redacted]. *Id.* at ¶ 9.

JPFF107. Operating costs are even higher. Spotify anticipates incurring non-R&D infrastructure costs of [redacted] in 2016 and [redacted] in 2017. Trial Ex. 1063, Harteau WDT ¶ 15.

JPFF108. But these expenses have had a significant impact on Spotify's efforts to grow its subscriber base. In fact, [redacted]. 3/28/17 Tr. 3437:2-15 (Barry). As a result of Spotify's investment in the quality of its service, its percentage of engagement (*i.e.*, daily active users as a percentage of monthly active users) [redacted]. 3/21/17 Tr. 2167:21-2168:10 (McCarthy).

C. The Services' Expert, David Pakman, Confirms that Digital Services Are Not Seen as Desirable Investments, Even Under Existing Rates

JPFF109. As David Pakman testified, excessive music licensing royalty costs have led to a high failure rate for digital music services and a lack of investment in these services relative to other digital businesses. Trial Ex. 696, Pakman WDT ¶ 13; 3/22/17 Tr. 2301:18-25 (Pakman) ("My research showed that companies in this space have royalty obligations and the payment of those royalties leaves very little margin left for the company. They experience low gross margins. These low gross margins result in a lack of profitability, and the lack of profitability leads to an inordinately high failure rate, particularly when compared with other industries."); Trial Ex. 696, Pakman WDT ¶ 18.

JPFF110. The low level of investment in digital music services has stifled growth in this industry. As a consequence, both music service revenues and the total dollar amount of payments to music rights-holders are depressed relative to what would be expected if there were a lower royalty structure. Trial Ex. 696, Pakman WDT ¶ 13.

JPFF111. As Mr. Pakman testified, while his own investment firm invests heavily in internet and technology companies, it has never invested in any digital music or internet radio companies. The overwhelming majority of venture investors have taken a similar approach by declining to invest in such services. 3/22/17 Tr. 2302:19-23 (Pakman) ("[W]hen compared with other industries, venture capital investors appear to invest at far lower rates into far fewer companies..."). The level of investment is particularly telling compared to the investments in other industries. *Id.* at 2307:22-2308:3 ("[T]here are vastly fewer...venture capital-backed companies in digital music than there are in mobile, SaaS, or eCommerce.").

JPFF112. The failure rate of digital music companies also is among the highest that Mr. Pakman has ever observed. Trial Ex. 696, Pakman WDT ¶ 27. Based on Mr. Pakman's observation of the market, the failure rate of standalone digital music companies is 15.4%. *Id.*; *see also* 3/22/17 Tr. 2310:10-20 (Pakman). If royalties were raised, the already-high failure rate for digital music services will only worsen. Trial Ex. 696, Pakman WDT ¶ 27.

JPFF113. The rate of successful exit—meaning an exit where an investor received its money back and a profit of at least $1—is also lower for interactive streaming than other industries. 3/22/17 Tr. 2325:12-16 (Pakman) ("So of the 239 [digital music service companies],...26 companies produced a profitable exit of one dollar or more in profit to their investors, which is about a 10 percent success rate compared to the 20 to 35 percent in" three comparable industries). Only 7 digital music services had a "meaningful return" for its investors, meaning a return for its investors of at least $25 million. *Id.* at 2326:5-16.

JPFF114. As the lack of successful exits underscores, the market for interactive streaming is not a healthy one. As Mr. Pakman explained, an "unhealthy market" is one where "there are only large companies participating and the failure rates of the small companies are very high....” *Id.* at 2330:4-8. Unfortunately, this is true of the interactive streaming market—only large companies are participating and many smaller services have been forced to exit. Because of this, many venture investors have determined that the interactive streaming market is unhealthy and have not invested. *Id.* at 2330:8-10.

JPFF115. With few entrants and many failures, little opportunity exists to grow the interactive streaming market, which ultimately impacts the Copyright Owners. Were royalty rates set in a way that enabled services to profit, there would be more entrants and investment, an expansion of the market, and, in turn, more music services making higher total royalty payments to the Copyright Owners. Trial Ex. 696, Pakman WDT ¶ 33; *see also* 3/22/17 Tr. 2329:10-17 (Pakman) (defining a “healthy market”).

V. THE DEVELOPMENT OF THE CURRENT RATES AND TERMS

A. Interactive Streaming Services Arose in the Early 2000s

JPFF116. The interactive streaming industry began over 15 years ago. Trial Ex. 697, Levine WRT ¶ 6; *see also* 3/28/17 Tr. 3405:4-15 (Timmins) (admitting the Digital Performance Right in Sound Recording Act of 1995 paved the way for interactive streaming). By the mid-2000s, both the NMPA and digital service providers foresaw that streaming would become a highly important source of music delivery. 3/29/17 Tr. 3693:14-3694:12 (Israelite); Trial Ex. 333 (article co-written by David Israelite and Jonathan Potter). In fact, David Israelite of the NMPA, and Jonathan Potter of DiMA, which represented the streaming services, both publicly predicted in 2006—correctly—that streaming could become the “dominant” source of music delivery. *Id.*

JPFF117. Early operators of interactive streaming services included Rhapsody, Pressplay and MusicNet, each of which launched in 2001. Trial Ex. 697, Levine WRT ¶ 6; 3/8/17 Tr. 153:19-25 (Levine). These early services pioneered the same business model that exists today of offering on-demand access to a large catalog of music for a flat monthly subscription fee. Trial Ex. 697, Levine WRT ¶ 6; *see also* Trial Ex. 875, Parness WDT ¶ 8.

JPFF118. Following on the heels of the initial entrants, large technology companies, including AOL, Yahoo!, and Microsoft, invested in the streaming market and began operating multiple interactive streaming services, that were integrated into broader consumer offerings, during the mid-2000s. Trial Ex. 697, Levine WRT ¶ 6; 3/8/17 Tr. 155:14-157:12 (Levine). Multiple pure-play music services also entered the interactive streaming market during this period, including MOG and Rdio, which began operating in 2009 and 2010, respectively. *Id*. Most of these services failed and exited the marketplace. Trial Ex. 696, Pakman WDT ¶ 27.

B. Serious Questions Over Whether Interactive Streaming Implicated "Mechanical" Rights at All Led to Industry-wide Compromises

JPFF119. From the outset, participants in the music streaming market were plagued with the question of whether streaming implicated both mechanical and public performance rights. Trial Ex. 875, Parness WDT ¶ 6; Trial Ex. 692, Levine WDT ¶¶ 26-34; 3/8/17 Tr. 146:3-147:2 (Levine). While the publishing industry argued that on-demand streaming implicated a mechanical right, the Digital Media Association ("DiMA"), a trade body representing a number of streaming services, and many streaming services disagreed. 3/8/17 Tr. 295:16-22 (Parness). The interested parties also varied widely in their opinions regarding what the value of a mechanical right for interactive streaming might be if such a right were ultimately found to exist. Trial Ex. 875, Parness WDT ¶ 6; 3/29/17 Tr. 3645:17-3647:2 (Israelite).

JPFF120. From 2001 until 2008, the Copyright Office weighed the question of whether digital streaming services implicated the mechanical right and would be subject to the Section 115 compulsory license. Trial Ex. 692, Levine WDT ¶¶ 26-27, 31, 33, 38; Trial Ex. 875, Parness WDT ¶ 6. On two occasions (in 2001 and again in 2008) the Copyright Office issued

Notices of Proposed Rulemaking to address this question. Trial Ex. 692, Levine WDT ¶¶ 26, 31; 3/8/17 Tr. 254:1-23 (Levine). The Copyright Office also hosted public roundtables to discuss the issue. Trial Ex. 692, Levine WDT ¶ 31. During this period, the topic was also debated in the legislative arena. *Id* at ¶ 30.

JPFF121. The legal uncertainties underpinning the debate over whether a mechanical license was required for interactive streaming led to several compromises between the publishing industry and operators of streaming services. First, in 2001, the publishing industry, acting through the Harry Fox Agency and the NMPA, reached an agreement with the RIAA, whose membership at the time included record labels that had invested in streaming services. Trial Ex. 692, Levine WDT ¶ 28; 3/8/17 Tr. 149:4-152:12 (Levine); Trial Ex. 3014, Israelite WDT ¶ 89. Per the terms of the agreement, which several other streaming services later signed onto, interactive streaming services were free to operate without fear of incurring copyright liability so long as they agreed to pay under rates and terms to be set later. Trial Ex. 692, Levine WDT ¶ 28; 3/29/17 Tr. 3618:25-3619:13 (Israelite); 3/8/17 Tr. 152:13-22 (Levine). In the ensuing years, many discussions took place about what the rates should be, but there was no resolution until 2008. 3/8/17 Tr. 154:1-20 (Levine).

C. The *Phonorecords I* Settlement Established Rates and a Royalty Structure for Subpart B That Persist Today

JPFF122. In 2008, during *Phonorecords I*, representatives of the publishing industry and streaming services finally settled on rates and terms applicable to interactive streaming. Trial Ex. 692, Levine WDT ¶ 33; Trial Ex. 875, Parness WDT ¶ 7; Trial Ex. 3030, Israelite WRT ¶ 5; Trial Ex. 6013 (*Phonorecords I* Wrapper Agreement). Under the terms of the settlement, interactive streaming services agreed to pay for mechanical licenses in exchange for, among other things, the publishers' agreement that no such license was required for non-interactive streaming. *Id*.; 3/8/17 Tr. 296:2-9 (Parness); Trial Ex. 6013 § 4.

JPFF123. Following the 2008 settlement, the Copyright Office issued an interim regulation that took no position on whether so-called "buffer copies" or, additional temporary copies made to better facilitate the actual streamed performance of the work, independently qualify as digital phonorecord deliveries ("DPDs"), thus ending its inquiry into whether interactive streaming implicated a mechanical license without upending the *Phonorecords I* settlement. Trial Ex. 692, Levine WDT ¶ 36.

JPFF124. The rates and terms agreed upon to settle *Phonorecords I* were adopted by the Board in January 2009 as Subpart B of 37 C.F.R. § 385, and the basic structure, rates, and regulations encompassed in the settlement remain the rates and terms applicable to Subpart B services today. Trial Ex. 692, Levine WDT ¶ 35; Trial Ex. 875, Parness WDT ¶¶ 10-13; *see also* Trial Ex. 3030, Israelite WRT ¶ 4.

JPFF125. One of the key aspects of the settlement was that the rates paid by services for mechanical royalties would allow for a deduction of expenses for public performance royalties, meaning that the top-line rate paid under the Section 115 license would be "all-in" from the services' point of view. Trial Ex. 692, Levine WDT ¶ 35; Trial Ex. 875, Parness WDT ¶ 7; 3/8/17 Tr. 298:18-299:5 (Parness). As Google's Zahavah Levine testified, one of the major concerns of the services in the early days of interactive streaming was the "double dip" problem whereby a service would have to conduct two separate negotiations in order to clear publishing rights. 3/8/17 Tr. 147:18-148:5 (Levine). In fact, prior to settlement, some members of the streaming community expressed a view that the value of any mechanical right implicated by interactive streaming is essentially zero because the Copyright Owners are already compensated through performance payments. 3/29/17 Tr. 3645:17-3647:2 (Israelite). So when the settlement establishing streaming rates was finally reached, a key driver of the deal for the services was the deduction of performance fees for, effectively, an "all-in" rate, thus solving the double dipping problem and allowing services to understand their overall liability for publishing rights. 3/8/17 Tr. 298:25-299:20 (Parness); Trial Ex. 875, Parness WDT ¶ 7; 3/8/17 Tr. 170:2-171:5 (Levine) (explaining benefits of all-in rate structure). In fact, the "all-in" nature of the rate was one of the determining factors in the parties reaching a settlement. 3/8/17 Tr. 300:25-301:20 (Parness).

JPFF126. From the services' perspective, other key drivers of the settlement were that the new rates would be structured as a percentage of revenue and set at a level—10.5%—that services deemed acceptable for the combination of mechanical and performance rights. Trial Ex. 875, Parness WDT ¶ 7. From the Copyright Owners' perspective, there were concerns that the rate structure needed to protect the Copyright Owners against price declines or under-monetization of services, so certain minimum payment thresholds (*e.g.,* TCC minima) were added to the royalty structure. Trial Ex. 875, Parness WDT ¶ 8; Trial Ex. 3030, Israelite WRT ¶ 20. Because the parties realized the need to allow for different service types targeting different consumers and that certain service offerings (*e.g.*, those with less interactivity or a limited catalog) should command lower rates, the parties agreed that the minima would vary depending upon the nature of the service offering. Trial Ex. 875, Parness WDT ¶ 8; *see also* 37 C.F.R. § 385 (reflecting the numerous service categories that still persist today, including standalone portable subscription services, bundled subscription services, and ad-supported services); 3/29/17 Tr. 3824:9-3825:1 (Israelite) (describing an agreement to set separate rates to accommodate ad-supported services).

JPFF127. In negotiations, the Copyright Owners also asked the streaming services to accept a "floor" fee for mechanical rights royalties below which payments could not fall after deducting performance rights payments. Trial Ex. 875, Parness WDT ¶ 9. The Copyright Owners' stated concern behind seeking a mechanical-only "floor," notwithstanding that public performance fees are distributed to the same music publishers and songwriters, was that on-demand streaming services would channel all of their royalties through the PROs. 3/8/17 Tr. 259:21-261:15 (Levine) (explaining that the floors were intended as a deterrent to keep services from shifting all of the licensing for musical works to the PROs at the expense of mechanical royalties). At the time, the services viewed the floor fees as all-but illusory under then-prevailing performance royalty rates. Trial Ex. 875, Parness WDT ¶¶ 9, 21; 3/8/17 Tr. 309:12-15 (Parness); Trial Ex. 692, Levine WDT ¶ 35; 3/8/17 Tr. 254:24-256:8 (Levine).

D. The *Phonorecords II* Settlement Anticipated Additional Business Models and Reaffirmed the Rates and Rate Structure Agreed to in *Phonorecords I*

JPFF128. In 2011, the Copyright Royalty Board commenced the *Phonorecords II* proceeding to determine Section 115 rates for the period of January 1, 2013 through December 31, 2017—the rates in effect today. Trial Ex. 875, Parness WDT ¶ 11; Trial Ex. 692, Levine WDT ¶ 37. Whereas reasonable minds could perhaps differ regarding the status and future of interactive streaming at the time of *Phonorecords I*, that was certainly not the case by the time of *Phonorecords II*. Trial Ex. 697, Levine WRT ¶¶ 5-6. The participants knew that streaming was the future and that there was no going back. *Id.*; 3/8/17 Tr. 171:7-172:6, 270:8-272:19 (Levine). The parties negotiated intensely for approximately one year before reaching a settlement in 2012. 3/8/17 Tr. 172:7-12 (Levine); 3/29/17 Tr. 3756:25-3757:23, 3760:8-3761:6 (Israelite); Trial Ex. 337.

JPFF129. For interactive streaming activity under Subpart B, the services and the Copyright Owners, who now had several years of data regarding the *Phonorecords I* rates to inform their settlement positions, agreed to continue the existing royalty rates and structure with only very minor changes. Trial Ex. 875, Parness WDT ¶ 13; Trial Ex. 692, Levine WDT ¶ 39. At the outset of *Phonorecords II* negotiations, the Copyright Owners sought an increase in the prevailing 10.5% all-in rate, which the services resisted. 3/8/17 Tr. 159:1-24 (Levine); 3/29/17 Tr. 3856:2-6 (Israelite). The Copyright Owners eventually abandoned those efforts and instead focused on refining regulations around TCC minima and allocation of revenue for bundled products in order to ensure that the Copyright Owner's interests were adequately protected in the structures carried over from the *Phonorecords I* settlement. 3/8/17 Tr. 161:2-164:11 (Levine). The services made several concessions on these points. The Board ultimately adopted the parties' settlement, and the proposed amendments to 37 C.F.R. § 385 were published in the Federal Register on November 13, 2013. Trial Ex. 875, Parness WDT ¶ 12.

JPFF130. In addition to negotiating the Subpart B rates and terms that would apply through 2017, the parties also negotiated vigorously over the rates that would apply to new service types, including cloud locker services, that would be embodied in Subpart C of 37 C.F.R. § 385. Trial Ex. 875, Parness WDT ¶ 13; Trial Ex. 692, Levine WDT ¶¶ 38-39. Ultimately, rather than developing an all new royalty structure for these service types, the parties agreed on a structure for Subpart C that resembled the Subpart B structure, including comparing a headline percentage of revenue royalty rate against TCC and per-subscriber minima. Trial Ex. 875, Parness WDT ¶ 14; *see also* 37 C.F.R. § 385.22. One notable aspect of the parties' settlement is the absence of any sort of mechanical-only "floor" fees in Subpart C. Trial Ex. 875, Parness WDT ¶ 14.

JPFF131. Each of the services involved in the current proceeding, with the exception of Spotify (which launched in the United States in July 2011), was also involved in the negotiations of the *Phonorecords II* settlement and signed the ultimate settlement agreement. Trial Ex. 6014 pp. 8-9 (signature pages of *Phonorecords II* "Wrapper Agreement"); *see also* 3/29/17 Tr. 3761:7-3763:13 (Israelite) (admitting that Pandora, Apple, Amazon and Google were all participants in *Phonorecords II* and DiMA members). The one missing party, Spotify, was also a well-known commodity by this time due to its recent launch in the United States and its rapid success abroad following a 2008 launch in Europe. Trial Ex. 1060, McCarthy WDT ¶ 4; 3/8/17 Tr. 157:6-12 (Levine); 3/22/17 Tr. 2361:9-12 (Pakman); *see also* 3/29/17 Tr. 3762:24-3763:13 (Israelite) (admitting awareness of Spotify's 2011 U.S. launch).

E. The Copyright Owners' Attempts to Disavow the *Phonorecords I* and *Phonorecords II* Settlements Are Unpersuasive and Run Counter to Undisputed Facts

JPFF132. Though the Copyright Owners agreed to the existing Subpart B royalty structure in two separate, voluntary settlements, they now seek to distance themselves from those settlements on the grounds that (1) the market conditions and issues that exist in today's interactive streaming market could not have been foreseen in 2008 or 2012; and (2) the *Phonorecords I* and *Phonorecords II* settlements were intended to be non-precedential. *See, e.g.*, Trial Ex. 3016, Brodsky WDT ¶ 59; Trial Ex. 3014, Israelite WDT ¶¶ 81, 103; Trial Ex. 3030, Israelite WRT ¶ 34; Trial Ex. 3018, Kokakis WDT ¶ 58; 3/28/17 Tr. 3586:6-3587:1 (Israelite); 3/29/17 Tr. 3770:12-3772:20 (Israelite). Neither of these theories is supported by the factual record.

1. *The Copyright Owners Made the Same Arguments They are Advancing Today During* Phonorecords I, *Which Addresed Those Concerns Through Minimum Payment Structures*

JPFF133. Copyright Owner witnesses, including David Israelite, Peter Brodsky, and David Kokakis, each took the position that, when *Phonorecords I* and *Phonorecords II* took place, no one could have anticipated certain features of the streaming marketplace, including the presence of services operated by large technology companies with diverse business interests, bundled services, or advertising-supported services. *See, e.g.*, Trial Ex. 3016, Brodsky WDT ¶ 59; Trial Ex. 3014, Israelite WDT ¶ 81; Trial Ex. 3018, Kokakis WDT ¶ 58. However, cross-examination from this proceeding and evidence from the *Phonorecords I* proceeding reveals that all of these issues were in fact broadly anticipated at least ten years ago, before the Copyright Owners twice agreed to the rate structure they now seek to jettison.

JPFF134. **Diversified Technology Companies**: The Copyright Owners claim that they could not have foreseen that large technology companies would be operating streaming services and that their expectation at the time of *Phonorecords I* was that record labels might be the operators of interactive streaming services. Trial Ex. 3016, Brodsky WDT ¶ 59 ("[T]he publishers and songwriters did not and could not foresee that some streaming services would be operated by companies that appear to be focused more on customer acquisition than on generating streaming revenue."); Trial Ex. 3014, Israelite WDT ¶ 81 ("No one knew who would be operating streaming services…or what their business models might be."); *see also* Trial Ex. 3018, Kokakis WDT ¶ 58.

JPFF135. But at the time of *Phonorecords I*, large, diversified technology companies like Microsoft, AOL, and Yahoo! had already entered the market. Trial Ex. 697, Levine WRT ¶ 6; 3/29/17 Tr. 3838:9-3839:22 (Israelite) (admitting that large technology companies were in fact operating services prior to *Phonorecords I*); 3/28/17 Tr. 3394:21-3395:15, 3397:22-3399:2 (Timmins) (discussing Yahoo!, AOL, and Microsoft ownership of interactive streaming services during the mid-2000s). In fact, the Copyright Owners specifically argued in *Phonorecords I* that the rate structure for streaming and limited downloads would need to address issues associated with large technology companies with diverse business interests (and the ability to displace revenue) operating streaming services. *See, e.g.*, 3/29/17 Tr. 3833:10-3836:20 (Israelite) (discussing expert report of Dr. Enders from *Phonorecords I*, which warned of revenue attribution issues associated with large technology companies like Yahoo! that may be primarily concerned with customer acquisition).

JPFF136. By the time of *Phonorecords II*, it would have been even more apparent which companies were likely to operate streaming services since the participants in this case were either involved in that proceeding or already operating in the market. *See* Trial Ex. 6014 pp. 8-9 (signatures of participants on *Phonorecords II* "Wrapper Agreement").

JPFF137. The claim that the Copyright Owners suspected in 2006-2008 that record labels would be the primary operators of interactive streaming services is belied by the fact that the major record labels, which had owned MusicNet and Pressplay in the early 2000s, had already exited the business in 2004, and the NMPA was aware of no definite plans for the labels to reenter the market. 3/29/17 Tr. 3846:17-3847:9 (Israelite). The record labels exited amidst a U.S. Department of Justice ("DOJ") investigation into antitrust concerns raised by their ownership of streaming services, thus making reentry an unlikely occurrence. Trial Ex. 876 (Statement of the Department of Justice on the Closing of the Antitrust Division's Review of the ASCAP and BMI Consent Decrees, dated August 4, 2016).

JPFF138. **Bundled Services**: The Copyright Owners' strategy at trial focused heavily on revenue allocation issues associated with bundling. However, as with the other issues raised by the Copyright Owners, these same bundling concerns were raised in the NMPA's *Phonorecords I* filings, and the parties' settlement of that case actually established a separate service category specifically to address bundled offerings. 3/29/17 Tr. 3843:7-3844:23 (Israelite). Additionally, bundling was a focus of negotiations leading up to the *Phonorecords II* settlement, in which the Copyright Owners voluntarily agreed to carry over the bundled service category and negotiated to create a new bundled service category under Subpart C with certain adjustments to the definition of "revenue." *Id*.; 3/8/17 Tr. 161:25-164:11 (Levine); 37 C.F.R. § 385.21.

JPFF139. **Advertising-Supported Services**: Though the *Phonorecords I* settlement contemplated ad-supported services, the Copyright Owners claimed at trial that this service category was merely "theoretical" at the time of the settlement. 3/28/17 Tr. 3600:6-11 (Israelite). But, during cross-examination NMPA President David Israelite admitted that the concept of an ad-supported service "was around" in *Phonorecords I*, and he was impeached with articles demonstrating specific services pursuing an advertising-based business model during that time. 3/29/17 Tr. 3824:9-14, 3829:24-3830:22 (Israelite). By the time of the *Phonorecords II* settlement, Spotify, which includes an ad-supported tier, had launched in the United States following a successful launch in Europe in 2008. 3/29/17 Tr. 3762:24-3763:13 (Israelite); Trial Ex. 1065, Marx WDT ¶ 48; Trial Ex. 1060, McCarthy WDT ¶ 4.

2. *The* Phonorecords I *and* Phonorecords II *settlements are not precluded as benchmarks.*

JPFF140. The Copyright Owners, particularly through the testimony of David Israelite during the hearing, try to dismiss the *Phonorecords I* and *II* settlements as benchmarks by claiming that the parties agreed the settlements would be non-precedential and could not be cited in future proceedings. 3/28/17 Tr. 3586:6-3587:1 (Israelite) ([redacted]); 3/29/17 Tr. 3770:12-3772:20 (Israelite) ([redacted]). [redacted]

JPFF141. While the *Phonorecords I* wrapper agreement [redacted], Trial Ex. 6013 § 3), such contractual restriction does not apply to all of the services here, and was superseded by [redacted]. Trial Ex. 6014; 3/29/17 Tr. 3777:17-25, 3778:12-21 (Israelite) ([redacted]); *see also* Trial Ex. 6014 § 5.5 [redacted]. *See* Trial Ex. 6013 § 3.

JPFF142. [redacted] *See* Trial Ex. 6013 § 3. [redacted]

[redacted].

F. Numerous Direct Licenses Adopt Rates and Terms from the Existing Subpart B and C Regulations

JPFF143. Though Section 115 provides access to musical works through a statutory license, many services and the Copyright Owners prefer to negotiate direct licenses. Unlike the Section 115 statutory license, which licenses compositions on a work-by-work basis, direct licenses with publishers provide services with a blanket license to an entire catalog of musical works. Trial Ex. 3016, Brodsky WDT ¶ 83; Trial Ex. 693, Joyce WDT ¶ 21. Further, these licenses often include additional benefits, such as reduced administrative costs or less frequent payment periods. Trial Ex. 3016, Brodsky WDT ¶¶ 84-85; Trial Ex. 3020, Barron WDT ¶¶ 34-37. Each of the services participating in this proceeding has entered into direct licenses with publishers, and some of the participants have licensed over [redacted] of the works available on their interactive service through direct licenses. *See* Trial Ex. 695, Leonard AWDT ¶¶ 53, 63-72 (describing services' direct licenses); Trial Ex. 693, Joyce WDT ¶ 22.

JPFF144. Most of the rates and terms found in the direct licenses between publishers and services track the rates and provisions of Subpart B and Subpart C of 37 C.F.R. § 385. *See* Trial Ex. 695, Leonard AWDT ¶¶ 54, 58, 67, 69. In some instances the payment provisions of the direct licenses simply incorporate by reference the regulations with no significant alteration. *Id*. at ¶ 69, n.124 (describing [redacted] licenses that simply reference 37 C.F.R. § 385). However, these license agreements are often structured so that the combination of the mechanical and performance rights payments will never trigger the mechanical floor. Trial Ex. 885, Katz WDT ¶ 104; 3/13/17 Tr. 624:13-23 (Katz). In other instances, the parties streamline or alter the regulations when negotiating a direct license. For instance, many direct licenses between publishers and participating services eliminate the "mechanical-only" floor fees found in Subpart B. *See* Trial Ex. 885, Katz WDT ¶ 53 (describing how [redacted] licenses with major publishers are inclusive of mechanical and performance rights and do not include a "floor" fee); Trial Ex. 885, Katz WDT ¶¶ 99-102; 3/13/17 Tr. 624:7-12 (Katz) (same for [redacted] direct licenses with music publishers covering majority of works available on service). Other licenses simplify the payment structure by focusing on only the component of the royalty structure under 37 C.F.R. § 385 that makes the most sense for the idiosyncrasies of that service. *See* Trial Ex. 885, Katz WDT ¶ 64 (describing how licenses for certain [redacted] offerings simplify the rate structure to only a "TCC" component).

JPFF145. The large number of direct agreements in this market with the same or similar rate structures to those found in the current regulations demonstrates that, while the statutory license may act as a focal point for direct licensing fees, the parties have continued to gravitate towards rate structures similar to those proposed by the services and dissimilar to those proposed by the Copyright Owners despite being free to alter the payment structure when practical or preferable to do so. *Id.*; 3/15/17 Tr. 1263:8-22 (Leonard).

G. The Copyright Owners Recently Rolled Over Long-Existing Subpart A Royalty Rates Until 2022.

JPFF146. The Board ruled following *Phonorecords I,* on November 24, 2008, that the statutory rates payable under a Section 115 compulsory license for musical works in physical phonorecords and PDDs would be the greater of $0.091 or $0.0175 per minute of playing time.

Final Determination of Rates and Terms, *Phonorecords I*, Docket No. 2006-3 CRB DPRA (November 24, 2008) at p. 1; Trial Ex. 695, Leonard AWDT ¶ 38. The ruling rejected rate proposals from the RIAA and the Copyright Owners and instead continued voluntary rates the relevant parties to *Phonorecords I* previously had agreed to in 2006. Final Determination of Rates and Terms, *Phonorecords I*, Docket No. 2006-3 CRB DPRA (November 24, 2008) p. 17; Trial Ex. 695, Leonard AWDT ¶ 38; Trial Ex. 3014, Israelite WDT ¶ 96. The interested parties decided to carry the same rates forward in the *Phonorecords II* proceeding, and on November 13, 2013, the Board issued a ruling maintaining Subpart A rates at the $0.091 status quo from January 1, 2014 through the end of 2017. Trial Ex. 695, Leonard AWDT ¶ 39; Trial Ex. 3014, Israelite WDT ¶ 101.

JPFF147. On June 15, 2016, the Board received a motion from the Copyright Owners, Universal Music Group, and Warner Music Group informing the Board that the relevant parties had reached a partial settlement regarding the rates for services covered under Subpart A for the period from 2018 to 2022, and seeking approval of that partial settlement. Trial Ex. 3014, Israelite WDT ¶¶ 20-21; Trial Ex. 695, Leonard AWDT ¶ 40. On October 28, 2016, Sony Music Entertainment, the third major record label, also filed a joint motion with the Copyright Owners asking the Board to adopt the Subpart A settlement. Trial Ex. 3014, Israelite WDT ¶¶ 24-26; Trial Ex. 695, Leonard AWDT ¶ 41. On March 28, 2017, the panel issued a final rule adopting the settlement, which carries the exact same $0.091 rate forward until 2022. *See Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III); Subpart A Configurations of the Mechanical License*, 82 Fed. Reg. 15,297 (Mar. 28, 2017).

JPFF148. The relevant parties have now agreed that the $0.091 rate in place since 2006 is the proper rate through at least 2022 (a span of over 15 years), and that this rate reflects the relative contributions of the Copyright Owners as compared against the sound recording rightsholders who pay the $0.091 rate to the Copyright Owners. *See* Trial Ex. 698, Leonard WRT ¶ 27 (discussing how rates were recently settled, and the settlement reflects Section 801(b)(1) objectives); *see also* Trial Ex. 3014, Israelite WDT ¶¶ 20-26 (describing industry-wide support for the settled rates). The Copyright Owners' voluntary acceptance of this rate demonstrates that the Copyright Owners are satisfied with this rate both relative to overall royalties paid for downloads and relative to the retail price of physical albums and PDDs. *See id.*; Trial Ex. 698, Leonard WRT ¶ 27.

JPFF149. The Copyright Owners attempt to diminish the import of Subpart A by claiming that it involves an insignificant amount of money and is not worth litigating because PDD sales are part of a declining market. *See* Trial Ex. 3030, Israelite WRT ¶ 49. However, on cross-examination, David Israelite admitted that rather than being insignificant, physical sales and PDDs each year continue to bring in billions of dollars in revenue for the music industry. 3/29/17 Tr. 3817:17-3818:17 (Israelite); *see also* Section III.A, *supra*. So the amount of money at stake when settling Subpart A was in fact significant—over $3.85 billion in retail sales in 2015. Trial Ex. 7. Moreover, the Copyright Owners—who are already incurring the costs of litigating Subparts B and C—could have chosen to include Subpart A in the proceeding and incurred only incremental litigation costs if they had felt the rates truly were unfair.

JPFF150. The Subpart A settlement is a voluntary agreement covering the same term as the license at issue here. It involves the same licensors and reflects the all-in amount paid to Copyright Owners in connection with physical and digital sales. The rate was negotiated by parties that in 2006 had litigated the Subpart A rate to a final decision in a proceeding under the

801(b)(1) factors before the Board. *Mechanical and Digital Phonorecord Delivery Rate Determination Proceeding*, 74 Fed. Reg. 4510, 4537 (Jan. 26, 2009) ("Phonorecords I").

JPFF151. Expressed as a percentage of revenue as currently defined in the regulations, the Subpart A settlement reflects an all-in payment to the Copyright Owners of 9.6% of revenue, when compared to the average retail price of digital downloads when the rate was established in 2006. Trial Ex. 695, Leonard AWDT ¶ 42. The Subpart A settlement also reflects an all-in payment to the Copyright Owners of 8.7% of revenue when compared to the average retail price of digital downloads in 2015. *Id.*

JPFF152. Expressed as a percentage of payments to the record labels, the Subpart A settlement reflects a payment of 15.8% of all-in sound recording royalties, when compared to payments to record labels in 2006, and of 14.2% of all-in sound recording royalties, when compared to payments to record labels in 2015. Trial Ex. 695, Leonard AWDT ¶ 46.

VI. THE LICENSING OF OTHER RIGHTS NEEDED BY SERVICES TO OFFER INTERACTIVE STREAMING

JPFF153. In order to operate an interactive streaming service, each Service must also secure licenses for multiple rights in addition to the mechanical rights for musical works discussed in the preceding section. These additional rights include the rights necessary to stream sound recordings and the right to publicly perform musical works.

A. Sound Recording Rights and the Absence of an Effectively Licensing Market

JPFF154. Unlike the mechanical rights at issue in this proceeding, sound recording rights needed by interactive streaming services are not available under a compulsory statutory license and instead must be procured through direct negotiations with record labels. Similar to the music publishing industry, the sound recording industry is dominated by three major companies—Sony Music Entertainment ("SME"), Universal Music Group ("UMG"), and

Warner Music Group ("WMG") (each, a "Major" or "Major Label"). *See* Trial Ex. 887 (Statement of Bureau of Competition Director Richard A. Feinstein *In the Matter of Vivendi, S.A. and EMI Recorded Music, FTC,* dated Sept. 21, 2012) p. 1. Collectively, the Major Labels own, control, or distribute the overwhelming majority of sound recordings available in the market today.

JPFF155. The absence of effective competition in the marketplace for sound recording licenses for interactive streaming services is well-documented in the Board's recent *Web IV* determination. In *Web IV*, the Judges "were presented with substantial, unrebutted evidence that the interactive services market is not effectively competitive," including testimony from record company executives admitting that the Major Labels "never attempted to meet their competitors' pricing when negotiating with interactive services," and evidence that the labels "structure their contracts with the interactive services to avoid any price competition with the other labels and to prevent the on-demand services from attempting to steer users away from their repertoires" (through so-called "anti-steering" provisions). *Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings*, 81 Fed. Reg. 26,316, 26,342, 26,344 (May 2, 2016) ("Web IV"). The Board therefore concluded that "[b]ecause the Majors could utilize their combined market power to prevent price competition among them by virtue of their complementary oligopoly power," the rates reflected in the interactive streaming license agreements that SoundExchange proposed as its principal benchmark in the *Web IV* proceeding had to be adjusted downward "in order to reflect an 'effectively competitive' market." *Web IV*, 81 Fed. Reg. at 26,368; *see also* Trial Ex. 886, Katz CWRT ¶ 58 ("[A]s the Judges in Web IV concluded, the royalty rate paid by interactive services to major record companies is distorted upward.").

JPFF156. The Board's conclusion in *Web IV* as to the anticompetitive nature of the sound recording industry echoes an earlier finding by the Federal Trade Commission ("FTC") following its review of the UMG acquisition of EMI Recorded Music ("EMI"). In its investigation of the proposed merger, the FTC considered the impact of the merger on the interactive streaming services market and "found considerable evidence that each leading interactive streaming service must carry the music of each Major to be competitive," and concluded that the music offered by UMG and EMI "is more complementary than substitutable in this context, leading to limited direct competition between Universal and EMI." Trial Ex. 887 at p. 2.

JPFF157. As Dr. Katz explained, the conditions that led the FTC and the Board to find that the sound recording licensing market is not effectively competitive remain in place today. Trial Ex. 886, Katz CWRT ¶¶ 58-59 & nn.95-102; 4/5/17 Tr. 4909:19-4910:9 (Katz). Each Major Label's sound recording catalog is a "must have" for interactive streaming services, while none of the interactive streaming services is a "must have" from the perspective of a Major Label. 4/5/17 Tr. 4909:6-10 (Katz). In direct licensing negotiations, interactive streaming services and major labels remain in dramatically different positions with respect to their ability to "make a credible threat just to walk away from the bargaining" and "in particular, the Services are in a much weaker position." 4/5/17 Tr. 4909:12-15 (Katz). Indeed, whereas the non-interactive services in *Web IV* could use steering—the ability to drive listeners to specific sound recordings, such as those by indies instead of majors—as a threat in their negotiations with the Majors, the interactive streaming services' ability "to steer consumers is very limited by the nature of the product" and, as a result, interactive streaming services cannot credibly threaten to steer as a way to improve their bargaining position when negotiating with the Majors. 4/5/17 Tr. 4910:10-22 (Katz); *see also* 3/14/17 Tr. 919:9-921:17 (Herring).

JPFF158. Critically, there is no evidence to suggest that these dynamics have changed in any meaningful way or that the interactive services market for sound recordings has evolved to become effectively competitive in the six months that had elapsed before the Copyright Owners first submitted written testimony in this matter or in the year since the *Web IV* determination was issued. Trial Ex. 886, Katz CWRT ¶ 59; 4/5/17 Tr. 4916:24-4917:3 (Katz); Section IX, *infra*.

B. Musical Work Performance Rights and the Potential Fragmentation of the Performing Rights Licensing Marketplace

JPFF159. In order to provide users with access to musical works, interactive streaming services must acquire both mechanical rights and public performance rights licenses for those works. Trial Ex. 885, Katz WDT ¶ 43. For many years, the acquisition of music performance rights was straightforward. Trial Ex. 875, Parness WDT ¶ 15. Music publishers, composers, and songwriters affiliated with a PRO, and the PRO would offer so-called "blanket" licenses to music users that authorized the use of any musical work in the PRO's repertory, without regard for which specific songs were played or how often, in exchange for a single fee. Trial Ex. 875, Parness WDT ¶ 15. Since at least the middle of the last century through the time the *Phonorecords II* settlement was reached, the rights to all musical works of any commercial significance could be obtained from at least one of three U.S. PROs: ASCAP, BMI, and SESAC. ASCAP and BMI have long been subject to consent decrees with the Antitrust Division of the DOJ. Trial Ex. 875, Parness WDT ¶ 15; Trial. Ex. 876 (Statement of the Department of Justice on the Closing of the Antitrust Division's Review of the ASCAP and BMI Consent Decrees, dated August 4, 2016). These consent decrees, which were the result of antitrust litigation brought by the DOJ on behalf of the United States against those organizations, provide certain protections for music users and were intended to address the market power that arises out of collective licensing of performing rights by the copyright owners. Trial. Ex. 876 at pp. 1, 6-7.

JPFF160. At the time of the *Phonorecords II* settlement, the PRO licensing market was stable and the streaming services involved in the *Phonorecords II* settlement agreed to leave the mechanical-only floor in Subpart B as a concession to the publishers because they believed it was highly unlikely to ever be triggered and not worth trying to change in the context of a settlement that was otherwise rolling over all of the Subpart B rates and terms set after *Phonorecords I*. Trial Ex. 875, Parness WDT ¶¶ 9, 21; 3/8/17 Tr. 309:12-15 (Parness).

JPFF161. After the 2012 settlement was finalized, however, the performance rights marketplace began to destabilize in unexpected ways. Trial Ex. 885, Katz WDT ¶ 91; Trial Ex. 875, Parness WDT ¶ 16; 3/8/17 Tr. 256:14-257:11 (Levine). First, a fourth U.S. PRO, GMR, emerged as an additional entity from which the services must secure public performance rights—one not subject to rate court oversight. Trial Ex. 885, Katz WDT ¶ 91; 3/13/17 Tr. 602:13-25 (Katz); Trial Ex. 875, Parness WDT ¶ 18; 3/9/17 Tr. 382:1-383:1 (Parness). Second, major music publishers began to threaten to withdraw from the PROs, further increasing the number of entities from which streaming services may have to secure licenses. Trial Ex. 885, Katz WDT ¶ 91; 3/13/17 Tr. 603:1-2 (Katz); Trial Ex. 875, Parness WDT ¶ 17; 3/9/17 Tr. 364:7-11, 376:15-380:10 (Parness); 3/28/17 Tr. 3312:18-3313:8 (Kokakis) (acknowledging that he had stated at a 2014 public roundtable held by the U.S. Copyright Office that Universal Music Publishing intended to fully withdraw from ASCAP and BMI in order to get out from under the "oppressive thumb" of the ASCAP and BMI consent decrees). Third, at least some PROs began attempting to provide only "fractional" licenses to the works in their repertories. Trial Ex. 885, Katz WDT

¶ 91; 3/13/17 Tr. 603:3-4 (Katz); Trial Ex. 875, Parness WDT ¶ 20; 3/9/17 Tr. 369:25-370:21 (Parness). If implemented, fractional licenses would require streaming services to secure licenses from every co-owner of a work, whether affiliated with a PRO or not. Trial Ex. 885, Katz WDT ¶ 91. Collectively, these changes threaten to increase (and in some cases have already increased) the number of entities from which interactive services must secure performance rights. *Id.* at ¶ 91; 3/13/17 Tr. 603:5-11 (Katz). Coupled with the lack of comprehensive regulation of the public performance marketplace, these recent changes in public performance licensing could subject streaming services to supracompetitive increases in public performance royalties.

JPFF162. Interactive streaming services cannot afford to ignore or refuse to negotiate with these additional performance rights licensing entities. Trial Ex. 885, Katz WDT ¶ 92; 3/13/17 Tr. 603:11-21 (Katz); *see* Trial Ex. 875, Parness WDT ¶ 19. Just as each of the major record labels' sound recording catalogs is a "must have" for an interactive streaming service, so are the repertories of the PROs and major publishers—all are needed for any streaming service to be viable. Trial Ex. 885, Katz WDT ¶ 92. There are two reasons this is so. First, an interactive streaming service cannot offer an attractive product without access to the musical works covered by each of the PROs, and every publisher of sufficient size. *Id.* at ¶ 92; 3/13/17 Tr. 603:11-17 (Katz); Trial Ex. 875, Parness WDT ¶ 19. Second, because of a lack of transparency regarding which publisher or PRO controls the rights to which work, it is costly and difficult, if not impossible, for an interactive streaming service to protect itself from infringement suits unless it has coverage from all major performance rights licensing entities. Trial Ex. 885, Katz WDT ¶ 92; 3/13/17 Tr. 603:17-21 (Katz); Trial Ex. 875, Parness WDT ¶ 19. This second problem is exacerbated by the prospect of fractional licenses. Trial Ex. 885, Katz WDT ¶ 92; 3/13/17 Tr. 603:17-21 (Katz). As a result, a license from each of the four PROs is a "must have" for an interactive streaming service. Trial Ex. 875, Parness WDT ¶ 19; 3/13/17 Tr. 603:11-21 (Katz). The same is true of the major music publishers (several of whom have repertories larger than the two smaller U.S. PROs), if they were to license performance rights for their works on a publisher-by-publisher basis. Trial Ex. 885, Katz WDT ¶ 92; 3/13/17 Tr. 603:11-21 (Katz).

VII. THE COPYRIGHT OWNERS' PROPOSED RATE STRUCTURE IS NOT APPROPRIATE FOR THE MARKETPLACE FOR INTERACTIVE STREAMING SERVICES

A. Summary of the Copyright Owners' Rate Proposal

JPFF163. The Copyright Owners' proposal features a rate equal to the greater of (a) $0.0015 per-play and (b) $1.06 per-end user per-month (in each case for mechanical rights only). Trial Ex. 1677R, Copyright Owner's Proposed Rates and Terms p. B-6.

JPFF164. The Copyright Owners define "end user" as follows:

> End User means each unique individual or entity that has access to an offering whether by virtue of the purchase of a subscription to access the offering or otherwise. Licensees or service providers shall be required to obtain from each individual or entity that wishes to access an offering a unique user name and valid e-mail address, and to provide each such individual or entity with a unique password or identifier, prior to granting such access.

Trial Ex. 1677R, Copyright Owner's Proposed Rates and Terms p. B-6.

JPFF165. The Copyright Owners also propose a late fee of 1.5% per month, or the highest lawful rate, whichever is lower, for any payment received by the rights owner after the due date. *Id*. The proposed term further provides that late fees shall accrue from the due date until payment is received by the rights owner. *Id*.

B. An Inflexible "One Size Fits All" Rate Structure Is Bad for Services, Consumers, and the Copyright Owners Alike

JPFF166. The current rates and terms, as well as those proposed by the Services for the upcoming license period, provide differentiated rate structures for distinct product categories.

A structure that provides flexibility for the determination of a royalty encourages diverse digital music service offerings that reach a wide array of music consumers and expand the base upon which royalties are calculated. Trial Ex. 22, Hubbard WDT ¶ 1.6(c). By offering a diversity of music services offerings, the Services are serving a wide variety of consumer segments, as measured both in terms of willingness and ability to pay and in terms of preferences for particular features and feature sets. *Id.* at ¶ 1.6(a); 3/20/17 Tr. 1894:7-1895:2 (Marx); 3/21/17 Tr. 2020:23-2021:1 (Marx); Trial Ex. 1065, Marx WDT ¶¶ 53-55. As Mr. Herring explained: "[Having a diverse set of offerings so that you can address multiple consumer preferences is how we optimize a market here…. [H]aving multiple tiers allows for innovation. It allows for diversity from a product perspective. It also grows the overall pie, both from a revenue perspective, as well as royalties to the copyright holders." 3/14/17 Tr. 885:1-16 (Herring); *see also id.* at 899:2-8.

JPFF167. Numerous other witnesses from the Services testified as to the importance of differentiated product offerings to growing industry revenues and consumer adoption and to maximizing the availability of music as well. For example, Mr. Page explained the importance of Spotify's ad-supported service to attracting users with no or low willingness to pay for music and funneling them over time into paid subscribers. Trial Ex. 1061, Page WDT ¶ 13; 3/20/17 Tr. 1713:19-1713:4, 1738:25-1739:6, 1803:13-21; *see also* 4/13/17 Tr. 5906:1-13 (Hubbard) ("Almost 60 percent of the respondents who currently pay for a streaming subscription had come from an ad-supported or bundled service."). Mr. Mirchandani also explained the diversity of Amazon's product set and how those different products enable Amazon to appeal to all parts of the demand curve and attract consumers new to on-demand streaming. 3/15/17 Tr. 1341:21-1344:19 (Mirchandani); Trial Ex. 1, Mirchandani WDT ¶¶ 35-37.

JPFF168. In contrast, the rigid "one size fits all" rate structure proposed by the Copyright Owners would lead to the [redacted], prevent interactive services from reaching consumers with low willingness to pay, stifle the growth of the marketplace for interactive streaming, and lead to lower royalty payments for music publishers and songwriters. 3/14/17 Tr. 911:19-21 (Herring); Trial Ex. 888, Herring WRT ¶¶ 8, 10 (testifying that Pandora [redacted] if the Copyright Owners' proposal were adopted); 3/16/17 Tr. 1604:17-1605:9 (Mirchandani) ([redacted]); Trial Ex. 22, Hubbard WDT ¶ 4.7. As Dr. Hubbard explained, a "one size fits all" rate structure "is grounded neither in economic theory nor in the reality of this market." 4/13/17 Tr. 5897:19-21, 5944:14-5945:6 (Hubbard). Further, as Dr. Marx observed, the Copyright Owners' "one size fits all" structure particularly penalizes services targeting consumers with a low willingness to pay. Trial Ex. 1065, Marx WDT ¶¶ 14, 56; *see also* Trial Ex. 1062, Vogel WDT ¶¶ 28-32.

C. A Per-Play Rate Is Not Appropriate for the Marketplace for Interactive Streaming Services

JPFF169. The Copyright Owners' proposal to include a "per play" rate prong for the mechanical rights at issue in this proceeding is both novel and inappropriate. Mechanical rights available under the compulsory license have never been paid on the basis of how many times a consumer actually plays a sound recording. This is true not only for royalties paid by interactive streaming services and locker services under Subparts B and C of 37 C.F.R. § 385, but also for royalties paid by record labels and other distributors of sound recordings in connection with physical phonorecord deliveries, permanent digital downloads, or ringtones. 37 C.F.R. § 385; Trial Ex. 888, Herring WRT ¶ 19; Trial Ex. 886, Katz CWRT ¶ 38. For example, under the Subpart A rates that the Copyright Owners recently agreed to preserve, royalties are paid based on the number of copies sold with complete indifference to number of times consumers elect to play particular records. *See Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords III)*, 81 Fed. Reg. 48,371 (July 25, 2016) ("Phonorecords III").

JPFF170. A per play rate, moreover, makes little sense given prevailing business models for interactive streaming services. For example, Amazon, Google, Pandora, Spotify, and Apple each offer an on-demand subscription service that allows the subscriber unlimited streaming in exchange for a fixed monthly fee (typically $9.99). Trial Ex. 1060, McCarthy WDT ¶ 9 (Spotify); Trial Ex. 692, Levine WDT ¶ 48 (Google); Trial Ex. 877, Phillips WDT ¶ 26 (Pandora); Trial Ex. 1, Mirchandani WDT ¶¶ 24-25 (Amazon); Trial Ex. 1615R, Ramaprasad WDT Table 2 (Apple). As Mr. Herring explained, even if the rate adopted were significantly lower than those proposed by the Copyright Owners, a per-play rate prong nonetheless would likely be highly disruptive to services that utilize this "all-you-can-eat" model. Trial Ex. 888, Herring WRT ¶¶ 15-18; 3/14/17 Tr. 894:18-898:5 (Herring).

JPFF171. First, for services that combine radio-style, lean-back listening with interactive features, a per-play rate structure—at least as proposed by the Copyright Owners to apply to non-interactive streams as well as on-demand streams—is not well tailored to the utilization of the mechanical rights at issue. There is no mechanical right associated with non-interactive streaming. For Pandora Plus, for example, the streams are overwhelmingly non-interactive. The Pandora Plus streams that are considered to implicate mechanical rights—those initiated by the replay function and those made from copies cached for offline listening—constitute less than [redacted] of total streams made since the launch of the product. Trial Ex. 888, Herring WRT ¶ 16. While the percentage of streams implicating a mechanical right will likely be higher on Pandora Premium given Pandora's expectations about the use of the on-demand functionality offered on that tier of service, Pandora still expects that "lean back" listening to DMCA-compliant playlists generated by Pandora's proprietary algorithms will constitute [redacted] or more of listening time. 3/14/17 Tr. 899:17-23 (Herring). Each of the other Services, as well as other services in the marketplace, also recognize and accommodate the consumer demand for products that offer both non-interactive streaming and on-demand streaming and allow subscribers to switch back and forth.[4] *See, e.g.*, Trial Ex. 1061, Page WDT ¶¶ 48-50 (Spotify); Trial Ex. 693, Joyce WDT ¶ 7 (Google); Trial Ex. 22, Hubbard CWDT ¶ 3.9 (Amazon); Trial Ex. 1611, Dorn WDT ¶¶ 17, 50-52, 55-57 (Apple).

JPFF172. Second, it is extremely challenging to operate a business that has fixed revenues per customer but variable and unpredictable costs, particularly for subscription products. Trial Ex. 888, Herring WRT ¶ 17; 3/14/17 Tr. 894:18-898:5 (Herring). A per-play consumption-based model where the revenue is fixed per user creates uncertainty and volatility around prospective margins, and the uncertainty discourages investment and hampers profitability. 3/14/17 Tr. 894:18-895:1 (Herring). Moreover, a per-play rate creates perverse incentives for subscription services to limit listening and reduce listener engagement, and reduced engagement "increase[s] the propensity to churn or likelihood to cancel." 3/14/17 Tr. 895:2-897:3 (Herring); *see also* 3/21/17 Tr. 2064:17-2065:7 (McCarthy) ([redacted]

[4] At a minimum, if the Board were to impose a per-play rate for mechanical rights, the terms of the statutory license would need to make clear that services are not required to pay that rate on non-interactive streams made as part of a service that also offers interactive functionality. Moreover, it would not be fair to assess a per-play royalty for streams if the underlying musical work has fallen into the public domain or is otherwise not subject to copyright protection. Trial Ex. 888, Herring WRT ¶ 16 & n.6.

[redacted]); 3/20/17 Tr. 1896:4-14 (Marx) ("A per-stream fee introduces a number of distortions. It provides an incentive for introducing per-stream fees to consumers, which is what creates the dead weight loss triangle in the diagram like this. It introduces incentives for capping streaming, which is a reduction in quantity that would be inefficient. It reduces incentives for Services to attract and retain the types of consumers who are going to stream lots of music."); Trial Ex. 1065, Marx WDT ¶¶ 130-131.

JPFF173. The all-you-can-eat monthly subscription model for on-demand streaming is well-established in the marketplace as what consumers demand, and there is no evidence that services could offer another model that would gain significant traction with consumers. If a per-play rate structure were imposed, services would likely need to institute listening caps to control costs, but such caps are detrimental to the consumer experience and will impede growth of the service. Trial Ex. 888, Herring WRT ¶ 17. Pandora, for example, has direct experience with listening caps as a result of the per-play royalty structure applicable to non-interactive services, and while Pandora viewed those caps as necessary measures at the time to control licensing costs, they led to significant listener churn, depressed the growth of the service and limited the royalty amounts Pandora would have been able to pay under a more favorable rate. *Id.*; 3/14/17 Tr. 914:4-919:8 (Herring). Ultimately, listening caps serve to discourage the Services' most engaged listeners from continuing to utilize the service, and they encourage reliance on alternative means of access to music that either do not monetize listenership for the rightsholder community as effectively or do not monetize at all (*e.g.*, piracy). 3/14/17 Tr. 914:4-919:8 (Herring); Trial Ex. 888, Herring WRT ¶ 17; *see also* Trial Ex. 1069, Marx WRT ¶ 33 & fig. 7

(addressing relative payments of Spotify's ad-supported service and other ad-supported sources of music that are not subject to the compulsory license at issue here).

JPFF174. Third, to the extent that witnesses providing direct testimony on behalf of the Copyright Owners expressed concerns about the difficulty of accurately measuring revenues for purposes of determining royalties based on a percentage of revenues, those concerns are overblown and, in any event, can be addressed through the use of other minima such as per-subscriber minima. Trial Ex. 886, Katz CWRT ¶ 5; Trial Ex. 888, Herring WRT ¶ 18. Music publishers and their PRO representatives have generally sought to license digital music services (and many other categories of music users) on a percentage-of-revenue basis. Historically, that is the basis on which the Services have paid for performance rights royalties to music publishers, whether via licenses from PROs or via direct licenses, and it remains the basis on which the Services pay performance royalties to ASCAP and BMI for interactive streaming. Trial Ex. 974-05 ([redacted]) p. 6 ([redacted]); Trial Ex. 974-06 ([redacted]) p. 2 ([redacted]); Trial Ex. 974-07 ([redacted]) p. 6 ([redacted]); Trial Ex. 974-08 ([redacted]) p. 3 ([redacted]); Trial Ex. 888, Herring WRT ¶¶ 18, 60; 3/13/17 Tr. 588:14-24, 767:23-768:3 (Katz); Trial Ex. 692, Levine WDT ¶¶ 51, 54, 55; Trial Ex. 695, Leonard AWDT ¶¶ 52, 55-56, 64, 66, 67, 69. Thus, music publishers and

PROs would need to change their practices with respect to performance rights licensing more generally to avoid the revenue measurement concerns Copyright Owner witnesses have expressed. Percentage-of-revenue royalty structures are common in licensing of other forms of intellectual property as well. Trial Ex. 886, Katz CWRT ¶¶ 34, 36 & nn.50-53 (observing benefits of percentage-of-revenue royalty structure across a variety of markets); Trial Ex. 698, Leonard WRT ¶ 81 & n.16 (same).

JPFF175. The revealed preference for a percentage-of-revenue structure over a per-play rate structure in the interactive music streaming industry can further be seen by examination of licenses between streaming services and record labels for sound recording rights. Indeed, the vast majority of sound recording licenses for interactive streaming contains a percentage-of-revenue prong, with some also containing a per-user/per-month prong. *See e.g.*, Trial Ex. 388 ([redacted]); Trial Ex. 2760 ([redacted]); Trial Ex. 2761 ([redacted]); Trial Ex. 2765 ([redacted]); Trial Ex. 2766 ([redacted]); *see also* 4/4/17 Tr. 4723:23-4724:14; 4741:14-4742:21 (Eisenach). [redacted] *Id.*

JPFF176. As Copyright Owners have highlighted throughout this proceeding, licenses for sound recording rights for interactive streaming services are unregulated (*see e.g.*, 4/4/17 Tr. 4723:23-4724:14 (Eisenach)), and thus, record labels are not subject to any regulatory constraints requiring a percentage-of-revenue structure. If anything, given the demonstrated complementary oligopoly market power of record companies (*see* Section VI.A, *supra*), the fact that they have chosen to structure their licenses with interactive streaming services on a percentage-of-revenue basis indicates the industry preference for a percentage of revenue rate structure by record companies, who have the very same incentives as Copyright Owners here to prevent any potential manipulation of revenue calculation or concerns of revenue displacement or deferment by streaming services. Thus, any alleged concerns by Copyright Owners about the potential for manipulation of a percentage of revenue rate structure are entirely fanciful and unsupported by real world empirical evidence.

D. The Copyright Owners' Proposal to Eliminate the Deduction for Performance Rights Royalties Paid to the Same Rightsholders for the Same Uses of Music Should Be Rejected

JPFF177. The Copyright Owners' proposal to eliminate the deduction for performance rights royalties from an "all-in" rate structure in order to determine mechanical rights royalties is problematic for numerous reasons. First, the mechanical rights at issue in this proceeding have literally no value to interactive streaming services absent the rights to perform the compositions. Trial Ex. 888, Herring WRT ¶ 21; 3/14/17 Tr. 882:19-883:2 (Herring). As Professor Katz explained, "Mechanical rights and public performance rights are perfect complements. … For an interactive streaming service, mechanical rights alone or public performance rights alone are worthless, but together the rights are potentially valuable. As a result there is no rigorous economic basis for allocating the total value they create between the two types of rights." Trial Ex. 886, Katz CWRT ¶ 3.

JPFF178. Second, the 801(b)(1) factors cannot be assessed in a vacuum without considering the performance rights royalties paid by the very same digital services to the very same rightsholders. For example, one cannot provide a "fair return to the copyright owner for the use of his or her creative works" without taking account of the performance rights paid by the same licensees to the very same licensors or their agents for the very same use. Nor could one appropriately "minimize the disruptive impact on the structure of the industries involved and on generally prevailing industry practices," without considering the "all in" rate digital music services must pay. Trial Ex. 888, Herring WRT ¶ 22.

JPFF179. Third, the Copyright Owners' proposal to eliminate the deduction for performing rights royalties would significantly diminish the cost predictability afforded by the current rate structure.[5] Heightened uncertainty concerning licensing costs will impede investment in digital music services and inhibit the growth of the market. *Id.* at ¶ 23.

VIII. ADOPTION OF THE COPYRIGHT OWNERS' RATE PROPOSAL WILL DRAMATICALLY DISRUPT THE INDUSTRY

A. Record Evidence in this Proceeding Has Established that Adoption of the Copyright Owners' Rate Proposal Will Lead to Dramatic Increases in Royalty Rates

JPFF180. Under the Copyright Owners' proposal, all of the Services would see unprecedented increases in their mechanical royalty obligations that would force them to close numerous mid-tier offerings. [redacted]

[5] Section IV.B, *supra*.

[redacted] These proposed increases fly in the face of the 801(b)(1) objectives, and the Copyright Owners know it. *See* Trial Ex. 309 p. 826 (speculating that "using willing buyer, willing seller standard instead of 801(b) standard" would increase mechanical royalties by a "13:6 ratio"); 3/29/17 Tr. 3812:21-3813:5 (Israelite) (noting that Ex. 309 was "an exercise to demonstrate the potential upside of the rate standard we were pursuing in Congress" to replace the 801(b)(1) objectives).

1. *Amazon*

JPFF181. Under its voluntary Prime Music agreements, Amazon paid an average effective mechanical-only rate of approximately [redacted] during 2015 and [redacted] during the first half of 2016. Trial Ex. 3005; Trial Ex. 30. As such, the Copyright Owners' proposed mechanical-only rate of $0.0015 per-play represents an increase of approximately [redacted] (for 2015) and [redacted] (for first half of 2016) over the actual effective rate paid by Amazon under deals that the Copyright Owners entered into voluntarily. Trial Ex. 3005; Trial Ex. 30.

JPFF182. In addition, according to calculations performed by Dr. Hubbard using data from Professor Rysman's sources, the Copyright Owners' proposed rate of $0.0015 per-play represents [redacted] as compared to the average effective per-play rates currently being paid across all services. Moreover, the Copyright Owners' proposed rate of $1.06 per-user per-month represents [redacted] as compared to the average effective per-user rates currently being paid across all services. The effects are even more pronounced for free and ad-supported services, which would see [redacted]. Trial Ex. 132, Hubbard CWRT ¶¶ 4.10, 4.12, 6.10.

JPFF183. In addition, the Copyright Owners' proposed rates would cause Amazon's mechanical publishing costs to [redacted]. Trial Ex. 111, Mirchandani WRT ¶¶ 45, 48; Trial Ex. 20; Trial Ex. 129; Trial Ex. 130; 3/16/17 Tr. 1405:1-1406:22 (Mirchandani).

JPFF184. The Copyright Owners' proposal would also be highly disruptive to Amazon's digital download business, which is closely intertwined with its purchased content locker service. Today, when a customer purchases a digital download from Amazon for $0.99 and then accesses it from Amazon's purchased content locker service, Amazon generates 9.1 cents in mechanical royalties. Trial Ex. 111, Mirchandani WRT ¶ 47. But under the Copyright Owners' proposal, rightsholders would receive 9.1 cents in mechanicals at the time of download and at least $1.06 per-month in mechanicals for that subscriber for each month that a track is played via the purchased content locker. Trial Ex. 111, Mirchandani WRT ¶ 47; 3/16/17 Tr. 1405:12-21 (Mirchandani).

JPFF185. These dramatic increases would render a number of existing streaming services uneconomic. As Mr. Mirchandani testified, the Copyright Owners proposal would [redacted]. 3/16/17 Tr. 1405:1-1407:5 (Mirchandani). As such, [redacted]

[redacted].

JPFF186. Moreover, under such conditions, Amazon's principal business strategy and *raison d'être* in the music business—offering differentiated services that appeal to a broad array of customers—would no longer be feasible, [redacted]. Trial Ex. 111, Mirchandani WRT ¶ 46; 3/16/17 Tr. 1405:1-1407:5 (Mirchandani).

2. *Google*

JPFF187. The Copyright Owners' proposal would also dramatically increase the rates paid for interactive streaming by Google Play Music. Under the Copyright Owners' proposal, Google's all-in royalties for interactive streaming from June 2013 to June 2016 would have increased by [redacted]. Trial Ex. 698, Leonard WRT ¶ 9; *see also id.* at Trial Ex. 1 (table calculating Google's musical works obligations under the Copyright Owners' proposal, the existing regulations, and under Google's proposal). Google would have paid [redacted] for musical works rights under the Copyright Owners proposal, substantially more than the [redacted] it paid based on the existing rates. *Id.* at ¶¶ 8, 9.

3. *Pandora*

JPFF188. The Copyright Owners' proposal would have a similarly dramatic impact on Pandora. Trial Ex. 888, Herring WRT ¶ 6. As Mr. Herring explained, holding all else equal, the Copyright Owners' proposal would require the company to pay over [redacted] more in royalties than it would pay if current rates and terms continue. Trial Ex. 888, Herring WRT ¶ 14; 3/14/17 Tr. 912:6-11 (Herring); Trial Ex. 889. If the Board were to accept the Copyright Owners' proposal, Pandora would pay [redacted] more for mechanical rights for Pandora

Premium during the 2018-2022 license period than it would if current rates and terms were extended. Trial Ex. 888, Herring WRT ¶ 11; 3/14/17 Tr. 911:22-912:1 (Herring); Trial Ex. 889. For Pandora Plus, the increase is even greater: Pandora would pay [redacted] more for mechanical rights under the Copyright Owners' proposal than it would otherwise pay. Trial Ex. 888, Herring WRT ¶ 8; 3/14/17 Tr. 911:8-14 (Herring); Trial Ex. 889.

JPFF189. When making the decision to enter the interactive streaming market, Pandora assumed that there would be no increase in the current statutory rates for the license at issue in this proceeding. Trial Ex. 880, Herring WDT ¶ 55; 3/14/17 Tr. 876:22-877:8 (Herring). Even with aggressive targets for subscriber growth and no increase in rates, Pandora did not expect that either Pandora Plus or Pandora Premium [redacted]. Trial Ex. 888, Herring WRT ¶¶ 9, 12.

JPFF190. The massive and crippling increase in royalties proposed by the Copyright Owners, however, would make it impossible for either of Pandora's interactive service tiers to become profitable according to GAAP at any point during the 2018-2022 licensing period. Trial Ex. 888, Herring WRT ¶¶ 12, 14; 3/14/17 Tr. 911:15-18, 912:2-5 (Herring). If the Copyright Owners' rate proposal were adopted, [redacted] Trial Ex. 888, Herring WRT ¶ 12; 3/14/17 Tr. 912:2-5 (Herring); Trial Ex. 889. The situation for Pandora Plus is even more dire. If the Copyright Owners' proposal were adopted, Pandora Plus [redacted]. Trial Ex. 888, Herring WRT ¶ 9; 3/14/17 Tr. 911:15-18 (Herring); Trial Ex. 889.

JPFF191. If the Copyright Owners' proposal were adopted, Pandora would have no choice but [redacted]. Trial Ex. 888, Herring WRT ¶¶ 8, 10; 3/14/17 Tr. 911:19-

21 (Herring). Although Pandora would likely continue to offer some version of Pandora Premium even if the Copyright Owners' proposal were adopted, this is only because Pandora has already sunk [redacted] in to creating the product. *See* 3/14/17 Tr. 951:17-953:1 (Herring). If Pandora had known that rates would escalate in the manner the Copyright Owners have proposed, it would not have invested in the development of Pandora Premium. 3/14/17 Tr. 951:17-953:1 (Herring).

JPFF192. In addition to wreaking havoc on Pandora's balance sheet, the Copyright Owners' proposal also would cripple the service's growth. Trial Ex. 888, Herring WRT ¶ 13. In calculating the projected royalty spike above, Pandora assumed for illustrative purposes that retail prices for subscription offerings, number of subscribers, number of streams, and performance rights royalties as a percentage of revenue would remain the same regardless of changes in rates and terms, and that no late fees would apply. *Id.* at ¶ 6; 3/14/17 Tr. 910:19-911:7 (Herring). In reality, however, Pandora's growth and user retention would be reduced under the Copyright Owners' proposal versus current rates and terms. Trial Ex. 888, Herring WRT ¶ 13; *see* 3/14/17 Tr. 894:15-896:13, 914:4-921:1 (Herring). If the Copyright Owners' proposal were adopted, Pandora would spend far more money on licensing costs, and have less money available to invest in marketing and product development. Trial Ex. 888, Herring WRT ¶ 13; 3/14/17 Tr. 894:15-896:13, 913:6-20, 915:7-916:25 (Herring). Pandora would not be able to invest further in growing the Pandora Premium service, because the return on the investment would be too low. 3/14/17 Tr. 913:1-20 (Herring). Pandora Premium would also likely need to be modified in ways that increase prices or reduce listening hours (*e.g.* listening caps), which in turn would reduce demand for the product, interfere with user engagement, and create user retention problems. Trial Ex. 888, Herring WRT ¶¶ 13, 17; 3/14/17 Tr. 894:15-896:13, 914:4-921:1 (Herring).

JPFF193. Furthermore, the [redacted] would significantly impede Pandora's ability to monetize subscribers unwilling to pay $9.99 per month for interactive features, and to upsell existing Pandora users to Pandora Premium. Trial Ex. 888, Herring WRT ¶ 10; Trial Ex. 877, Phillips WDT ¶ 25; 3/14/17 Tr. 1012:24-1013:8 (Herring). Even though subscription fees for Pandora Premium are higher than for Pandora Plus, these dynamics would substantially erode the total royalties that Pandora expects to pay to the Copyright Owners during the license period. Trial Ex. 888, Herring WRT ¶ 10.

4. *Spotify*

JPFF194. The Copyright Owners' rate proposal would lead to dramatic increases in Spotify's royalty rates. The impact of the Copyright Owners' proposal on Spotify is particularly important for two reasons: First, because the Copyright Owners' proposal is particularly punitive to ad-supported offerings, and Spotify is the only participant with an ad-supported offering, the proposal would lead to particularly dramatic increases in Spotify's effective royalty rates. Second, because Spotify is the largest on-demand streaming service in the United States by a wide margin (*see, e.g.*, Trial Ex. 1069, Marx WRT ¶¶ 37 fig. 8 & 39 fig. 9), the impact of the proposal on Spotify will affect the largest number of listeners and plays.

JPFF195. [redacted]. *See, e.g.*, Trial Ex. 1068, Vogel WRT ¶ 27; *see also, e.g.*, 4/6/17 Tr. 5319:5-9 (Vogel); 4/7/17 Tr. 5488:5-5489:7 (Marx); Trial Ex. 1066, McCarthy WRT ¶ 14; Trial Ex. 1068, Vogel WRT ¶¶ 19 nn.13, 26; Trial Ex. 1069, Marx WRT ¶ 16 fig. 1 & n.10.

JPFF196. [redacted] Trial Ex. 1068, Vogel WRT ¶¶ 14-15, 19 n.3; Trial Ex. 1069, Marx WRT ¶¶ 16 & fig. 1, 19 & fig. 3; 4/6/17 Tr. 5319:13-22, 5230:24-5321:7 (Vogel); 4/7/17 Tr. 5486:3-5487:10, 5487:23-5488:4 (Marx); *see also* Trial Ex. 1066, McCarthy WRT ¶ 14. Such an increase is dramatic and unwarranted.

JPFF197. The Copyright Owners' per-user prong ([redacted]) applies to all registered users, not only active users. This is because the Copyright Owners' proposed per-user rate is "$1.06 per-end user," where "*[e]nd user* means each unique individual or entity that has access to an offering whether by virtue of the purchase of a subscription to access the offering or otherwise." Trial Ex. 1677R p. B-6; *see, e.g.*, 4/7/17 Tr. 5483:16-5484:5 (Marx); Trial Ex. 1068, Vogel WRT ¶¶ 30-31; Trial Ex. 1069, Marx WRT ¶ 16; *see also* 4/6/17 Tr. 5305:4-22 (Vogel).

JPFF198. [redacted] 4/6/17 Tr. 5322:16-5324:17, 5325:15-5326:6 (Vogel); Trial Ex. 1068, Vogel WRT ¶ 38; Trial Ex. 1066, McCarthy WRT ¶ 26; Trial Ex. 1069, Marx WRT ¶¶ 16 & Fig. 1, 19 & Fig. 3. This could happen if, for example, Spotify somehow culled or deregistered non-active users from its ad-supported users. *See*, *e.g.*, 4/7/17 Tr. 5487:11-

22 (Marx); Trial Ex. 1069, Marx WRT ¶ 22 (also noting costs and disruption associated with doing so); *see also* Section VIII.B, *infra*.

JPFF199. Regardless of whether the per-user prong applied to all registered ad-supported users (resulting in [redacted] 3/21/17 Tr. 2056:17-2057:7 (McCarthy); 4/6/17 Tr. 5320:7-14, 5326:11-17 (Vogel); 4/7/17 Tr. 5488:12-24, 5490:8-16 (Marx); Trial Ex. 1066, McCarthy WRT ¶¶ 15, 26; Trial Ex. 1068, Vogel WRT ¶¶ 15, 27; *see also* Trial Ex. 1069, Marx WRT ¶ 32.

JPFF200. [redacted]. 4/6/17 Tr. 5321:8-5322:15 (Vogel); 4/7/17 Tr. 5488:17-5489:11 (Marx); Trial Ex. 1068, Vogel WRT ¶¶ 27-28; Trial Ex. 1066, McCarthy WRT ¶¶ 27-28; Trial Ex. 1069, Marx WRT ¶ 21. [redacted] Trial Ex. 1068, Vogel WRT ¶ 28 n.16).

JPFF201. [redacted] Trial Ex. 1066, McCarthy WRT ¶¶ 29-31 [redacted]

[redacted]; 3/21/17 Tr. 2062:17-2063:5 (McCarthy).

JPFF202. [redacted] Trial Ex. 1066, McCarthy WRT ¶ 32. *See also* 3/21/17 Tr. 2063:6-19 (McCarthy):

[redacted]

There is no argument that the Copyright Owners' proposal would be anything but a dramatic increase in royalty rates.

JPFF203. [redacted]. Trial Ex. 1068, Vogel WRT ¶ 28 n.16. [redacted]

B. Services Cannot Raise Prices, Change Functionality, or Cut Costs To Make Up for the Increase in Royalties

JPFF204. The Copyright Owners argue that the Services have strategic options to offset the impact of their proposed increases in royalty rates, including increasing prices, serving more advertisements, and reducing other costs. Trial Ex. 1, Mirchandani WDT ¶¶ 25, 93-101; Trial Ex. 3035, Gans WRT ¶¶ 70, 73. Putting aside that some of these fundamental changes in how the services operate their businesses are per se "disruptive," the evidence adduced in this proceeding suggests that the Copyright Owners are simply wrong that these changes would be viable.

1. *Raising Prices Would Result in Market Contraction*

JPFF205. Though both Professors Rysman and Gans suggest that services could offset rate increases by raising prices, neither could offer any support for those opinions when pressed. For instance, on cross examination, Professor Rysman readily admitted that higher prices would lead to lower consumer demand but simultaneously conceded that he had not attempted to quantify how much lower the demand would be if prices were increased *or* conducted any analyses of the elasticity of demand in the music streaming market. 4/3/17 Tr. 4402:18-4403:5 (Rysman). Similarly, Professor Gans testified that he understood that the Copyright Owners' proposal might have an effect on consumer prices but admitted that he also had not examined the price elasticity of demand for subscription streaming services. 3/30/17 Tr. 4189:22-4190:8 (Gans).

JPFF206. The Services, on the other hand, *have* attempted to understand the price elasticity of demand for subscription streaming services along with potential consequences of raising consumer prices. As Amazon's internal documents reflect, Amazon "conducted a pricing study to measure the price elasticity of demand for Hawkfire plans." Trial Ex. 117 p. 1. [redacted] Trial Ex. 117 p. 1; 3/16/17 Tr. 1429:5-13 (Mirchandani).

JPFF207. In addition, one of the principal findings of the Klein Survey was that [redacted] Trial Ex. 249, Klein WRT ¶ 67. Among survey respondents who currently paid for a music streaming service, [redacted]. Trial Ex. 249, Klein WRT ¶¶ 67-68; 4/6/17 Tr. 5401:1-5402:17 (Klein); 4/13/17 Tr. 5904:6-18 (Hubbard).

JPFF208. Further, Will Page testified that Spotify examined consumers' willingness-to-pay, and found that there was a "cliff edge" at [redacted]. 3/20/17 Tr. 1714:24-1717:16 (Page) (discussing Trial Ex. 1026 p. 38, which has a chart of demand versus price); *see also* Trial Ex. 1067, Page WRT ¶ 50 (reproducing this chart). Indeed, the evidence shows that total revenue (the product of consumer demand for subscriptions and price per subscription, or the "area under the curve" in Trial Ex. 1026 p. 38) [redacted]. *See* Trial Ex. 1026 p. 38; 3/20/17 Tr. 1714:24-1717:16 (Page); *see also* 3/20/17 Tr. 1719:9-16 (Page) (stating that if [redacted]).

2. *Changes to Functionality Would Result in Market Contraction*

JPFF209. The Copyright Owners also allege that Services change functionality to make up for a rate increase—for example by playing more ads—but they also offer no evidence to support this claim.

JPFF210. With respect to ad load, the Copyright Owners' expert, Professor Rysman, failed to provide support for his opinion that ad-supported services could offset royalty increases by delivering more advertisements to consumers. For example, during cross examination, Professor Rysman conceded that he had not undertaken any analyses as to the impact of increased ad load on any interactive services. 4/3/17 Tr. 4402:6-9; 4420:9-4421:23 (Rysman). Nor did the Copyright Owners offer any evidence of an ad-supported service deliberately underpricing or choosing not to sell its available advertising inventory. Professor Rysman also conceded that he had not conducted any empirical analyses to support his contention that increased ad-loads could drive ad-supported users to convert to paid users and that he had not conducted any econometric analyses to understand whether increased ad-loads might instead drive ad-supported users away from the service altogether. 4/3/17 Tr. 4402:6-9; 4420:9-4421:23 (Rysman).

JPFF211. Testimony from Spotify—the only participant in this proceeding currently operating an ad-supported on-demand streaming service—is instructive. According to Mr. Vogel, Spotify's VP, Head of Global Financial Planning and Analyses and Investor Relations, [redacted] But as Mr. Vogel explained, [redacted] Trial Ex. 1068, Vogel WRT ¶ 19.

JPFF212. Mr. Vogel's testimony is corroborated by Dr. Hubbard's analysis. Using Professor Rysman's own data, Dr. Hubbard calculates that free and ad-supported services, like Spotify's ad-supported tier, would experience a [redacted] in effective per-user rates under the Copyright Owners' proposal. Trial Ex. 132, Hubbard CWRT ¶ 4.12. Dr. Hubbard then uses publically available data suggesting that Spotify currently offers an ad format where ads are played at an approximate frequency of two minutes of ads per hour, [redacted]. Trial Ex. 132, Hubbard CWRT ¶ 4.12, n.99. Ultimately, Dr. Hubbard concludes that "it seems unlikely that any combination of increased ad playing time, increased ad prices, or increases in other types of advertisements would support an increase in ad revenue of [redacted]." Trial Ex. 132, Hubbard CWRT ¶ 4.12.

JPFF213. Controls on usage are equally problematic. Capping usage detracts from the listeners' experience with the service and will adversely impact user engagement. Trial Ex. 697, Levine WRT ¶ 13; Trial Ex. 880, Herring WDT ¶ 17; 3/14/2017 Tr. 915:9-15 (Herring). These measures are fundamentally inconsistent with the goal of building services designed to optimize the customer experience and drive engagement, as well as with the broader goal of maximizing the availability of creative works to the public. 3/16/17 Tr. 1570:14-1571:11, 1625:11-1626:25 (Mirchandani); Trial Ex. 697, Levine WRT ¶ 13. [redacted]. 3/16/2017 Tr. 1570:1-7 (Mirchandani). [redacted]. 3/16/2017 Tr. 1570:14-1571:11, 1625:11-1626:25 (Mirchandani). Such restrictions ultimately harm user engagement and subscriber numbers, but these restrictions are often necessary when operating under per-play rates.

JPFF214. Services have learned that with free services, there are many disruptions that deter consumers from listening, like too many ads, limited playback options, and the fact that many free services are not available on a customer's mobile phone. Trial Ex. 1, Mirchandani WDT ¶ 21; Trial Ex. 877, Phillips WDT ¶¶ 12-14.

JPFF215. Users leave services due to changes in functionality. 3/20/17 Tr. 1709:11-15 (Page); 3/9/17 Tr. 391:14-392:6 (Phillips); 3/14/17 Tr. 944:7-9 (Herring). Consumers of interactive streaming services are not completely loyal to one provider; they may move from service to service and use multiple music services at the same time. 3/8/17 Tr. 215:15-24; 217:25-218:15, 219:5-9 (Levine); 3/9/17 Tr. 392:1-6 (Phillips); 3/14/17 Tr. 944:2-6 (Herring).

JPFF216. [redacted] 3/20/17 Tr. 1711:19-1712:2 (Page). [redacted] 3/20/17 Tr. 1712:3-18 (Page). [redacted]. 3/20/17 Tr. 1713:11-1714:11 (Page).

JPFF217. On-demand music streaming services also compete with other media providers for users' time and attention, so, as a result of a price increase, users leaving a service have a variety of alternatives. Users could go back to piracy, choose a free service, move to a paid service, or abandon music streaming altogether and spend time watching Netflix instead. 3/20/17 Tr. 1720:1-1721:8 (Page).

3. *Cutting Costs Would Result in Market Contraction*

JPFF218. The Copyright Owners make unsupported statements that Services can always reduce costs to offset a rate increase. Again, however, Professor Rysman was unable to defend his opinion that services could offset the Copyright Owners' proposed rate increase by reducing costs. In particular, on cross examination Professor Rysman conceded that cutting marketing and sales expenses could lead to a decrease in subscribership and that such an effect could have a negative impact on the Copyright Owners. 4/3/17 Tr. 4403:25-4404:19 (Rysman); *see also* Trial Ex. 1066, McCarthy WRT ¶¶ 41-42 ([redacted]); Trial Ex. 1060, McCarthy WDT ¶¶ 31-45 ([redacted]).

JPFF219. Based on analysis conducted by Spotify, if Spotify removed the mobile feature on its ad-supported tier, [redacted] would move to the paid tier. 3/20/17 Tr. 1807:2-17 (Page); Trial Ex. 1025. Spotify could try to more aggressively de-register its inactive users on the ad-supported service, but this would be costly [redacted]. 4/7/17 Tr. 5631:13-25 (Marx).

JPFF220. In reality, Services would more likely reduce costs by reducing total plays, implementing measures like usage caps to control content costs. Indeed, many Service witnesses testified that the Copyright Owners' proposal incentivizes Services to limit listening to lessen the heavy burden of royalty payments. Trial Ex. 1, Mirchandani WDT ¶ 56; 3/16/17 Tr. 1570:20-1571:11, 1626:16-25 (Mirchandani); Trial Ex. 1068, Vogel WRT ¶ 43; Trial Ex. 1067, Page WRT ¶ 43; 3/20/17 Tr. 1896:9-21 (Marx); Trial Ex. 888, Herring WRT ¶ 13; 3/14/17 Tr. 914:18-916:25 (Herring); Trial Ex. 697, Levine WRT ¶ 16. Again, though, these measures are at odds with the objectives of designing services that enhance the customer experience and drive engagement, as well as with the broader goal of maximizing the availability of creative works to the public. 3/16/17 Tr. 1570:14-1571:11, 1625:11-1626:25 (Mirchandani); Trial Ex. 697, Levine WRT ¶ 13.

C. “Bargaining Down” for Lower Rates is Also Not a Viable Option

JPFF221. Dr. Eisenach has taken the position that the compulsory rate should be used as a “ceiling,” because “if rates are set too high, they are subject to correction in the marketplace.” Trial Ex. 3027, Eisenach WDT ¶¶ 8, 29-32.

JPFF222. Not only does this argument call for the panel to essentially abdicate its charge of setting a fair and correct rate, but Dr. Eisenach ignores the fact that setting rates too high imposes costs on service providers and rightsholders by forcing them to negotiate and shifts bargaining power in an inefficient manner. Trial Ex. 132, Hubbard CWRT ¶ 4.29; Trial Ex. 886, Katz CWRT ¶ 135.

1. *Bargaining Down is Cost-Prohibitive*

JPFF223. One of the main purposes of the compulsory license is to reduce transaction costs. 4/6/17 Tr. 5233:13-17 (Leonard); 3/22/17 Tr. 2539:3-2541:2 (Dorn). Indeed, one of the most-important aspects of a well-calibrated compulsory license is that it facilitates efficiency—and thereby preserves value for all interested parties—specifically because it obviates the type of transactional “correction” that Dr. Eisenach and the Copyright Owners contemplate. Trial Ex. 111, Mirchandani WRT ¶ 53.

JPFF224. A rate structure encouraging parties to negotiate outside of the compulsory rate runs counter to that purpose. 4/6/17 Tr. 5233:13-17 (Leonard); 3/22/17 Tr. 2539:3-2541:2 (Dorn).

JPFF225. In order to license a full-catalog service on a solely voluntary basis, service providers would have to negotiate agreements not only with the three major music publishing companies, but with—at the very least—***tens of thousands*** of additional indie publishers as well. The time necessary to orchestrate that many direct deals—and the immense transactional costs associated with doing so—would render the exercise unworkable from a business perspective. Trial Ex. 111, Mirchandani WRT ¶ 51.

JPFF226. In other words, "if rates are set too high" such that they require "correction in the marketplace," it will already be too late, and it will effectively be impossible to license a full-catalog service. Trial Ex. 111, Mirchandani WRT ¶ 53.

2. *Inflated Rates Shift Bargaining Power*

JPFF227. A well-calibrated compulsory license works to even out the bargaining power among the stakeholders in private negotiations. 3/13/17 Tr. 577:3-24 (Katz). This, in turn, encourages fair outcomes. *Id*.

JPFF228. An inflated statutory rate, on the other hand, would grant publishers and songwriters more bargaining power during negotiations.[6] Trial Ex. 132, Hubbard CWRT ¶ 4.29; Trial Ex. 886, Katz CWRT ¶ 135. Rightsholders could simply threaten to walk away from negotiation, leaving service providers with the higher rate. Trial Ex. 132, Hubbard CWRT

[6] Dr. Eisenach acknowledged the effect of unfair compulsory rates on bargaining power in arguing, incorrectly, that licensees under the ASCAP and BMI consent decrees enjoy "bargaining power" that derives from the availability of interim licenses and "no requirement for immediate payment" under the consent decrees. *See* Trial Ex. 3027, Eisenach WDT ¶¶ 108-109 (quoting "Copyright and the Music Marketplace Report"). Dr. Eisenach is entirely wrong about how the decrees operate; both provide mechanisms to establish interim fees, which can be far in excess of a licensee's final fees and do not color the final fee determinations. Judgment ¶ 3, *RMLC v. ASCAP*, No. 10-cv-1067 (S.D.N.Y. Jan. 30, 2012) (refunding $75 million in interim fee payments); Ex. A, ¶ J, Final Order, *Withers Broad. Co. of Ill. v. BMI*, No. 10-cv-4779 (S.D.N.Y. Aug. 30, 2012), ECF No. 59 (refunding $70.5 million in interim fee payments); Judgment ¶ 12, *In re Application of THP Capstar Acquisition Corp.*, 756 F. Supp. 2d 516 (S.D.N.Y. 2010) (refunding $12 million in interim fee payments); Judgment ¶ 2, *In re Application of MobiTV*, 712 F. Supp. 2d 206 (S.D.N.Y. 2010) (providing for refund of $1,595,000 million in interim fees after a license fee award to ASCAP of $405,000). But putting aside Dr. Eisenach's error with regard to the decrees, his conceptual point that statutory rates can lend a party bargaining power demonstrates the exact reason why he is wrong to argue that compulsory rates should merely serve as a "ceiling" that encourages the parties to bargain for lower rates.

¶ 4.29; Trial Ex. 886, Katz CWRT ¶ 136. This would have the effect of driving higher negotiated rates, which can be especially problematic if the statutory rate is set unreasonably high. Trial Ex. 132, Hubbard CWRT ¶ 4.29; Trial Ex. 886, Katz CWRT ¶¶ 135-136.

JPFF229. In fact, there is reason to believe that the current statutory rates may already be set too high. As Dr. Leonard has testified, if the parties were to negotiate a mechanical license in a competitive open market, the royalty rate would be lower. 3/15/17 Tr. 1247:6-22 (Leonard). Thus, setting an even higher rate would only work to shift even more bargaining power to rightsholders, further reducing the likelihood that the parties reach a fair outcome in private negotiations. 3/13/17 Tr. 577:3-24 (Katz).

D. The Copyright Owners' Rate Proposal Would [redacted]

JPFF230. The Copyright Owners do not dispute that their rate proposal would cause an exponential, unprecedented increase in royalties [redacted]. *See, e.g.*, 4/13/17 Tr. 5922:5-10 (Hubbard); *see also, e.g.*, 3/30/17 Tr. 4188:3-23 (Gans) (admitting that as a percentage-of-revenue, under the Copyright Owners' proposal an ad-supported service might pay significantly more than a paid service); 4/7/17 Tr. 5481:18-21 (Marx) ([redacted]); Trial Ex. 1066, McCarthy WRT ¶ 12 ([redacted]). Such an increase would inevitably lead [redacted], causing a significant reduction in the variety of streaming services available. 4/7/17 Tr. 5528:3-18 (Marx) (concluding that "the Copyright Owners' proposal would lead to a reduction in the variety of services available, [redacted]).

JPFF231. Spotify's ad-supported tier is the largest ad-supported interactive streaming service in the United States. *See, e.g.*, 4/7/17 Tr. 5501:12-15 (Marx) [redacted]; Trial Ex. 1069, Marx WRT ¶¶ 37 & fig. 8, 38 & Fig. 9. [redacted]. Trial Ex. 132, Hubbard CWRT ¶¶ 4.27, 6.47. [redacted] *See, e.g.*, Trial Ex. 1068, Vogel WRT ¶ 36. [redacted] *E.g.*, *id.* ¶ 27; *see also, e.g.*, 4/6/17 Tr. 5319:5-9 (Vogel); 4/7/17 Tr. 5488:5-5489:7 (Marx); Trial Ex. 1066, McCarthy WRT ¶ 14; Trial Ex. 1069, Marx WRT ¶ 16 n.10.

JPFF232. Under the Copyright Owners' per-user prong, over the 12-month period from July 2015 to June 2016, Spotify's ad-supported tier would have seen a [redacted] in mechanical royalties *alone*, from [redacted] per year to [redacted] per year. 3/21/17 Tr. 2055:16-2056:2 (McCarthy); 4/6/17 Tr. 5319:5-22 (Vogel); 4/7/17 Tr. 5486:12-5487:10 (Marx); Trial Ex. 1066, McCarthy WRT ¶ 14; Trial Ex. 1068, Vogel WRT ¶¶ 14-15, 19 n.13; Trial Ex. 1069, Marx WRT ¶¶ 16 & fig. 1, 19 & fig. 3, 20. For that time period, [redacted] 4/6/17 Tr. 5320:3-6 (Vogel); Trial Ex. 1066, McCarthy WRT ¶ 14.

JPFF233. [redacted] 3/21/17 Tr. 2056:21-2057:7 (McCarthy); *see also* Trial Ex. 1068, Vogel WRT ¶ 18 [redacted] 3/21/17 Tr. 2056:17-2056:20 (McCarthy); Trial Ex. 1066, McCarthy WRT ¶ 15; 4/6/17 Tr. 5320:7-14 (Vogel); Trial Ex. 1068, Vogel WRT ¶ 27; 4/7/17 Tr. 5488:12-24, 5490:8-16 (Marx); *see also* Trial Ex. 1069, Marx WRT ¶ 32.

JPFF234. The Copyright Owners' proposed per-user prong ([redacted]) applies to all registered users, not only active users. Trial Ex. 1677R at p. B-6; *see, e.g.*, 4/7/17 Tr. 5483:16-5484:5 (Marx); Trial Ex. 1068, Vogel WRT ¶¶ 30-31; Trial Ex. 1069, Marx WRT ¶ 16; *see also* 4/6/17 Tr. 5305:4-22 (Vogel). [redacted] 4/6/17 Tr. 5322:16-5324:17, 5325:15-5326:6 (Vogel); Trial Ex. 1068, Vogel WRT ¶ 38; Trial Ex. 1066, McCarthy WRT ¶ 26; Trial Ex. 1069, Marx WRT ¶¶ 16 & fig. 1, 19 & fig. 3; *see also, e.g.*, 4/7/17 Tr. 5487:11-22 (Marx).

JPFF235. [redacted] 4/6/17 Tr. 5326:11-17 (Vogel); Trial Ex. 1068, Vogel WRT ¶ 15; Trial Ex. 1066, McCarthy WRT ¶ 26; *see also* Trial Ex. 1068, Vogel WRT ¶¶ 19 n.13, 28 n.16 ([redacted]).

JPFF236. The Copyright Owners argue that ad-supported services could limit usage or serve more ads to offset increases in mechanical royalties. *See, e.g.*, 4/3/17 Tr. 4310:15-25 (Rysman); Trial Ex. 3026, Rysman WDT ¶¶ 96-97; *see also, e.g.*, Trial Ex. 3016, Brodsky WDT ¶ 66. [redacted] *See* Trial Ex. 1068, Vogel WRT ¶ 34. In addition, ad-supported services cannot serve more ads unless they can sell the ads to advertisers. *See, e.g.*, 4/3/17 Tr. 4418:24-4419:9 (Rysman). And when ad-supported services serve more ads, they drive down the price of their ads. Trial Ex. 1068, Vogel WRT ¶ 23; *see also id.* at ¶¶ 21-22. [redacted]; *see also* 4/3/17 Tr. 4419:10-13 (Rysman) (admitting he does not know what percentage of Spotify's current advertising inventory goes unsold). [redacted] In addition, serving more ads makes the service a less attractive alternative for listeners than radio, piracy, or other free-to-users services. *E.g.*, Trial Ex. 1066, McCarthy WRT ¶ 24; *see also* 4/3/17 Tr. 4420:9-4422:8 (Rysman) (acknowledging he does not have any empirical analysis regarding whether serving more ads would increase subscription conversion nor has he done any econometric study as to whether serving more ads would drive users away); 3/23/17 Tr. 2891:15-29 (Ghose) ("[I]t is actually possible and feasible without too much difficulty to figure out what should be the optimal frequency of ads and what should be the optimal pricing of the ads."); Trial Ex. 1068, Vogel WRT ¶ 20 [redacted]

[redacted] (*see* Trial Ex. 1068, Vogel WRT ¶ 24), [redacted]. *See* above; *see also* Trial Ex. 1068, Vogel WRT ¶ 25.

JPFF237. The Copyright Owners further argue that ad-supported services could "negotiate[e] around" their proposed statutory rate. *E.g.*, 4/3/17 Tr. 4389:25-4390:12, 4431:3-22 (Rysman); *see also, e.g.*, 4/4/17 Tr. 4717:11-21 (Eisenach). However, even if the Copyright Owners as a whole would be better off negotiating around the statutory rate (*see, e.g.*, 3/23/17 Tr. 2887:11-20 (Ghose); 4/7/17 Tr. 5490:8-17, 5491:24-5493:15 (Marx)), the transaction costs of such negotiations would be extremely high, because there is a "very long tail" of publishers. 4/13/17 Tr. 5901:10-19 (Hubbard); *see also* 4/7/17 Tr. 5493:19-5495:24 (Marx). Thus, such an approach would not serve the purposes of a compulsory license, but rather tilt the playing field in favor of the "top few publishers [that] control a lot of the market." 4/13/17 Tr. 5901:10-19 (Hubbard); *see also* 4/6/17 Tr. 5233:9-5234:1 (Leonard) (noting that the point of compulsory licensing is to reduce transaction costs and prevent the exercise of market power). Notably, none of the Copyright Owners' experts have even attempted to model how negotiations among the Copyright Owners and Services—with all of the attendant obstacles—might play out in reality. 4/7/17 Tr. 5493:19-5495:24 (Marx). Indeed, failing to get a license from any one major publisher would jeopardize the ability to offer the service at all.

JPFF238. That the Copyright Owners would [redacted] is unsurprising: the evidence shows that these services perform many of the functions of traditional radio, but unlike traditional radio, do so with more of a focus on the "long tail" of songs that the major music publishers represented in this proceeding do not own the rights to. *See* Section II.B, *supra*; Trial Ex. 1061, Page WDT ¶ 48 ("Spotify is the modern-day answer to broadcast radio . . . ."); *id.* at ¶ 77 ("Spotify can break out an artist, and radio will follow."). If the Copyright Owners can force services to negotiate outside the compulsory license to offer ad-supported services, they can drive up the transaction costs associated with obtaining the rights to stream these long-tail songs. This may be why they seek to end a category of service that otherwise results in positive revenue for publishers and songwriters. *See* 3/23/17 Tr. 2887:11-20 (Ghose) (ad-supported services are revenue-positive for the Copyright Owners); 4/7/17 Tr. 5491:24-5493:15 (Marx) (same); *cf.* Trial Ex. 1069, Marx WRT ¶¶ 7, 33 & fig. 7 (Spotify's ad-supported offering pays higher royalties to publishers and songwriters than [redacted]); 3/21/17 Tr. 2064:6-2065:7 (McCarthy) ([redacted]); Trial Ex. 1068, Vogel WRT ¶ 41 (same).

E. The Copyright Owners' Rate Proposal Would [redacted]

JPFF239. The Copyright Owners' Rate Proposal would also cause an enormous increase in royalties for "limited offerings" like Pandora Plus. Trial Ex. 888, Herring WRT ¶ 7; 3/14/17 Tr. 911:8-14 (Herring); Trial Ex. 889. If adopted, this increase would cause Pandora [redacted]. Trial Ex. 888, Herring WRT ¶ 10; 3/14/17 Tr. 911:19-21 (Herring).

JPFF240. Under current rates and terms, the per-subscriber minimum royalty for "limited offerings" is $0.18 per month, *before* deducting performance rights royalties. Trial Ex. 888, Herring WRT ¶ 7 (citing 37 C.F.R. § 385.23(a)(3)). The Copyright Owners propose to raise this to $1.06 per end user per month, *without* any deduction for performance rights royalties.

Trial Ex. 888, Herring WRT ¶ 7. This would be a six-fold increase in the minimum rate even if performance rights royalties were zero. *Id*. Factoring in the actual performance rights royalties paid for Pandora Plus, the new minimum would be more than [redacted] times the current minimum rate. *Id.*

JPFF241. The royalty increase is also striking for "limited offerings" currently paying royalties under the "percentage of revenue" prong. Trial Ex. 888, Herring WRT ¶ 7. The minimum payment for mechanical rights for Pandora Plus required under the Copyright Owner's proposal is twice what Pandora currently pays for both mechanical *and* performance rights for the product under the revenue prong—and the required payments could rise even higher depending on the number of plays subject to the royalty. *Id.*

JPFF242. These rate increases would transform a "limited offering" at the $4.99 per month price point of Pandora Plus into a sure-fire money-losing proposition. *See* Trial Ex. 888, Herring WRT ¶¶ 7, 9; 3/14/17 Tr. 911:15-18 (Herring). At a minimum, the Copyright Owners' proposal would result in Pandora paying over [redacted] more than the standard retail price of Pandora Plus for mechanical royalties alone, and over [redacted] more when performance royalties are included at their current rates. Trial Ex. 888, Herring WRT ¶ 7. As discussed above, under the Copyright Owners' proposal, Pandora Plus would not be able to [redacted]. *Id.*; 3/14/17 Tr. 911:15-18 (Herring); Trial Ex. 889. As a result, Pandora will have no choice but to [redacted]. Trial Ex. 888, Herring WRT ¶¶ 8, 10; 3/14/17 Tr. 911:19-21 (Herring).

IX. DR. EISENACH'S "MARKET-BASED" BENCHMARK ANALYSIS IS ENTIRELY UNRELIABLE

JPFF243. The Copyright Owners rely primarily on the expert testimony of Dr. Jeffrey Eisenach—who asserts that he has used a "straightforward" and "robust" benchmarking analysis—to validate their rate proposal. Trial Ex. 3027, Eisenach WDT ¶¶ 8, 36, 38; *see also* 4/4/17 Tr. 4588:8-25, 4589:7-23, 4722:3-4723:11 (Eisenach). Dr. Eisenach, who has demonstrated a notable hostility to the Section 801(b)(1) rate-setting standard that governs the rate-setting process in this proceeding (*see* Sections IX.A-B, *infra*), utilized two somewhat different, but interrelated, and equally flawed, methodologies. In each case, he bases his benchmark analysis on unregulated and unadjusted rates paid by the interactive services to the recording industry for sound recording rights, and then purports to convert those sound recording rates into musical works mechanical rights rates by deriving, then applying, a "range of ratios" between the "relative values of the sound recording and musical works rights." Trial. Ex. 3027, Eisenach WDT ¶¶ 38, 81-104. But Dr. Eisenach's analysis suffers from numerous insupportable assumptions and manipulations, rendering it utterly unreliable for any purpose in this proceeding.

JPFF244. Most fundamentally, it is incontestable that the major record labels are a complementary oligopoly and that unregulated sound recording rates that are Dr. Eisenach's starting point are inflated by the record labels' market power. His failure to make any adjustment before converting them to rates that would comport with the Section 801(b)(1) objectives that govern here is indefensible. Moreover, Dr. Eisenach arbitrarily cherry-picked the data upon which he bases his analysis so as to eliminate vast relevant portions of it, most particularly data relating to Spotify's subscription and ad-supported services, the largest interactive service in the industry by far. Similarly, Dr. Eisenach relies on very tiny portions of the available data to derive his "conversion" ratio, based on peculiar situations in no way representative of the larger sound recording and musical works market contexts, and then manipulates the limited data that he chooses to use. The individual and cumulative effects of these and other manipulations and omissions is to inject so many upward and unjustifiable biases into his benchmarking exercise as to be the antithesis of a "straightforward" and "robust" analysis, and to render it wholly useless in setting a mechanical works rate in this proceeding. *See id.* at ¶ 8. We now turn to a discussion of some of the many flaws.

A. Dr. Eisenach's Analysis Does Not Comport with the Section 801(b)(1) Objectives

JPFF245. Dr. Eisenach takes a singularly peculiar approach to the meaning of the 801(b)(1) objectives, essentially gutting their impact, consistent with his long-demonstrated hostility to them. Dr. Eisenach reads the first three factors in the aggregate as providing for "fair market value," tempered only by a "constrained" view of the fourth factor's "somewhat controversial" requirement that industry disruption be minimized. Trial Ex. 3027, Eisenach WDT ¶¶ 24-25; 4/4/17 Tr. 4589:24-4590:13, 4665:21-4666:7, 4686:19-4687:18 (Eisenach). This attempt by Dr. Eisenach to rewrite the statute is remarkable not only for its inconsistency with the statutory structure and language, but with his own sworn testimony before a Congressional Subcommittee in 2012, where he expressly acknowledged (in opposing an amendment that would have added the Section 801(b)(1) objectives to section 114) that rates determined under Section 801(b)(1) would result in *below-market* rates. *See* Trial Ex. 1698, (Nov. 28, 2012 Testimony of Jeffrey A. Eisenach, Ph.D. before e Subcommitteee on Intellectual Property, Competition and the Internet, Committee [of] the Judiciary ("2012 Eisenach Testimony) p. 2 ("its proposal to replace the market-oriented willing buyer/willing seller standard with the *uneconomic*, four-part standard under Section 801(b) of the Copyright Act of 1976… would represent a significant step in the wrong direction, both because *the rates are likely to emerge* *from the rate-setting process would be below those that would emerge from a competitive market*…and because the 'non-disruption' standard…would create perverse incentives[.]") (emphasis added); *id.* Attachment A at 24 ("Nor is it surprising that, as one knowledgeable observer recently noted, '*the change* from the willing buyer/willing seller standard *to the 801(b) standard is widely anticipated to significantly lower the royalty rates that on-line radio services pay*") (emphasis added).

JPFF246. Dr. Eisenach's trial testimony—that his 2012 testimony does *not* reflect his current view —lacks credibility. *See* 4/4/2017 Tr. 4678:16-18 (Eisenach). His 2012 testimony was in writing, and supported by a lengthy article to the same effect. Trial. Ex. 1698, 2012 Eisenach Testimony. His current testimony, that his 2012 testimony was due to a then-unexpressed "concern" that the Board might "change" how it had interpreted the 801(b) factors in the past, an eventuality that in fact never occurred—is nowhere corroborated in his 2012 testimony or the attached article, and is manifestly unconvincing. *Compare* 4/4/2017 Tr. 4680:14-4683:5, 4684:21-4686:7, *with* Trial Exhibit 1698, 2012 Eisenach Testimony.

JPFF247. Dr. Eisenach's view regarding the fourth factor, as "controversial" and subject to a "constrained interpretation," is equally problematic. Trial Ex. 3027, Eisenach WDT ¶ 25; 4/4/17 Tr. 4687:4-13 (Eisenach). Essentially, he would give it no meaning at all, as he testified that even if the Copyright Owners' proposal to more than triple the current effective rates for mechanical rights were to [redacted] (which accounted for some [redacted] of the [redacted] streams in Dr. Eisenach's 2015 data), that would still not be "disruptive" within the meaning of section 801(b)(1)(D). 4/4/17 Tr. 4687:19-4697:11, 4842:16-4843:6 (Eisenach); 4/4/2017 Tr. 4701:19-4716:15 (Eisenach) (discussing Copyright Owners' proposal to increase effective rates from [redacted] per hundred plays and about [redacted] per user per month in 2015 to the greater of $.15 per hundred plays or $1.06 per user per month); *see also* Trial Ex. 888, Herring WRT ¶¶ 3-10 (testifying that if the Copyright Owners' rate proposal were adopted [redacted]); *see also* Trial Ex. 698, Leonard WRT ¶¶ 20-22 (testifying that the Copyright Owners' rate proposal would significantly disrupt interactive streaming services, including [redacted], and result in reduced consumption of music).

JPFF248. Dr. Eisenach's further position that the Board should err on the side of setting a rate that is too high rather than too low because parties could always negotiate for a lower rate (*see e.g.* Trial Ex. 3027, Eisenach WDT ¶ 32) would override the entire purpose of this proceeding and effectively jettison the impact and protections of the 801(b)(1) objectives that Congress has mandated be applied.

B. Dr. Eisenach's Calculation of the Royalties Paid for Sound Recording Rights Does Not Present a Reliable Benchmark

1. *Sound Recording Rates Are Inflated Due to Market Power of Record Companies and Do Not Constitute an Appropriate Benchmark Under the Section 801(b)(1) Policy Objectives*

JPFF249. Dr. Eisenach's benchmark analysis relies on the royalty rate paid for sound recordings, which Dr. Eisenach argues are "negotiated freely" and market-based. Trial Ex. 3027, Eisenach WDT ¶¶ 8, 37. But it is incontestable that the royalty rates paid to record labels for sound recording rights do not reflect rates that are negotiated under effectively competitive conditions and are instead inflated as a result of record company market power as they are an effective complementary oligopoly. Trial Ex. 886, Katz CWRT ¶ 56; Trial Ex. 1069, Marx WRT ¶¶ 137-141; Trial Ex. 132, Hubbard CWRT ¶¶ 6.26-6.27; Trial Ex. 698, Leonard WRT ¶¶ 24, 44.

JPFF250. As the Board found in *Web IV* (*see* Section VI.A, *supra*), the major record companies possess and exercise substantial market power in the upstream market in which they license sound recording performance rights to interactive services, and as a result, the royalty rate paid by interactive streaming services to major record companies is distorted upward. Trial Ex. 1460 (*Web IV* Final Determination) at p. 26368.

JPFF251. Specifically, the Judges found:

> Because the Majors could utilize their combined market power to prevent price competition among them by virtue of their complementary oligopoly power…the Judges must establish rates that reflect steering, in order to reflect an 'effectively competitive' market.

Id. The Judges further wrote that:

> The Judges do not find that the mere size of the Majors or their share of the non-interactive market is in itself anticompetitive (especially on this record), but *the Judges find that the ability of the Majors to leverage that market power to create the complementary oligopoly pricing problem can neither be imported into the non-interactive market nor assumed to be part of the hypothetical effectively competitive non-interactive market.*

(*Id*. at 26374) (emphasis added); *see also* Trial Ex. 887, Statement of Bureau of Competition Director Richard A. Feinstein *In the Matter of Vivendi, S.A. and EMI Recorded Music* (FTC Sept. 21, 2012) (noting that each major label was a "must have" to an interactive service and that the major labels are more "complementary than substitutable")

JPFF252. In such market conditions where major record labels are "complementary [rather] than substitutable" to each other, the prices negotiated in this upstream market are likely even higher than monopoly levels due to the Cournot Complements effect.[7] As the major record companies admitted in *Web IV*, they never offer lower royalty rates in an effort to compete with rivals. Trial Ex. 1460 (*Web IV* Final Determination) at p. 26344. And indeed, certain agreements between record labels and interactive services explicitly prevent the service from playing one

[7] By logic first identified by Antoine Cournot in 1838, firms offering complementary products tend to set higher prices than would even a monopoly seller of the same products. Trial Ex. 886, Katz WRT ¶ 93. This phenomenon arises because a monopoly seller of two complementary products would internalize the fact that lowering the price of one product would increase sales of both products, whereas a seller that internalizes the benefits of only one of the products has less incentive to lower the price. *Id.* ¶ 93.

label off against another through "anti-steering" provisions. *See, e.g.*, Trial Ex. 921 ([redacted]) § 11(b); Trial Ex. 922 ([redacted]) §§ 3(b) and 5(j); Trial Ex. 2768, ([redacted]) § 2.o; *see also* Trial Ex. 1460 (*Web IV* Final Determination) at p. 26342. Accordingly, the Board concluded in *Web IV* that "the interactive services market is *not* effectively competitive," and specifically made a 12% downward adjustment to the proposed benchmark for the "willing buyer/willing seller" regulated rate at issue there so as "to reflect an effectively competitive rate." Trial Ex. 1460 (*Web IV* Final Determination) at pp. 26344, 26404-06.

JPFF253. The Judges also adjusted the per-play benchmark rate to reflect differences between interactive and non-interactive services in terms of the degrees of interactivity and "skips" (*i.e.*, situations in which a consumer listens to only a small fraction of song). *Id.* at p. 26339. The latter is necessary because the Copyright Owners' proposal would levy a per-play royalty fee on every play, while interactive services' license agreements with record companies typically exclude at least some skips. *Id.*, citing written direct testimony of Dr. Daniel Rubinfeld ("under the statute, a 'skip'… is considered a royalty-bearing play for a non-interactive service. By contrast, interactive services, pursuant to their direct license agreements with record companies, typically are permitted to exclude from the royalty obligation at least some skips.")

JPFF254. In contrast to the adjustment factor used by the Board in *Web IV*, Dr. Eisenach made no attempt to adjust the unregulated rates paid to the labels for sound recording rights in his benchmark analysis here. He claimed that that was because the time periods were different between here and in *Web IV* and because the services in the current interactive streaming market are larger. But the data upon which Dr. Eisenach relied here was all from 2015, and the data in *Web IV* was immediately contiguous, *i.e.*, 2011-14. Indeed, it is obvious that the very agreements upon which Dr. Eisenach relied for his analysis here were in effect during the period covered by the data at issue in *Web IV*. 4/4/17 Tr. 4736:5-4737:1, 4739:3-12 (Eisenach). The agreements themselves, which all contain a percentage of revenue royalty prong, are all in the [redacted] range, a figure Dr. Eisenach himself acknowledged was "standard" in the industry, whether for agreements in 2011-14, 2015 or beyond, and regardless of the identity of the service, including the new large ones and Spotify. *See* Trial Ex. 3027, Eisenach WDT ¶ 169; 4/4/17 Tr. 4739:9:4753:7 (Eisenach); *see also e.g.*, Trial Ex. 388 ([redacted]); Trial Ex. 2760 ([redacted]); Trial Ex. 2761 ([redacted]); Trial Ex. 2765 ([redacted]); Trial Ex. 2766 ([redacted]). While Dr. Eisenach concedes that the major record labels remain "must have" for any full catalog interactive streaming service, by contrast none of the services is "must have" for the record labels. 4/4/17 Tr. 4754:9-4755:13 (Eisenach).

2. *Dr. Eisenach Bases His Calculation on a Biased Sample*

JPFF255. Dr. Eisenach's calculation of the effective per-play sound recording rates paid by interactive streaming services is unreliable for the additional reason that it consists of only a miniscule cherry-picked subset of data from streaming services. For example, his primary calculations, which exclude data from Spotify, Apple, and other services, rely on data that account for only about [redacted] of industry plays. Trial Ex. 3027, Eisenach WDT, Table 11, Table 13; Trial Ex. 886, Katz CWRT ¶ 72; Trial Ex. 1033.

JPFF256. The exclusion of the data for Spotify, the largest interactive service by far, is particularly indefensible. Of the 126 billion interactive streams in 2015 for which Dr. Eisenach had royalty payment data, Spotify's subscription and ad-supported services accounted for [redacted] and [redacted], respectively. *Compare* 4/4/2017 Tr. 4712:14-4713:23 (Eisenach) (126 billion streams) *with* Trial Ex. 1033 (showing Spotify plays). *see also* Trial Ex. 132, Hubbard CWRT ¶ 6.47; 4/4/17 Tr. 4766:3-6 (Eisenach) (explaining that Dr. Eisenach excluded ad-supported services from his analyses). Dr. Eisenach even used the obviously feeble and demonstrably untrue excuses that including data for the ad-supported service, with its [redacted] in 2015 would either be a "waste of paper" or a "waste of time." 4/4/2017 Tr. 4767: 8-4769:14, 4826:24-4827:12 (Eisenach). These attempts to dismiss the place of Spotify's ad-supported service in the industry are condescending, unjustified, and a disservice to this process.

JPFF257. Dr. Eisenach excludes all of the data pertaining to Spotify on the sole ground that several record companies hold small portions of equity in Spotify, totaling some [redacted] which, he argues, implies that [redacted]. Trial Ex. 3027, Eisenach WDT ¶ 150; *see also* 4/7/17 Tr. 5540:1-10 (Marx) (explaining that the fact that some labels have an equity share in Spotify and the ad-supported service is a funnel for moving them to subscription are not acceptable reasons to exclude the ad-supported service from the analysis as done by Dr. Eisenach). This assertion, however, is completely belied by the evidence. First, there is the uncontradicted testimony by Mr. Barry McCarthy, Spotify's CFO, that [redacted] 3/21/17 Tr. 2121:6-9 (McCarthy). Second, and as noted above, the Spotify contract with record labels that Dr. Eisenach reviewed show [redacted]. 4/4/17 Tr. 4739:9:4753:7 (Eisenach); *see also e.g.* Trial Ex. 2760 ([redacted]; Trial Ex. 2765 ([redacted]. Indeed, Dr. Eisenach's own data shows that [redacted]. Trial Ex. 886, Katz WRT ¶ 73 (citing to Trial Ex. 3027, Eisenach WDT, Table 19). Finally, his justification for excluding Spotify because of record companies' ownership in Spotify is undermined by the fact that he chose to include Deezer in his data set even though Dr. Eisenach was aware that record labels have a greater ownership interest in Deezer than Spotify. Trial Ex. 3027, Eisenach WDT Table 11; 4/4/17 Tr. 4774:8-4775:7, 4782:1-4787:1 (Eisenach). While he claimed on redirect examination that including Deezer lowered his calculation of the effective 2015 per-play rate, he was obliged to acknowledge during re-cross examination that, on the contrary, the payment figures for Deezer were *above* the weighted average figure that he reached. 4/4/17 Tr. 4876:3-10 (Eisenach).

JPFF258. These manipulations of the data—by excluding Spotify while including those above the average in terms of per-stream payment rates—go well beyond cherry picking and are far from trivial. *See* Trial Ex. 886, Katz CWRT ¶¶ 75, 76, 78-80; Trial Ex. 132, Hubbard CWRT ¶¶ 6.46-6.47. By excluding both the subscription and ad-supported Spotify services, Dr. Eisenach increased his computation of the actual per-stream rate for sound recordings in 2015 from [redacted] per hundred by almost 60% to [redacted] per hundred. Trial Ex. 1033; *see also* 4/4/17 4770:11-4774:5 (Eisenach). By using an inflated benchmark streaming rate for sound recordings, unadjusted for market power, and manipulated by material exclusions, Dr. Eisenach's benchmark analysis is fatally flawed from the very first step.

C. Dr. Eisenach's "Conversion Ratio" Is Based on Inapposite Licenses and Renders His Calculations for the "Implied Value" of the Mechanical Right Deeply Flawed

1. *Dr. Eisenach Provides No Principled Basis for his Ratio Analysis*

JPFF259. After identifying the benchmark sound recording royalty rate, Dr. Eisenach purports to develop a "range of ratios" to convert the value of the sound recording rights to reflect the relative value of the musical works rights. Trial Ex. 3027, Eisenach WDT ¶ 8. In developing his "valuation ratio," he looked at a "mix" of various agreements to "establish a lower and upper bounds on the relative market valuation of sound recordings and musical works." *Id.* at ¶ 81. But Dr. Eisenach again manipulates his data, excluding as inapposite some examples that would raise the ratio upward, but including examples that are clearly inapposite and that bias it downward. He ultimately settled on the midpoint of a range of two very limited sets of data, that are themselves inapposite, and that Dr. Eisenach also then manipulated downward.

JPFF260. Dr. Eisenach makes no attempt to justify this "valuation ratio" approach through any economic theory. Trial Ex. 886, Katz CWRT ¶ 84; Trial Ex. 698, Leonard WRT ¶30; Trial Ex. 132, Hubbard CWRT ¶ 6.30; Trial Ex. 1069, Marx WRT ¶¶ 134-136. Instead, Dr. Eisenach baldly asserts that "[f]or my purposes, it is sufficient *simply to assume* that the relative values of the two rights should be stable across similar or identical market contexts." Trial Ex. 3027, Eisenach WDT ¶ 79 (emphasis added). But there is no such "stable" ratio in Dr. Eisenach's analysis. Rather, Dr. Eisenach's own examination of various ratios reveals a very wide range, with ratios stretching from 1:1 to [redacted] which he himself by choice narrowed down to the still very wide range of 1:1 to [redacted][8] *See* Trial Ex. 3027, Eisenach WDT ¶¶ 75, 95, 99, 125. Under Dr. Eisenach's own assertion, his overbroad range is evidence of wide dissimilarities in the market contexts of the licenses he relies on for his ratio, further undermining his analysis.

2. *Section 115 Licenses*

JPFF261. Dr. Eisenach uses the existing structure of payment for musical works rights under Section 115 to derive an upper bound or [redacted] on the ratio between sound recording and musical works royalties. He dismisses this ratio as a useful direct benchmark that can at most serve only an upper bound because the rates were established in the wake of prior agreements entered in the "shadow" of section 115. Trial Ex. 3033, Eisenach WRT ¶ 20. But these agreements, which were voluntarily entered both in 2008 and 2012, by the very same publishers in the same markets and for the same rights, are by far the most directly apposite benchmarks used in Dr. Eisenach's analysis. *See* Trial Ex. 885, Katz WDT ¶¶ 97-113; Trial Ex. 695, Leonard AWDT ¶¶ 45-70; *see also* 4/5/17 Tr. 5152:13-20 (Leonard) (noting that, for

[8] As Dr. Eisenach admits, "the sound recording rights are perfect complements to the musical works rights: both licenses are required to engage the interactive streaming services covered in Subparts B and C." Trial Ex. 3027, Eisenach WDT ¶ 37. What Dr. Eisenach fails to acknowledge is that it is widely recognized in economics that there is no way to assign economic "value" to one complement or the other. Trial Ex. 886, Katz CWRT ¶ 87; Trial Ex. 1069, Marx WRT ¶ 71.

services paying under the percentage-of-revenue prong under Section 115 and based on prevailing sound recording rates, "[t]he ratio would be more like…5-to-1 to 6-to-1").

JPFF262. Dr. Eisenach also excludes from his analysis the ratio between sound recording and musical works royalties Copyright Owners agreed to for 2018 to 2022 in the recently approved Subpart A settlement. This voluntary agreement by the Copyright Owners in this same rate-setting proceeding under the 801(b)(1) factors, establishes a ratio of between 6.33 and 7.04. *See* Section V.G, *supra*; *see also* 4/5/17 Tr. 5152:21-25 (Leonard) (noting that Subpart A establishes a ratio "between 6-to-1 and 7-to-1, approximately").

3. *Synchronization Licenses*

JPFF263. To establish the "lower" bound of the sound recording to musical works ratio as 1:1, Dr. Eisenach relies on synch and micro-synch license for markets, applications and parties for limited use applications. Trial Ex. 3027, Eisenach WDT ¶¶ 93-98. But the Board has already held in no uncertain terms that synch rights are so far from comparable to those at issue in licensing musical works that they simply cannot be used as a benchmark. As the Board wrote in *Phonorecords I*, "[b]ecause of the large degree of its incomparability, *the synch market 'benchmark' clearly lies outside the 'zone of reasonableness' for consideration in this proceeding. Therefore, we find this particular benchmark cannot serve as a starting point for the 801(b) analysis* that must be undertaken in this proceeding." 74 Fed. Reg. at 4519 (emphasis added). Dr. Eisenach professed familiarity with this decision, and indeed listed it as a source in his Appendix A to his WDT. 4/4/2017 Tr. 4671:8-24, 4799:12-4801:7 (Eisenach); Trial Ex. 3027, Eisenach WDT Appendix A.[9]

[9] *See also* Trial Ex. 698, Leonard WRT ¶¶ 37-40; Trial Ex. 132, Hubbard CWRT ¶ 5.32; Trial Ex. 1069, Marx WRT ¶¶ 148-151.

4. *Dr. Eisenach's Analyses of the YouTube and Pandora Agreements Are Unreliable*

JPFF264. At bottom, given Dr. Eisenach's own rejection of the section 115 licenses as pertinent, and the obvious irrelevance of the synch licenses, his "valuation ratio" comes down to his examination of two fairly atypical circumstances, the Pandora "opt-out" agreements, entered into during a period in which the publishers sought to withdraw from the performing rights organizations in an attempt to get higher rates, and YouTube license agreements. Even as to these, Dr. Eisenach's attempts to manipulate the data so as to decrease the "conversion ratio" are all too transparent.

a. *YouTube Agreements*

JPFF265. Dr. Eisenach derives his YouTube ratio of [redacted] by estimating that YouTube pays [redacted] of its ad revenue to publishers for musical works rights and 40% of its ad revenue to record labels for sound recording rights ([redacted]). Trial Ex. 3027, Eisenach WDT ¶ 101-102. However, Dr. Eisenach's estimates for musical works royalty rates ([redacted]) and for sound recording (40%) are both biased and inconsistent with the factual record.

JPFF266. First, Dr. Eisenach chose the [redacted] number for the musical works royalty rates by considering only one of several [redacted]."[10] [redacted]. Trial Ex. 3027, Eisenach WDT ¶ 101 n.93. But Dr. Eisenach acknowledges that there are other types of videos defined in these contracts, most notably "publisher audio-only" videos. *Id*. Nonetheless, Dr. Eisenach assumes that rights for user-

[10] [redacted] Trial Ex. 540 (GOOG-PHONOIII00002538) p. 2551; *see also* Trial Ex. 698, Leonard WRT ¶ 43.

generated audio and video content for "User Video with commercial sound recording" are comparable to rights for audio-only content for interactive streaming services. Trial Ex. 3033, Eisenach WRT ¶¶ 57-58. If anything, [redacted] Trial Ex. 1374, Katz SWRT ¶ 9; Trial Ex. 698, Leonard WRT ¶¶ 43-44. [redacted]—a rate that is [redacted] the publisher rate that Dr. Eisenach uses to calculate his YouTube ratio. *Compare* Trial Ex. 698, Leonard WRT ¶¶ 43 *with* Trial Ex. 3027, Eisenach WDT ¶ 101. Dr. Eisenach did not consider the [redacted] in his estimate and instead chose to go with the [redacted] figure for his denominator, the effect of which was to lower the resulting ratio. *Id.*

JPFF267. Dr. Eisenach's use of the 40% sound recording royalty rate for his numerator is clearly contrary to the factual record. To arrive at this number, Dr. Eisenach initially relied on trade press reports as the basis for asserting that YouTube generally pays content providers a total of [redacted] of ad revenue and subtracting [redacted] from [redacted] to estimate that record companies receive 40% of advertising revenues. Trial Ex. 3027, Eisenach WDT ¶ 101. He later asserted, following the production of the actual agreements, that his initial estimate of 40% was still valid as representing "the majority of agreements entered into by Google" with record labels. Trial Ex. 3393, Eisenach SWRT ¶ 7. This assertion is misleading, because the agreements between YouTube and the major labels, which account for at least [redacted] of the industry, (in yet another illustration of their outsized complementary oligopoly bargaining power), all uniformly provide for [redacted]. *See, e.g.*, [redacted]

[redacted]; 4/4/17 Tr. 4813:6-4814:5 (Eisenach); *see also* Trial Ex. 698, Leonard WRT ¶ 46.

JPFF268. The evidence on YouTube convincingly illustrates Dr. Eisenach's manipulative approach to the available data. As demonstrated in the testimony of Dr. Katz, Dr. Eisenach chose the lowest possible ratio by choosing the least apposite type of YouTube offering compounded by his insistence on ignoring the agreements between YouTube and the major labels, all leading to a downward bias in the resulting "conversion ratio." Trial Ex. 1374, Katz SWRT ¶ 8, Figure 1; 3/15/17 Tr. 1264:3-24 (Leonard).

b. *Pandora Agreements with Publishers from 2012-2016*

JPFF269. Dr. Eisenach examines certain Pandora licensing agreements that were negotiated directly between Pandora and certain publishers, when the latter had withdrawn from the PROs ASCAP and BMI for Pandora's then-non-interactive service, so as to be able to achieve higher licensing rates than those permitted by the rate courts. Trial Ex. 3027, Eisenach WDT ¶ 115.

JPFF270. Dr. Eisenach acknowledges that prior to the efforts of certain publishers to partially withdraw from ASCAP and BMI, the ratio of Pandora payments for sound recordings to those for musical works was [redacted]. Trial Ex. 3027, Eisenach WDT ¶ 125; 4/4/17 Tr. 4804:6-4805:11 (Eisenach). What happened during the period of withdrawal from the PROs by the publishers was a transparent exercise of market power (*see* Section VI.B, *supra*), as that ratio dropped precipitously from [redacted] before the withdrawal to [redacted] by the end of the period. *Id.* Dr. Eisenach offers nothing but his assumption that rates had been depressed below market by the rate courts as the reason for his preferring to use the rates during the period of withdrawal. 4/4/2017 Tr. 4805:12-4806:17 (Eisenach). But there is every reason to believe that the publishers, who were all "must have" for Pandora's full-catalogue non-interactive service, were charging above-market rates in the withdrawal period, making them invalid as a point of comparison for the rates governed by the Section 801(b)(1) objectives at issue here. *See* Trial Ex. 886, Katz CWRT ¶ 100; Trial Ex. 698, Leonard WRT ¶ 50.

JPFF271. Dr. Eisenach's manipulation of the data pertaining to the Pandora "opt-out" agreements does not end there. As noted, even the data Dr. Eisenach identified shows the lowest ratio as [redacted] for 2018. Trial Ex. 3027, Eisenach WDT Table 6. Yet, through use of a straight line regression analysis into the future, he extends what he considers to be a downward time trend out to 2022, and then averages the figures to claim a ratio of [redacted]. Trial Ex. 3027, Eisenach WDT ¶¶ 104, 128, Table 8.

JPFF272. Dr. Eisenach's conclusion that there would be a continued downward trend in the sound recording-to-musical-works-value ratio is not supported by sufficient data. Dr. Eisenach relies on just seven data points representing the historical ratio of sound recording to musical works royalty payments for an entire eight-year period from 2012-2018. Trial Ex. 3027, Eisenach WDT Table 7. Not only does the lack of data render Dr. Eisenach's estimates unreliable, it also calls into question the applicability of Dr. Eisenach's linear regression specification. Indeed, as reflected in the testimony of Dr. Katz, when applying different alternatives to project the regression of future ratios such as using linear-log regression or quadratic regression, the resulting projected ratio would be significantly higher than Dr. Eisenach's predicted ratio of [redacted] Trial Ex. 886, Katz CWRT ¶¶ 104-106.

JPFF273. But not only does he fail to justify such a speculative extension forward in time, but Dr. Eisenach uses a "projected" figure for 2018 when actual contract terms for that year are available (based on agreements effective through 2018), and otherwise uses contractual rates for past years when there is again actual data for the payments from Pandora's public filings. Trial Ex. 698, Leonard WRT ¶ 52. Doing so results in a higher ratio for each year than what Dr. Eisenach has calculated. *Id*.

JPFF274. In short, Dr. Eisenach's use of the somewhat peculiar circumstance of the Pandora "opt-out" agreements is not only inapposite in this proceeding governed by section 801(b)(1), but is indefensibly manipulated.

D. Dr. Eisenach's Calculations of Per-Play Performance Royalties For Musical Works Are Inconsistent and Unreliable

JPFF275. Dr. Eisenach proposes two methods for estimating the per-play musical works performance royalties:

> Method 1 is to identify the implicit value of the mechanical works right for sound recordings in interactive services by subtracting the statutory performance right value for *non-interactive services* from the all-in sound recording right *for interactive services*, and then adjust for the relative value of sound recordings to musical works.
>
> ….
>
> Method 2 is to derive an all-in musical works value based on the relative value of sound recordings to musical works and then remove the amount of public performance rights paid for musical works, leaving just the mechanical-only rate.

Trial Ex. 3027, Eisenach WDT ¶¶ 140-142 (emphasis added).

1. *Method 1*

JPFF276. Dr. Eisenach's Method 1 is based on the premise that "[t]he difference between… the free market rate for interactive rights for sound recordings and the statutory rate for non-interactive rights… is akin to a "mechanical" right for sound recordings, directly paralleling the mechanical right for musical works at issue in this proceeding." Trial Ex. 3027, Eisenach WDT ¶ 137. However, Dr. Eisenach's Method 1, in addition to utilizing sound recording data and a "valuation ratio" that are subject to all of the errors and manipulations just discussed, is based upon the fundamental and incorrect assumption that the entire difference between interactive and non-interactive rates must be attributed to the mechanical license right. But this assumption is clearly belied by the fact that there is a difference between interactive and non-interactive rates for musical works performance rights, the former being higher than the latter. Trial Ex. 698, Leonard WRT ¶ 55; Trial Ex. 886, Katz CWRT ¶¶ 117-118; Trial Ex. 132, Hubbard CWRT ¶ 6.44. For example, ASCAP, which covers about 45% of the performance rights market (4/4/2017 Tr. 4764:11-20 (Eisenach)), charges different royalty rates for performance rights depending on whether the service is non-interactive or interactive.[11] *See, e.g.*, *In re Petition of Pandora Media, Inc.*, 6 F. Supp. 3d 317, 330 (S.D.N.Y. 2014):

> The interactive/non-interactive distinction in the ASCAP form license agreements is borrowed from 17 U.S.C. § 114's ("Section 114") use of the term interactive in the context of the licensing of sound recording rights (Section 114 and sound recording rights are discussed below). Because ASCAP considers its music to be more valuable to the services it classifies as interactive, it has licensed them at a higher rate than non-interactive services.

[11] Indeed, in *Web IV*, the Judges found that sound recording rights for interactive services are twice as valuable as non-interactive services. Trial Ex. 1460 (*Web IV* Final Determination) at pp. 26338-39, 26344-46, 26353. Another factor that could account for the difference between the sound recording royalty rates for interactive services and that for non-interactive services is the additional value of having access to music on-demand, which Dr. Eisenach acknowledges in his testimony. 4/4/2017 Tr. 4853:19-4855:7; Trial Ex. 3033, Eisenach WRT ¶ 51 ("[A]ccess to music on-demand is a substantial value separate and apart from the value obtained from listening to music.").

And see id.:

> The 5.0 License allowed non-interactive users to choose between three rate schedules. Schedule A of the 5.0 License, which Pandora chose, required it to pay the higher of 1.85% of revenue or a per-session rate. The 1.85% rate represented an increase in ASCAP's form license rate from the previous rate. The predecessor to the 5.0 License had an equivalent rate for this schedule of 1.615%. ASCAP's form license for interactive services provided for a substantially higher license rate of 3.0%. [Internal footnotes omitted.]

JPFF277. Obviously, it would be a mistake to attribute all of the difference between interactive and non-interactive rates to the mechanical license. 4/5/17 Tr. 4972:3-4974:7 (Katz) (discussing Eisenach's incorrect assumption that performance rates would be the same for interactive and non-interactive services); 4/4/17 Tr. 4851:3-4852:18 (Eisenach) (admitting his method 1 analysis failed to account for the presence of the ephemeral right in licensing non-interactive streaming); 4/5/17 Tr. 5159:18-5161:6 (Leonard) (discussing how Eisenach's analysis is flawed because he failed to consider the ephemeral right); Trial Ex. 698, Leonard WRT ¶¶ 55-56.

JPFF278. During his live testimony at the hearing, Dr. Eisenach claimed in a brand new analysis—which was never before disclosed, and which should be stricken for that reason alone—that, after his rebuttal report and his deposition, he had reviewed some data that he could barely specify, and determined that the "amounts that are paid [to ASCAP for interactive and non-interactive performance rights] turn out to be roughly the same." 4/4/2017 Tr. 4758:17-4762:2 (Eisenach). In light of the incredible nature of Dr. Eisenach's testimony concerning his 2012 testimony before the Congressional Subcommittee, his manipulative use of the data, and his exceedingly vague description of this post-rebuttal/deposition "analysis" of the ASCAP data, any such testimony, even if not stricken, is insufficient to nullify the express, evidence-based finding of Judge Cote as to the 3:1.85 ratio as between interactive and non-interactive ASCAP performance rights rates. *See In Re Petition of Pandora Media, Inc.*, 6 F. Supp. 3d at 330, 355-56.

JPFF279. In short, Dr. Eisenach's Method 1—which utilizes sound recording data that has been unadjusted for market power, and that has been cherry-picked to exclude mountains of relevant data, particularly the Spotify data, converted to musical works using a wholly invalid "valuation ratio," all coupled with the erroneous assumption that all of the difference between the interactive and non-interactive works can be attributable to the mechanical license—is completely unreliable. If one were to use [redacted] per hundred plays for the sound recording rate (which includes the Spotify data) (*id.* at 4771:10-4774:5), reduce that by 12% as the Board did in *Web IV* for complementary oligopoly power, increase the [redacted] per hundred plays Dr. Eisenach uses for musical works performance rights by 60% to account for the difference in ASCAP rates identified by Judge Cote, and then apply Dr. Eisenach's invalid "valuation ratio" of 3.2:1, the result would be [redacted] per hundred plays, way below the $0.15 per hundred plays rate that Dr. Eisenach attempts to validate.

2. *Method 2*

JPFF280. Method 2, relying as it does on many of the same foundational inadequacies as Method 1, is equally invalid. As with Method 1, it relies on sound recording data unadjusted for market power, excludes Spotify data (the largest interactive streaming service) and uses a wholly invalid "valuation ratio." What Dr. Eisenach does in this method is to take the unadjusted, unregulated sound recording rates, leaving out the Spotify data, apply his "valuation ratio" and then subtract the musical works performance rights payment to get his mechanical rate. But in addition to the errors inherent in Method 1, here Dr. Eisenach is content to subtract the performance rights payments that he elsewhere claims are artificially depressed by the rate courts (4/4/2017 Tr. 4805:12-16 (Eisenach)) without making any adjustment for such artificial depression, the effect of which is to magnify the amount for the mechanical right. *Id*. at 4821:24-4823:4.

JPFF281. But even apart from this last error, it is obvious that Dr. Eisenach's Method 2 is completely unreliable as a basis for validating the Copyright Owners' rate proposal. If one were to use the [redacted] per hundred plays for sound recordings by including the Spotify data, reduced by 12% as in *Web IV* for complementary oligopoly power, and apply the invalid 3.2:1 "conversion ratio," and then subtract [redacted] per hundred he uses for performance rights, even then the methodologically flawed result would be [redacted] per hundred or about half the Copyright Owners' rates. Obviously it would be even less if one were to use a higher "conversion ratio" or adjust the performance right payment rate by including Spotify or to account for its allegedly having been depressed by the rate courts. *Id.* at 4823:5-4825:17.

3. *Per-User Calculation*

JPFF282. Dr. Eisenach, makes a similar use of Method 2 to try to validate the Copyright Owners' proposed per-user/per-month prong, which suffers from all of the same defects. Although he nowhere computed the effective per-user/per-month 2015 rate for sound recordings using all of the Spotify data, in open court Dr. Eisenach acknowledged that, using his spreadsheet, that rate was [redacted], quite far from the [redacted] rate he used by excluding all Spotify data. *Id*. at 4825:9-4828:17. If one were to use that [redacted] rate, reduced by 12% as in *Web IV* for complementary oligopoly power, apply the invalid 3.2:1 "conversion ratio" developed by Dr. Eisenach and then subtract [redacted] per user/per month for musical works performance rights (again excluding Spotify or adjusting for rate court "depression"), the result would be [redacted] per month, or about a sixth of the Copyright Owners' proposal of $1.06 per user/per month. *Id*. at 4828:22-4830:1.

E. Dr. Eisenach's Flawed Calculations in Each Step of His Overall Analysis Renders His Benchmark Analysis Unreliable

JPFF283. Taking all of these considerations into account from his peculiar, crabbed, and legally unsupportable view of the 801(b)(1) rate-setting standard; to his use of unadjusted sound recording royalty payments affected by complementary oligopoly power; to his exclusion of vast amounts of the available data; to his use and manipulation of odd inapposite pieces of data in developing a "conversion ratio"; to his utilization of the unwarranted assumption in his Method 1 that ignores the difference in ASCAP performance rates between interactive and non-interactive services and his failure to adjust for his assertions of rate court depression in his use of Method 2, whether considered singly or in the aggregate, Dr. Eisenach's analysis is anything but "straightforward" and "robust," but rather, on the contrary, is wholly unreliable to validate the Copyright Owners' rate proposal.

X. THE ECONOMIC MODELS AND ARGUMENTS PRESENTED BY THE COPYRIGHT OWNERS' OTHER EXPERTS DO NOT SUPPORT THEIR RATE PROPOSAL

A. Unsound Shapley Value Approaches Used by Drs. Gans and Watt

JPFF284. "Shapley value" is a concept from game theory that provides a way of dividing up between players the profits of a joint endeavor. 3/20/2017 Tr. 1826:4-7 (Marx). Shapley value has been given the interpretation in economics literature as being an embodiment of "fairness"—it divides up value in proportion to the relative contributions of parties coming together to create that value. *Id*. at 1826:7-12. As economic experts on both sides have agreed, the Shapley value framework is well-suited to the analysis of the second and third 801(b) objectives. *See, e.g.*, 3/20/2017 Tr. 1867:13-21 (Marx); 3/27/2017 Tr. 3058:18-3059:2 (Watt);

3/30/17 Tr. 3991:3-15 (Gans). The Board itself has recognized the merits of the Shapley value approach in royalty rate proceedings. *Distribution of 1998 and 1999 Cable Royalty Funds*, 80 Fed. Reg. 13,423, 13,429-30 (Mar. 13, 2015); *see also* Trial Ex. 1065, Marx WDT ¶ 138.

JPFF285. There are two overarching elements that affect the outcome of a Shapley analysis: the delineation of the upstream and downstream entities contributing value and the total value contributed by those entities. Trial Ex. 1065, Marx WDT ¶¶ 145-153. The output of a Shapley value analysis is a fair division of the total surplus based on the relative contributions of the parties. If an entity has a positive marginal contribution to total surplus, then its Shapley value is positive, and that entity should be allocated a positive portion of the total surplus. *Id*. at ¶ 155.

JPFF286. The Copyright Owners' economic experts, Drs. Gans and Watt, both perform Shapley value analyses that incorrectly model the market in ways that skew the division of total surplus in favor of the Copyright Owners and against the Services. Drs. Gans and Watt also use inaccurate revenue and cost numbers for their Shapley inputs based on global rather than U.S. data, and on unreliable and invalid projections of costs rather than actual data. Their modifications distort the basic idea of the Shapley value—that all parties to a joint deal should share in the benefits.

JPFF287. Instead, Dr. Gans' Shapley analysis calls for *much higher* royalty rates than the current rates, allocates negative surplus to the Services, and would result, for example, in Spotify paying [redacted] in royalties. For his part, Dr. Watt's Shapley analysis assigns a negative Shapley value to additional downstream services beyond the first. On this basis, Dr. Watt ultimately concludes that total musical works royalties paid by the

Services as a percentage of revenue should *decrease*—contrary to the significant increases proposed by the Copyright Owners.

B. Dr. Gans

1. *Dr. Gans Misinterprets the Section 801(b)(1) Objectives*

JPFF288. Dr. Gans' interpretation of the 801(b)(1) factors and resultant economic analysis are flawed and incomplete, and do not support the Copyright Owners' rate proposal. Instead, they provide a thin cover for a dramatic increase in rates meant to mimic the returns received by record labels in the unregulated sound recording market. Dr. Gans states that the objective of his economic analysis was to determine rates that are "reasonable rates," which he defines without support as being "consistent with free market outcomes." Trial Ex. 3028, Gans WDT ¶ 32.

JPFF289. Based on this, Dr. Gans determines that an unconstrained market rate for sound recordings—which is inflated by the "must have" nature of each label—represents a good baseline for determining reasonable rates under 801(b)(1). *Id.* at ¶ 32. Dr. Gans ignores voluminous evidence that major record labels have substantial market power, and concludes that the sound recording market was reasonably competitive solely by observing "that there are multiple record labels" and without "delv[ing] into it in a detailed way." 3/30/17 Tr. 4168:16-4169:1 (Gans).

JPFF290. Dr. Gans' assumption that the sound recording market is competitive is deeply misguided. In *Web IV* the Judges found that the major record labels could utilize their complementary oligopoly power to prevent price competition among them, and therefore concluded that the market for sound recordings is not effectively competitive. Trial Ex. 1460 (*Web IV* Final Determination); *see also* Trial Ex. 886, Katz CWRT ¶ 152. As a result, the Judges in *Web IV* deemed it appropriate to adjust the rates derived from sound recording agreements downward "in order to reflect an 'effectively competitive' market." Trial Ex. 1460 p. 26368; *see also* Trial Ex. 886, Katz CWRT ¶ 58. Indeed, due to the Cournot Complements problem discussed in Professor Katz's written rebuttal testimony, there is reason to believe that the royalty rates obtained by the record companies are actually even higher than monopoly levels. Trial Ex. 886, Katz CWRT ¶ 152. This conclusion is further supported by the closing statement issued by the FTC following its review of Universal Music Group's acquisition of EMI, in which the FTC concluded that the Majors' "music is more complementary than substitutable." Trial Ex. 887 p. 2. Under such circumstances, contrary to Dr. Gans' assertion, "there will be no competition between record labels in licensing interactive services, as complementary products, by definition, do not compete with each other." Trial Ex. 886, Katz CWRT ¶ 152.

JPFF291. Dr. Gans' understanding of fairness is also flawed in that Dr. Gans does not "see why fairness is all about targeting consumers with low willingness to pay" and it is not clear to him that the rate structure that is established by this proceeding should "target consumers with low willingness to pay as opposed to people who really love music." 3/30/17 Tr. 4085:12-19 (Gans). However, when questioned about this confused notion of fairness, Dr. Gans admitted that, if the Services were able to practice perfect price discrimination, it would be in the interest of all parties (*i.e.*, services, labels and publishers alike) to do so because it would increase the amount of surplus to all of them. *Id.* at 4087:12-25. Dr. Gans also admitted that a percentage-of-revenue pricing structure is a form of price discrimination in the downstream market, but failed to take any of this into account in his economic analysis and conclusion that a per-user or per-rate structure is more appropriate than a percentage of revenue structure. *Id.* at 4088:16-21.

2. *The "Top-Down" Shapley Approach Used in Dr. Gans' Written Direct Testimony Contains Flaws With Structure, Application and Inputs*

JPFF292. **Structural Flaws.** The centerpiece of Dr. Gans' economic opinion in his written direct testimony is what he called a Shapley value analysis, but later downgraded to a "Shapley-inspired" or "Shapley light" analysis. Dr. Gans explained that the "top-down" approach—a phrase he coined for this proceeding—is different from the "bottom-up" approach used by Dr. Marx. He explained that a bottom-up approach is an exercise in "modeling the royalty rate as the result of a hypothetical bargain," and the top-down approach is to determine whether the royalty rate (*i.e.*, price) "is too high or not." 3/30/17 Tr. 4013:22-4014:2 (Gans). Notably, the approach used by Lloyd Shapley in his seminal Shapley paper was closer to a "bottom-up" approach than the "top-down" approach used by Dr. Gans. *Id.* at 4108:25-4109:17; *see* Trial Ex. 1598.

JPFF293. For his "top-down" Shapley-inspired analysis, Dr. Gans completely omits any music distributors from the model. Trial Ex. 1069, Marx WRT ¶ 182. This ignores the contributions of distributors who are a necessary participant in realizing the value of music through music consumption. *Id.* At the same time Dr. Gans admits that the Services provide the value of making works available and accessible to consumers. 3/30/17 Tr. 4094:4-4095:16 (Gans). By this omission, Dr. Gans creates a Shapley model where no value would actually be created as there is no way in his model by which the musical works reach the consumer. Trial Ex. 1069, Marx WRT ¶ 182.

JPFF294. Of note, in a past regulatory proceeding in Australia to determine performance license payments for gyms, Dr. Gans included the downstream participants in his Shapley value analysis and modeled them as a single player, similar to what Dr. Marx did in her alternative Shapley model. 3/30/17 Tr. 4178:22-4179:14 (Gans). In that proceeding, which pertained to public performance licenses from gyms, Dr. Gans was hired by the Australian Competition and Consumer Commission, and he performed a Shapley analysis. *Id.* at 4177:19-4178:6, 14-16. The upstream player in that proceeding was the Phonographic Performance Company of Australia, which is the collecting agency for performance rights. On the downstream side of the market, Dr. Gans modeled gyms and consumers as two separate players, with gyms as a single market player even though there was more than one gym chain in Australia. *Id*. at 4179:5-25. Dr. Gans provides no plausible justification for excluding the downstream participants (*i.e.*, the Services) from the model that he used in connection with his written direct testimony in this proceeding, especially since he admits that the Services add value. *Id.* at 4090:2-17 (Gans) ("As I said, if all the Services disappear, value goes away.").

JPFF295. **Inappropriate Application of the Shapley Model.** Dr. Gans uses his Shapley-inspired analysis to calculate what, in his opinion, is the appropriate ratio of payments between sound recording and musical works. Trial Ex. 1069, Marx WRT ¶¶ 74, 183; Trial Ex. 3028, Gans WDT ¶¶ 75, 77. He then assumes that an appropriate mechanical royalty rate must give labels and publishers equal profits. In his estimation, therefore, mechanical royalties must rise until publishers match the profit the labels achieve. Trial Ex. 1069, Marx WRT ¶ 183. He does not use this model to determine the appropriate allocation of royalties between upstream copyright holders and downstream copyright users, seemingly missing the point of this proceeding. *Id.* at ¶ 74.

JPFF296. **Flaws With Inputs and Calculations.** In addition to the structural flaws with Dr. Gans' Shapley model, there are several fatal flaws with the numbers that Dr. Gans used as the inputs for his "top-down" Shapley-inspired analysis. On the revenue side of the equation, Dr. Gans started with a per-play rate for sound recordings that was an assumption given to him by counsel, yet he did not conduct any analysis to understand how this per-play royalty rate was calculated. 3/30/17 Tr. 4026:11-16, 4114:6-23 (Gans). Nor does he account for the market power of the labels, which he suggests use their position to capture the value of allegedly depressed mechanical royalties. *Id.* at 4019:2-4020:2; 04/07/17 Tr. 5532:25-5533:20 (Marx) (stating that Dr. Eisenach's use of sound recording royalties as a benchmark is improper because they reflect market power of the record labels and "the possibility that those sound recording rates are inflated by the statutory musical works royalties").[12] Professor Gans relied exclusively on data for paid-subscription streaming services despite the fact that the data source he used included figures for ad-supported streaming services. Trial Ex. 132, Hubbard CWRT ¶ 6.18.

JPFF297. However, Dr. Gans did not adjust his Shapley analysis to account for the allegedly depressed mechanical rates or the market power of the record labels, and he did not bother to plug the relevant numbers into the formula to determine what the results would be if he made this adjustment. 3/30/17 Tr. 4021:22-4023:4 (Gans). In the end, Dr. Gans' "top-down" Shapley approach tell us nothing about the appropriate royalty rate for interactive streaming services. Dr. Gans admitted that "[w]hen you do a bottom-up Shapley value analysis, you can actually be even more precise about those sorts of effects." *Id.* at 4024:7-12. Dr. Gans "sort of realized that later on" when he took a "bottom-up" approach in connection with his rebuttal report whereby he attempted to "explore why [Dr. Marx] was getting [the results] she was getting" from the bottom-up—and more precise—Shapley analysis that she performed. *Id.* at 4024:7-4025:5. Yet, Dr. Gans chose to use a simplified, less precise "top-down" approach, and he did not re-do his work to attempt to make it more accurate.

[12] Professor Gans also relied exclusively and without explanation on data for paid-subscription streaming services, despite the fact that the data source he used included figures for ad-supported streaming services. Trial Ex. 132, Hubbard CWRT ¶ 6.18.

3. *The "Bottom-Up" Shapley Approach Used in Dr. Gans' Rebuttal Report Contains Flaws With Its Structure and Inputs*

JPFF298. The "bottom-up" Shapley analysis that Dr. Gans performed as a critique of Dr. Marx's work is also materially flawed, both structurally and with regard to the inputs used. Dr. Gans makes three ill-conceived modifications to Dr. Marx's Shapley value analysis, summarized in Figure 3 of his rebuttal report. Trial Ex. 3035, Gans WRT fig. 3. Dr. Gans claims that adjusting Dr. Marx's analysis by modeling the industry structure differently and by projecting revenues and costs into the future brings Dr. Marx's results "close to those in my direct report and consistent with the corroborating market benchmarks" that he selected based on a misunderstanding of the objectives of the 801(b)(1) factors. Trial Ex. 3035, Gans WRT ¶ 9; Trial Ex. 3028, Gans WDT ¶ 32 (stating the objectives as being consistent with free market outcomes).

JPFF299. **Structural Flaws.** Dr. Gans adjusted Dr. Marx's Shapley model to include substitutable interactive streaming and non-interactive streaming players downstream. 3/30/17 Tr. 4051:12-4052:16 (Gans). Thus, he models the industry as one with a pure monopoly publisher and a pure monopoly label facing a multiple substitutable interactive streaming services and other services. This change gives the monopoly publisher much more bargaining power than the competing music distributors, and changes the Shapley results in ways one would expect by transferring more surplus to the publishers. *Id.* at 4054:5-8. This runs contrary to determining "reasonable" rates that are fair, and not those resulting from unconstrained monopoly power. *See* 3/20/17 Tr. 1863:3-16 (Marx) (adopting a Shapley model that does not have asymmetries in market power); *see also* 4/5/17 Tr. 5183:3-5185:14 (Leonard). This also runs contrary to the purpose of the Shapley as described by the defendants' own expert, Dr. Watt, who has written that "[t]he use of the Shapley methodology allows us to remove any monopoly power that the copyright holders may otherwise hold, when they combine as a single bargaining unit under a copyright collective."[13]

JPFF300. **Flaws With Revenue and Cost Inputs.** Although structural changes that Dr. Gans makes to "correct" Dr. Marx's model are conceptually flawed, it is Dr. Gans' choice of revenue and cost inputs used in his Shapley analysis that make his results dramatically inaccurate. Dr. Gans chooses unfounded inputs and makes inaccurate projections to ensure that his "bottom up" approach is consistent with his earlier flawed "top down" approach. A key parameter of Dr. Marx's Shapley value analysis is the ratio of interactive streaming's non-content cost to its revenue. *See* Trial Ex. 1065, Marx WDT ¶¶ 171-178, Appendix B. All else equal, the smaller this ratio, the higher the percentage royalty. Instead of using actual data to calculate this ratio, Dr. Gans projects costs and revenue into the future using an overly simple regression model that yields unreliable and unrealistic results. Trial Ex. 3035, Gans WRT ¶ 67, Appendix A at ¶ 3. Unsurprisingly, it also yields a higher royalty payment from streaming services to copyright owners.

JPFF301. For the revenue inputs, Dr. Gans takes the streaming revenue from a single interactive streaming service—Spotify—from 2013-2016 and applied *global* growth projections from a Goldman Sachs report to estimate revenues for all of interactive streaming from 2018-2022 in the United States. 3/30/17 Tr. 4123:10-24 (Gans). The global growth projections that Dr. Gans used included emerging markets that are not currently using interactive streaming at high rates, and thus are likely to exhibit much higher growth rates than in the U.S. *Id.* at 4145:8-4147:15. In fact, the report on which Dr. Gans relies suggest that a big driver of streaming

[13] Trial Ex. 1713 p. 127. In Dr. Watt's testimony in this proceeding, he views the Shapley value methodology as a way to counter the potential abuse of the monopoly power. 3/27/17 Tr. 3132:23-3133:6 (Watt) ("Judge Strickler: So the Shapley value methodology is a way to counter the potential monopoly power of the players? A. The potential abuse of the monopoly power. Judge Strickler: The sentence you read doesn't refer to abuse of power. A: No, it is true. It is poorly worded. I said that.").

growth outside of the U.S. is the higher growth rate of mobile phone adoption and the higher growth rate of mobile networks with higher speed and bandwidth in developing countries.[14] *Id.* at 4143:2-4144:25.

JPFF302. On the cost side of the equation, Dr. Gans estimated costs over the 2018-2022 rate period using an average. 3/30/17 Tr. 4121:5-9 (Gans). The accuracy of those cost averages depend, in part, on the accuracy of the revenue projections used over that same period, which, for reasons discussed above, are flawed. In particular, Dr. Gans calculated the cost component using the relationship between revenues and costs during a time period in the past (2013-2016) and then "plugged in the Goldman Sachs numbers for revenue to determine the likely costs" in the future (*i.e.*, between 2018 and 2022). *See id.* at 4121:13-25. Dr. Gans predicts that U.S. streaming non-content cost as a percentage of revenue will drop from [redacted] in 2015 to [redacted] in 2022. Trial Ex. 3035, Gans WRT fig. 6. He has done no analysis of whether that [redacted] is at all comparable to what other content distribution firms incur. 3/30/17 Tr. 4176:18-22 (Gans).

JPFF303. Moreover, Dr. Gans uses Spotify's global financial data instead of U.S. data for his projection of U.S. streaming non-content costs, without examining whether Spotify's global operations reflect the same cost-revenue relationship as its US operations. Trial Ex. 3035, Gans WRT Table A4 (source data). In fact, Spotify's global non-content cost/revenue ratio is [redacted] than its U.S. non-content cost/revenue ratio. Trial Ex. 1060, McCarthy WDT ¶¶ 24-26. [redacted]

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[14] Dr. Gans does not know how Goldman Sachs derived the global growth projections that he relied on to project future revenue, nor did he inquire of anyone at Goldman Sachs about this before using these numbers for his analysis. 3/30/17 Tr. 4127:21:4128:2 (Gans). The report is not of the type he regularly relies on. *Id.* at 4130:25-4131:13. Dr. Gans testified that he "wasn't aware that they [Goldman Sachs] would have any incentive issues" to understate or overstate their estimates with respect to global growth rates, despite the prominent disclaimer on the report. *Id.* at 4128:3-7, 4129:8-4130:13; Trial Ex. 2727.

[redacted] 3/30/17 Tr. 4138:21-4139:20 (Gans); Trial Ex. 3035, Gans WRT ¶ 46.

JPFF304. Dr. Gans, who is admittedly not an accountant, provides no other basis for using global costs in his analysis or why he rejected the cost allocations that Spotify made to its U.S. business in the ordinary course of business as unsuitable for use in his model. 3/30/17 Tr. 4140:6-22 (Gans). Dr. Gans also did not consider the relative position of Spotify in markets outside of the U.S. as compared to the U.S. market, and the variance in costs incurred across markets. Using Spotify's global instead of U.S. financial data to project U.S. streaming non-content costs as percentages of revenues leads to [redacted].

JPFF305. To convert current to alleged future non-content costs, Dr. Gans ran nine regression models on a very small sample. Trial Ex. 3035, Gans WRT ¶ 4, Table A2. The actual data he used for the forecast has 13 data points, which correspond to 13 quarters, and the actual ratio goes up and down—it starts at about [redacted] in early 2013, increases to 45% in mid-2014 and then decreases to about [redacted] in early 2016. The regression he selects, and the one with results that mimic the results in his direct report, is the regression that gives him the lowest (positive) non-content cost to revenue ratio (he does omit a regression that projects that costs become negative in the future). This regression yields a ratio of non-content cost to revenue of [redacted] in early 2022, which is far lower than his other regression outputs (above [redacted] in early 2022 as shown in the figure) and far lower than the actual data from 2013 to 2016. This regression predicts much lower cost-to-revenue ratios than his other regression models. Yet, this outlier is the one Dr. Gans uses to "correct" Dr. Marx's model.

JPFF306. All of these unsupported adjustments to the revenue and cost inputs yield the erroneous conclusion that a Shapley value approach, based on the idea of fairly dividing value created, calls for a large increase in royalties to transfer monies from entities earning negative profits to those earning large positive profits. These unsupported adjustments to structure and inputs are the only way that Dr. Gans can make his "bottom up" model consistent with the assumption in his written direct testimony that label Shapley values are simply equal to existing profits resulting from market power and other market distortions.

4. *Conclusions Reached By Dr. Gans*

JPFF307. Using the flawed Shapley analyses described above, Dr. Gans concludes that, for 2012-2018, a reasonable per-play musical works royalty rate is [redacted]. Trial Ex. 1069, Marx WRT ¶ 184; Trial Ex. 3028, Gans WDT ¶ 79, Table 4. If this were Spotify's musical works royalty rate for 2015, this would amount to [redacted] of Spotify's revenue—a [redacted] from Spotify's current musical works royalty rate of [redacted] Trial Ex. 1069, Marx WRT ¶ 184. When combined with Spotify's sound recording royalty rate of [redacted], the total royalties paid by Spotify would be [redacted]. Trial Ex. 1069, Marx WRT ¶ 184. Dr. Gans made no effort to assess, and gave no opinion on, the effect of the rate that he concluded is "reasonable" on the Services, on the Copyright Owners or on consumers. 3/30/17 Tr. 4194:10-4195:15 (Gans). Rather, Dr. Gans concluded that a per-play musical works royalty rate of [redacted] is "reasonable" simply because it is lower than the sound recording benchmark rate that Dr. Gans flagged as an "alarm bell" rate that he identified as too high. *Id.* at 4163:20-4164:17.

JPFF308. This result does not afford copyright users (*i.e.*, the Services) fair incomes based on their relative contributions to the joint surplus. "If an entity has a positive marginal contribution to total value, then its Shapley value is positive. This says that entities that contribute to value should earn a positive payoff." Trial Ex. 1065, Marx WDT ¶ 155. Dr. Gans' conclusion whereby Spotify would be required to pay [redacted] (*i.e.*, allocated negative profits) makes even less sense given his admission and apparent understanding that the Services provide value by making the works available to consumers. 3/30/17 Tr. 4094:4-4095:16 (Gans). The rate that Dr. Gans arrived at as "reasonable" would also cause disruptive impact to the market, as that rate would yield [redacted] for one of the Services, Spotify, [redacted]. Trial Ex. 1069, Marx WRT ¶ 32.

JPFF309. Dr. Gans' suggested solution to all of this was to simply assume that the "services would raise prices in response to higher publisher royalties," but Dr. Gans conducted zero analysis to assess the impact of the Copyright Owners' proposal on consumer prices and did not examine the price elasticity of demand for subscription streaming services to assess just how disruptive and impossible this would be. 3/30/17 Tr. 4189:16-4190:8 (Gans); Trial Ex. 3035, Gans WRT ¶ 73; Section VIII.B, *supra*.

C. Dr. Watt

JPFF310. Dr. Watt was retained by the Copyright Owners solely to opine on Dr. Marx's work in this proceeding. 3/27/17 Tr. 3031:3-10 (Watt). Dr. Watt made two major modifications to Dr. Marx's Shapley value analyses: he changed Dr. Marx's model of the industry to introduce severe asymmetries in market power between copyright owners and services and replaced actual U.S. cost data used in Dr. Marx's Shapley value model with unreliable cost-to-revenue ratios based on global data and projections. Trial Ex. 3034, Watt WRT ¶¶ 5-7. Dr. Watt's economic analysis does not support the Copyright Owners' rate proposal: he concludes that the [redacted], whereas under the Copyright Owners' rate proposal, [redacted]. *Id*. at ¶ 6.

1. *Dr. Watt's Shapley Model is Internally Inconsistent and Structurally Flawed*

JPFF311. In his report, Dr. Watt "agree[s] with Dr. Marx's assertion that the Shapley model is a very appropriate methodology for finding a rate that satisfies factors B and C of 801(b)." Trial Ex. 3034, Watt WRT ¶ 22. Dr. Watt criticizes the Shapley value analysis performed by Dr. Marx, but performs an analysis of his own that is flawed in several material ways. Dr. Watt replaces Dr. Marx's single downstream interactive streaming firm, which balances the market power of upstream and downstream entities in order to calculate an appropriate Shapley value, with three downstream interactive streaming firms. *Id.* at Appendix 3. This creates a strong imbalance of market power between upstream and downstream entities, modeling the industry as one with a pure monopoly. This model locks in the market power of the players and does not make any adjustments for such power in consideration of the 801(b)(1) objectives. 3/27/17 Tr. 3068:20-3069:8, 3071:6-19 (Watt). Dr. Watt did not adjust his Shapley model to remove upstream market/monopoly power. *Id.* at 3148:4-10, 3130:11-3133:6.

JPFF312. This omission contradicts Dr. Watt's own academic writings on Shapley value modeling. Trial Ex. 1713 p. 127 (stating, in a book authored by Dr. Watt, that "[t]he use of the Shapley methodology allows us to remove any monopoly power that the copyright holders may otherwise hold, when they combine as a single bargaining unit under a copyright collective"). The asymmetric treatment of copyright owners and copyright users also goes against notions of fair returns to parties who add positive value to the market in that it gives copyright owners (modeled as monopolists) much more bargaining power than the competing music distributors, and thus changes the Shapley results from Dr. Marx's results in ways favoring copyright owners. 3/20/17 Tr. 1866:3-17 (Marx) ("[B]reaking out a large number of distributors, a large number of copyright owners facing a single copyright user is going to, in effect, in a Shapley value model, give market power to the copyright owners.").

2. *Dr. Watt's Criticisms of The Data Inputs Used by Dr. Marx Are Unfounded, and Dr. Watt's Data Inputs Are Flawed and Based on Unjustified Assumptions*

JPFF313. Dr. Watt criticizes the inputs that Dr. Marx uses in her Shapley value analysis in several ways, all of which are unsubstantiated:

- He criticizes Dr. Marx's Shapley analysis for using "outdated and unreliable data." Trial Ex. 3034, Watt WRT ¶¶ 37-38. In particular, he alleges that Dr. Marx should have taken into account the value of expected future earnings, but then admits that he did not and could not calculate this in connection with his own model. 3/27/17 Tr. 3136:16-23 (Watt); Trial Ex. 3034, Watt WRT ¶ 38. Dr. Watt also testified that, in a proceeding in New Zealand where he served as an economic expert, he did not use the value of expected future earnings in his Shapley analysis. 3/27/17 Tr. 3136:24-3137:3 (Watt).
- He asserts that Dr. Marx overrepresented costs by not excluding certain costs incurred by the Services such as competitive advertising costs and executive bonuses. Trial Ex. 3034, Watt WRT ¶¶ 57-59; 3/27/17 Tr. 3137:4-7, 3139:1-5 (Watt). Dr. Watt does not provide any basis for excluding these legitimate costs incurred by the Services. Dr. Watt also does not explain why these costs, if excluded from the downstream market in the model, should not also be excluded from the upstream market to ensure that the model is fair and balanced. In fact, Dr. Watt acknowledges that if certain costs are deducted from the downstream

part of the model, those costs should also be deducted from the upstream part of the model. 3/27/17 Tr. 3139:6-12 (Watt). Dr. Watt also testified that, in the New Zealand matter in which he conducted a Shapley analysis, he did not exclude executive bonuses from the cost inputs. 3/27/17 Tr. 3139:13-17 (Watt).

- He criticizes Dr. Marx's analysis for not using up-to-date revenue and cost data. 3/27/17 Tr. 3139:23-25 (Watt). The revenue and cost numbers used by Dr. Marx in connection with her written direct testimony are, in fact, from Spotify's actual U.S. financial data. *See, e.g.,*Trial Ex. 1065, Marx WDT ¶¶ 71, 76. Notably, in connection with her rebuttal testimony, Dr. Marx used the most current revenue and cost data available from the last half of 2015 and the first half of 2016. 4/7/17 Tr. 5480:25-5481:8 (Marx). This did not change the results of her analysis.

JPFF314. Despite his baseless criticisms of Dr. Marx, Dr. Watt does not use up-to-date cost figures at all. Instead, Dr. Watt uses projected costs based on some real data and some assumptions that he made based on non-content costs as a percentage of revenue. 3/27/17 Tr. 3140:9-20 (Watt). Dr. Watt claims that U.S. interactive streaming industry's non-content cost and revenue ratio is "[redacted] and that [redacted]" Trial Ex. 3034, Watt WRT ¶ 33, n.21. Dr. Watt's [redacted] are speculative, and "corroborated" by financial data of markets in which he has no apparent expertise. *Id.*

JPFF315. Dr. Watt also makes no attempt to establish whether these markets from which his input numbers are derived are representative of the U.S. interactive streaming market. Indeed, Dr. Watt admits that he does not know how long Spotify has been in business outside of the U.S. and does not know the state of competition in any markets in which Spotify operates outside the U.S. 3/27/17 Tr. 3144:7-22 (Watt). Dr. Watt further acknowledges that projected costs are less reliable than actual costs, but "[i]f you don't have the actual costs, the estimates are as good as you will get." *Id.* at 3140:21-24. Here, where Dr. Watt had access to actual costs, he offers no plausible reason why he did not use those numbers.

3. *Dr. Watt's Improper Interpretation of, and Failure to Properly Consider, the Section 801(b)(1) Objectives*

JPFF316. Dr. Watt testified that he interpreted "availability" in the first 801(b)(1) factor as "firmly centered upon incentivizing creators to write music and to publish that music to make it available" and not premised on use or access to music by consumers. 3/27/17 Tr. 3032:15-3033:1 (Watt); Trial Ex. 3034, Watt WRT ¶ 10. Dr. Watt's interpretation of the first 801(b)(1) factor is simply incorrect. "Maximizing the availability of creative works to the public" does not mean only setting the stage for songwriters and artists to put more works out into the marketplace, and has everything to do with consumer access and use of musical works. 3/13/17 Tr. 553:4-21 (Katz) ("What it means to be available is that consumers can get access at prices that they're willing to pay."); 3/15/17 Tr. 1119:16-1120:1 (Leonard) ("You know, it's part of the availability. If I can and do listen to more music, that's a good thing under this factor."); 3/20/17 Tr. 1825:10-14 (Marx) ("An economist might think about availability as relating to production and distribution and pricing, so that it is in the practical sense available to consumers."); see Section XII.A., *infra*.

JPFF317. Dr. Watt also testified that the availability of musical works is not necessarily a function of price (3/27/17 Tr. 3118:6-10 (Watt)), which is contrary to economic theory and Dr. Watt's own deposition testimony. 3/20/17 Tr. 1825:10-14 (Marx) ("An economist might think about availability as relating to production and distribution and pricing, so that it is in the practical sense available to consumers."); 3/27/17 Tr. 3169:1 **(**Watt) (agreeing at his deposition that, if Spotify were to charge its subscribers on a per-stream basis assuming a marginal cost of zero, that would involve an economic inefficiency).

JPFF318. Even if Dr. Watt's definition of "maximizing availability" were accurate (which it is not), this definition does not support the adoption of a per-user or per-stream rate structure as the Copyright Owners propose. In fact, Dr. Watt testified that he has not seen any evidence that there is an undersupply of songs in the market under the current revenue-based rate structure. *Id.* at 3118:15-21. He also admitted that, when preparing his report, he had not seen any evidence that the current rate structure is not properly incentivizing songwriters to create songs. *Id.* at 3118:22-3119:5.

JPFF319. With regard to the fourth 801(b)(1) factor (minimizing disruptive impact), Dr. Watt did not consider this factor at all in his analysis. *Id.* at 3180:5-13. When questioned, Dr. Watt testified that non-disruptiveness "can be inferred from the modeling that [he] did in the sense that if non-disruptiveness is that the total royalty pool wouldn't change much, then it is considered, but [that he] didn't set out with that in mind." *Id.* at 3180:10-18. This raises an important inconsistency with the Copyright Owners' proposal—which would dramatically increase the total royalty pool—and the results of Dr. Watt's analysis which, as explained below, reflect no such increase.

4. *Dr. Watt's Criticisms of Dr. Marx's Conclusions About the Incentives Created By A Per-Stream Royalty Structure Are Based on Faulty Guesswork*

JPFF320. Dr. Watt also takes the position that "[o]ne cannot form an economically reliable argument in support of revenue sharing royalty models over per-unit royalties based on the incentives created for interactive streaming services" as criticism of Dr. Marx's conclusions that a per-stream royalty structure provides incentives for services to discourage listening. Trial Ex. 3034, Watt WRT ¶ 21. Dr. Watt cites no authority on this point, nor could he due to its inaccuracy. 4/6/17 Tr. 5632:12-5633:1 (Marx); 3/14/17 Tr. 897:1-898:17 (Herring); 3/15/17 Tr. 1142:3-1143:4 (Leonard); *see also* Trial Ex. 692, Levine WDT ¶ 20 (discussing how operators of interactive streaming companies would be disincentivized to encourage user engagement). In an attempt to validate his position that interactive streaming services would not need to take action to restrict streaming if faced with a per-stream royalty rate structure that would make the marginal cost of an incremental stream more than zero, Dr. Watt provides a made-up and grossly inaccurate buffet restaurant example. Trial Ex. 3034, Watt WRT ¶ 17.

JPFF321. In this example, Dr. Watt alleges that "[b]uffets face positive marginal costs, but certainly these restaurants make no efforts to discourage patrons from attending the restaurant, or to discourage diners at the restaurant from eating" and that "[t]he same would be expected to occur in the interactive streaming business." *Id.* at ¶¶ 17-18. Dr. Watt cites no support for these conclusions, and when probed about their validity, Dr. Watt admitted that these statements are "pure observation" based on his own dining experiences. 3/27/17 Tr. 3173:4-3174:5 (Watt). Dr. Watt further admitted that he has never consulted for a buffet restaurant, he has never performed any economic analysis of the business strategies of buffet restaurants, and he has never studied the user behavior of interactive streaming users. *Id.* at 3173:8-15, 3174:6-13. Dr. Watt also could not answer the question about whether it is his testimony that "a per-stream rate would have no impact on the incentives of the Services in pricing marginal streams" because "I don't know how they work out—how they price to the consumer," and he had not inquired to find out in connection with his work. *Id.* at 3171:2-10. Dr. Watt's analysis and conclusions about the effects that a per-stream revenue structure would have on the businesses of the Services are false, based on pure conjecture and should be given no probative weight in the Board's determination of a rate structure in these proceedings.

JPFF322. When questioned, Dr. Watt admitted that he believes that the marginal cost of a stream is "very small," but explained that he "didn't need that in [his] analysis," so he has not "made any assumption on it." *Id.* at 3167:2-16. In response to a question about whether pricing a stream at a cost above its marginal of zero would potentially create an economic inefficiency, Dr. Watt testified that he "can always create an example where that doesn't happen." *Id.* at 3167:24-3168:13. He was then impeached with his deposition testimony where he admitted that pricing a stream above its marginal cost of zero would create an economic inefficiency in the form of a deadweight loss. *Id.* at 3168:14-3169:4. This is consistent with economic theory and Dr. Marx's testimony. 3/20/17 Tr. 1891:17-23 (Marx) (stating that "economics teaches that the total surplus, overall economic efficiency is maximized when the price is set equal to marginal cost. In this case, we will think of the marginal cost of an additional stream as being roughly zero").

5. *Dr. Watt's Conclusions Are Inconsistent With the Copyright Owners' Rate Proposal*

JPFF323. As a result of his Shapley analysis, Dr. Watt arrived at the conclusion that [redacted] of the Services' revenue should be devoted to all music royalties (*i.e.*, sound recording, mechanical and performance royalties), and [redacted] of the Services' revenue should be paid for musical works royalties (*i.e.*, mechanical and performance royalties). 3/27/17 Tr. 3115:19-3116:7 (Watt); Trial Ex. 3034, Watt WRT ¶¶ 6, 35. [redacted]. 3/27/17 Tr. 3152:9-19 (Watt). Thus, ironically, Dr. Watt's Shapley analysis goes against the Copyright Owners' proposal—[redacted]

[redacted]. *Id.* at 3152:20-25.

JPFF324. Notably, Dr. Watt's model assumes that if mechanical royalty rates increase, sound recording rates will go down, but he did not consider that sound recording rates may not change at the same time as the mechanical rates because sound recording rates are determined by agreements with varying expiration dates. *Id.* at 3090:9-3092:22. Dr. Watt "didn't even think of that" until he was questioned by Judge Strickler at trial, but upon prompting, he agreed that increasing mechanical rates to reflect the presumption that sound recording royalties would drop runs the risk of disrupting the market. *Id.* at 3091:24-3092:22. Indeed, the rates may not go down at all.

JPFF325. For all of the foregoing reasons, Dr. Watt's criticisms of Dr. Marx and the conclusions that he reaches with respect to reasonable mechanical royalties should be disregarded as based on a flawed economic analysis and a misunderstanding of the statutory objectives underlying this proceeding.

D. Dr. Rysman

JPFF326. Dr. Rysman argues that a revenue-based royalty structure is "deeply unsuited to ensuring a fair return to rightsholders or achieving the [801(b)(1)] policy objectives" due to certain "economic features of the music streaming market that lead streaming services to defer and displace revenue and profits." Trial Ex. 3026, Rysman WDT ¶ 11. He argues that a rate structure based on per-play and per-user rate tests is preferable and that the Copyright Owners' proposed per-play rate is reasonable and meets the policy objectives. *Id.* at ¶¶ 34-41, 56-111. However, the record demonstrates that Dr. Rysman's conclusions are unsupported, based on unreliable data, and rely on calculations riddled with undisputed (and uncorrected) mistakes and inaccuracies.

1. *Dr. Rysman's Conclusions Regarding Economic Factors Leading Services to Defer and Displace Profits Are Unsupported*

JPFF327. Dr. Rysman testified that the market for music streaming is characterized by four features—network effects,[15] economies of scale,[16] learning about consumers,[17] and switching costs[18]—which may lead a streaming service to defer or to displace profits. 4/3/17 Tr. 4334:15-24 (Rysman). Dr. Rysman acknowledges, however, that the importance of these four factors in a particular environment may vary and that he has not done any empirical analysis to determine the extent to which music streaming services are impacted by these four economic features.

JPFF328. For example, while asserting that music streaming is characterized by network effects (Trial Ex. 3026, Rysman WDT ¶ 15), Dr. Rysman acknowledges that not all network effects are of equal importance and that a small network effect would not create the same incentives for streaming service to defer or displace revenue. 4/3/17 Tr. 4336:20-4337:2 (Rysman). He also concedes that even though it is possible to do so, he has not conducted a study to determine how important the network effect is with respect to the music streaming services.

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15 According to Dr. Rysman, network effects arise when a consumer's value of a good depends on how many other consumers also buy the good or how frequently other consumers use the good. Trial Ex. 3026, Rysman WDT ¶ 14.

16 Dr. Rysman asserts that economies of scale exist when the average cost of producing a good declines as the firm produces more goods, which typically happens when producing a good involves fixed costs. Trial Ex. 3026, Rysman WDT ¶ 16.

17 "A music service can learn about consumers' individual preferences and behavior through its repeated interactions with those consumers. The more the service learns about a consumer, the better the service can tailor the consumer experience, which increases the service's value to the consumer and increases the stickiness of the consumer to the service." Trial Ex. 3026, Rysman WDT ¶ 18.

18 "[S]witching costs arise when consumers face an extra cost or barrier to change the product or brand they use. Trial Ex. 3026, Rysman WDT ¶ 24.

Id. at 4337:3-15. In fact, Dr. Rysman acknowledges that he did not conduct any type of empirical analysis to determine the importance of or the extent to which music streaming services actually exhibit any of the other economic factors or how those factors may impact deferment of profits. *See e.g., id.* at 4337:23-4338:12, 4338:16-4341:13, 4342:16-20.

JPFF329. Moreover, Dr. Rysman failed to provide support for his assertion that the four economic features he discussed have actually led to deferment or displacement of profits or revenues by any of the services here. Again, Dr. Rysman concedes that he has not done any empirical analysis to conclude that the Services are engaging in revenue deferment. 4/3/17 Tr. 4344:24-4347:8 (Rysman); *see also id.* at 4349:9-14 ("Q. And you have not seen any documents indicating that any of the music streaming services are focused exclusively on the deferment of revenue and are not focused at all on current direct profits, correct? A. That is correct."); *see also id.* at 4349:15-20 ("Q. [Y]ou have not reached a conclusion that music streaming services involved in this proceeding are currently focused on deferring revenue and profits to the exclusion of current profits or current revenue, correct? A. That's correct.").

JPFF330. And, even if there is evidence of profit deferment by the services, Dr. Rysman does not dispute that deferment or displacement of profits or revenue can actually benefit the Copyright Owners. *See* 4/3/17 Tr. 4368:15-4369:17, 4369:18-4370:2 (Rysman) (acknowledging possibility that royalty streams for rightsholders are greater today because of the music streaming services' past focus on long-term growth); *see also* Trial Ex. 886, Katz CWRT ¶ 16 ("any strategy of deferring revenues to build up a consumer base that increases the net present value of the interactive service's profits will also increase the net present value of the royalties paid under a percentage-of-revenue license."); Trial Ex. 698, Leonard WRT ¶ 84 (explaining that a strategy of "'invest' today (with lower prices)" and be rewarded with a "larger installed base in the future" "would benefit copyright owners by increasing the royalties paid in the future.").

2. *Dr. Rysman's Analysis of Royalty Rate Structure is Flawed*

a. *Revenue-Based Royalty Structure*

JPFF331. In his written direct testimony, Dr. Rysman lists several arguments against a revenue-based structure and in favor of a per-play model. Trial Ex. 3026, Rysman WDT ¶¶ 11, 34-55. Dr. Rysman argues that "there is no economic reason why royalty revenue to songwriters and publishers should depend on the pricing model of the service, and thus the price of copyrighted content to services should not depend on the pricing of the service." *Id.* at ¶ 36. But Dr. Rysman concedes that revenue-based royalty scheme "has other benefits that outweigh" problems he described in his written direct testimony and that revenue-based models are common in many industries, including ASCAP and BMI licenses and patent licensing agreements. Trial Ex. 886, Katz CWRT ¶ 34; 4/3/17 Tr. 4354:10-20 (Rysman); *see also* Trial Ex. 698, Leonard WRT ¶ 81; 4/5/17 Tr. 5166:17-5168:11 (Leonard) (discussing the prevalence of percentage of revenue rates in other contexts); *see also* Trial Ex. 1069, Marx WRT ¶ 212; Trial Ex. 695, Leonard AWDT ¶ 74 (noting that the services' voluntary licenses demonstrate a "revealed preference" for percentage of revenue licenses); Trial Ex. 698, Leonard WRT ¶ 81 (percentage of revenue licenses are "extremely common in intellectual property licenses").

JPFF332. Moreover, Dr. Rysman's criticisms of a revenue-based royalty structure do not appropriately account for the nature of the costs associated with creating streaming servicers and streaming musical works and for the way in which interactive streaming services have developed an all-you-can-eat pricing model that creates value to consumers, the services, and the Copyright Owners. Trial Ex. 886, Katz CWRT ¶ 5; Trial Ex. 698, Leonard WRT ¶¶ 81-

82. It is undisputed that the marginal cost of using a musical work after it has been created is zero (4/3/17 Tr. 4318:8-20, 4359:16-24 (Rysman)); and the opportunity costs for the copyright owner may also be zero or close to it (because the incremental listeners are those who would not otherwise pay to consume or be attracted away from piracy).[19] Trial Ex. 886, Katz CWRT ¶¶ 26-28; 3/20/17 Tr. 1892:22-1893:4 (Marx).

JPFF333. A revenue-based royalty structure reflects such low (possibly zero) marginal and opportunity costs for additional streams and encourages the introduction of new, lower-priced service offerings in order to attract different consumer segments and their willingness to pay, thereby expanding the total economic pie to be shared between content owners and content distributors. Trial Ex. 886, Katz CWRT ¶ 32; Trial Ex. 1065, Marx WDT ¶¶ 121, 124-126. In other words, a revenue-based structure aligns a service's royalty payments with the consumer's willingness to pay. Trial Ex. 886, Katz CWRT ¶ 32; Trial Ex. 1065, Marx WDT ¶ 130; Trial Ex. 698, Leonard WRT ¶ 95. In fact, while he argues that revenue-based royalty payments "may appear to make sense at the dawn of the streaming industry when the prospects for streaming were unclear and both publishers and services had an interest in cultivating the industry," (Trial Ex. 3026, Rysman WDT ¶ 41), Dr. Rysman concedes that copyright holders still have a mutual interest in cultivating the music streaming industry through the pursuit of growth strategies and that the ability of the Copyright Owners to receive royalty payments depends on the vitality of the music streaming industry. 4/3/17 Tr. 4356:3-4356:22 (Rysman).

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[19] Dr. Rysman does not provide any evidence that incremental interactive streaming leads to a decrease in payments for other forms of music consumption; and as set forth in Section VII.A, *supra*, evidence indicates that the all-you-can-eat model of interactive streaming services induces greater exploration and broader consumption of music than would otherwise occur. Trial Ex. 886, Katz CWRT ¶¶ 27-28.

JPFF334. Dr. Rysman also provides almost no empirical evidence in support of his arguments regarding a revenue-based royalty structure, and the scant evidence he does discuss does not support his conclusion. *See* Trial Ex. 698, Leonard WRT ¶¶ 87-88. While Dr. Rysman testified that "[m]any industry observers have expressed concern that services may manipulate revenue calculations in their favor" (Trial Ex. 3026, Rysman WDT ¶ 43), he offered no opinion as to whether or how frequently services actually manipulate the current revenue-based scheme to reduce payments; nor has he undertaken any analysis to quantify the impact to the rightsholders of such purported manipulation. 4/3/17 Tr. 4357:24-4358:15 (Rysman). Likewise, he argues that a revenue-based model leads to inequities because rightsholders who allegedly suffer from short-run revenue suppression from the Services are not necessarily the same rightsholders who would benefit in the future from higher revenues. Trial Ex. 3026, Rysman WDT ¶ 50. He acknowledges that this assumes that there is short-run revenue suppression by the Services, that he has not conducted any empirical analyses in the form of a regression analysis or otherwise to determine whether the prices set by the streaming services are artificially low, and that he cannot rule out the possibility that royalty streams for rightsholders are greater today because of the music streaming services' past focus on long-term growth. 4/3/17 Tr. 4368:15-4369:17, 4369:18-4370:2 (Rysman). Nor does he acknowledge the payment smoothing function of publishers discussed above. *Compare* Trial Ex. 698, Leonard WRT ¶¶ 89-90 *and* 4/6/17 Tr. 5281:18-5283:2, 5283:9-22 (Leonard) *with* 4/3/17 Tr. 4454:12-4455:8 (Rysman) (confirming he performed no analysis of any advances or any other payments received by his exemplar songwriter for revenue deferment concerns).

JPFF335. Last and importantly, despite his claim in response to a question from Judge Strickler that a per play model is an "unadulterated good" and that there are "no downsides" of a per-play model relative to a revenue based model. 4/3/17 Tr. 4264:23-4265-2 (Rysman). Dr. Rysman's own analysis and testimony highlights various advantages of a revenue based model and disadvantages of a per-play model. For example, Dr. Rysman asserts that "[t]he user value of having access to music repertoires, separate and apart from whether or how much those repertoires are in fact listened to by the user, seems plain." Trial Ex. 3032, Rysman WRT ¶ 58. In fact, Dr. Rysman acknowledges that like a per-user model, a revenue-based model can align with the value of providing access to music,[20] which is not the case with a per-play rate. 4/3/17 Tr. 4374:25-4375:15, 4378:3-7 (Rysman).

JPFF336. Moreover, Dr. Rysman acknowledges that the use of minima can ameliorate many of the purported disadvantages of a revenue based model. *See, e.g.*, 4/3/17 Tr. 4364:15-18 (Rysman) (acknowledging that a per-subscriber minimum can be an effective check against alleged loss-leader strategies). And he admitted that he prepared his WDT at a time when some of the services' proposals called for percentage-of-revenue license fees without any minima. *Id.* at 4449:11-4450:17.

b. *Per-Play Royalty Structure*

JPFF337. Dr. Rysman argues that that per-play rates "address a fundamental problem in the market based on the current rates, namely that while demand for streaming is rising among users, who are demanding to stream more and more music, rightsholders are receiving less and less in effective royalties per-play." Trial Ex. 3026, Rysman WDT ¶ 57. However, in response to questioning by Judge Strickler, Dr. Rysman acknowledged that he has not done any analysis as to whether the demand for streaming has increased or that the quantity demanded of streaming has been increasing. 4/3/17 Tr. 4372:12-4373:7 (Rysman). Further, while

[20] This assumes that the Copyright Owners are entitled to share in this value under the work-by-work Section 115 compulsory license.

Dr. Rysman opines that the effective royalties per play are decreasing, it is his impression that the total amount of mechanical royalties that rightsholders have received has increased. 4/3/17 Tr. 4374:8-13 (Rysman). He further acknowledges that royalty payments to publishers and songwriters, considering all royalties due to streaming, have increased overall with the increase in streaming. *Id.* at 4372:7-11.

JPFF338. Dr. Rysman also asserts that the number of streams is much easier to monitor by publishers than service revenue is, and thus cultivates transparency and trust. Trial Ex. 3026, Rysman WDT ¶ 57. However, Dr. Rysman admits that a per-play royalty structure could also suffer from measurement issues. 4/3/17 Tr. 4379:11-4380:4 (Rysman) (explaining that "it is conceivable that technologies for access to music will not count streams fully or properly, whether due to data reporting issues, data caching issues, third-party device coding or countless unforeseeable factors"). He explains why it could be "virtually impossible" or "hard to track" a user's total number of streams. Trial Ex. 3026, Rysman WDT ¶ 59. This is particularly problematic when a single service contains both interactive and non-interactive plays and it would be necessary to determine which play is of which type to calculate appropriate royalties. Trial Ex. 886, Katz CWRT ¶ 22. For example, since the launch of the Pandora Plus product, less than [redacted] of the streams have been interactive plays (Trial Ex. 888, Herring WRT ¶ 16); and if it is not possible or hard to properly track which plays are subject to mechanical royalties at issue in this proceeding, almost all of the Pandora Plus streams would be licensed at the wrong royalty rate. Trial Ex. 886, Katz CWRT ¶ 22.

3. *Dr. Rysman's Comparative and Competitive Analyses of Ownership and Access Are Incorrect*

JPFF339. Dr. Rysman argues that a "revenue-based royalty rate gives streaming services an unfair competitive advantage over download services" because while streaming services can "increase the use of licensed music without paying additional royalties," "[d]ownload services cannot operate that way, because they must pay a fee for each download. Trial Ex. 3026, Rysman WDT ¶ 51. Dr. Rysman's claim fails to properly compare access and ownership.

JPFF340. When a consumer purchases a permanent digital download, he or she is generally free to play that downloaded song as many times as desired and to do so at no additional cost and there is no change in the royalties paid by the download service to music publishers when the consumer listens to the song more times. Trial Ex. 886, Katz CWRT ¶ 38; Trial Ex. 698, Leonard WRT ¶ 95; *see also* 4/3/17 4371:4-10 (Rysman). Similarly, under the current model, when streaming services pay under the structure of the 2012 Settlement and a consumer has purchased an all-you-can-eat subscription streaming service, there is no change in the royalties paid by the streaming service to music publishers when the consumer listens to a song more times. Trial Ex.698, Leonard WRT ¶ 94.

4. *Dr. Rysman's Evaluation of the Copyright Owners' Proposed Rates is Flawed and Unreliable*

a. *Dr. Rysman Relies on Selective Data and His Calculations Are Riddled with Errors and Inaccurate Calculations*

JPFF341. To support the Copyright Owners' rate proposal, Dr. Rysman purports to calculate the "effective per-play royalty rates" paid by streaming services over the last five years. Trial Ex. 3026, Rysman WDT ¶ 62. Dr. Rysman (1) calculates the total mechanical royalty payments due from each streaming service in each year, regardless of whether or not that payment was driven by per-revenue fees, per-user fees, or varied by month; and then (2) divides the total mechanical royalty payment by the number of streams for that service to find the effective per-play rate. *Id.* Based on this calculation, Dr. Rysman concludes that [redacted]

[redacted], and the market has seen consistent rapid growth, even price competition." *Id.* at ¶¶ 63, 64 fig. 7, Table 1. But, Dr. Rysman's calculation relies on biased data and contains numerous errors, flaws, and inconsistencies. Trial Ex. 698, Leonard WRT ¶¶ 96-97.

JPFF342. First, many of the services that he claims "have paid effective per-play rates well above what the Copyright Owners propose" are tiny and have not prospered. For example:

- Dr. Rysman calculates that Rara's S3 service had a per-play rate of [redacted] in that year, which is based on less than [redacted] in royalties and approximately [redacted] streams, equivalent to just [redacted] percent of total streams in 2015. 4/3/17 4381:19-4382:4 (Rysman); Trial Ex. 885, Katz WDT ¶ 177; Trial Ex. 1069, Marx WRT ¶ 120, fig. 7; 4/7/17 Tr. 5545:6-9 (Marx). Rara shut down in 2015. 4/3/17 4382:5-7 (Rysman);

- Dr. Rysman calculates that 7Digital had an effective per-play rate of [redacted] in 2014, which is based on less than [redacted] in royalties and approximately [redacted] streams, equivalent to [redacted] percent of total streams in 2014. 4/3/17 4382:8-17 (Rysman); Trial Ex. 885, Katz WDT ¶ 177;

- Dr. Rysman calculates that Da Capo Music had a per-play rate of [redacted] in 2014, which is based on approximately [redacted] in royalties and [redacted] streams, equivalent to [redacted] of total streams in 2014 based on Dr. Rysman's backup data. 4/3/17 4383:4-17 (Rysman); Trial Ex. 885, Katz WDT ¶ 177; and

- The 2014 effective per-play rate of [redacted] calculated by Dr. Rysman for Steinway is based on [redacted] of royalties and [redacted]. Trial Ex. 885, Katz WDT ¶ 177.

JPFF343. Second, Dr. Rysman failed [redacted], even though he is aware that the Copyright Owners' rate proposal calls for application of the same per-play rate to streams on [redacted]. 4/3/17 Tr. 4385:6-17, 4390:16-20 (Rysman) (admitting that he did not include royalties paid by ad-supported services in determining his effective per-play rate analysis); *see also* Trial Ex. 132, Hubbard

CWRT ¶ 6.6; 4/3/17 Tr. 5929:4-14 (Hubbard); Trial Ex. 698, Leonard WRT ¶ 98. Dr. Rysman concedes that, had his calculation [redacted], his calculation of historical mechanical royalties per-play for [redacted]. 4/3/17 Tr. 4385:23-4386:2, 4389:11-20 (Rysman). Dr. Rysman also admitted that, had he included Spotify's ad-supported service in his analysis, [redacted]. *Id.* at 4389:11-4390:15.

JPFF344. Third, Dr. Rysman fails to consider streams less than 30 seconds in length. Trial Ex. 132, Hubbard CWRT ¶ 6.10; 4/13/17 Tr. 5929:4-14 (Hubbard); Trial Ex. 886, Katz CWRT ¶ 176. As a result, Dr. Rysman implicitly assumes that all mechanical royalties would be attributable only to streams in excess of 30 seconds. Because the Copyright Owners propose per-play rates of $0.15 per 100 streams applied to all streams—including those less than 30 seconds in length—Dr. Rysman's effective per-play amounts are not directly comparable to the proposed rates. Trial Ex. 132, Hubbard CWRT ¶ 6.9. When adjustments are made to correct for this obvious manipulation, [redacted]. Trial Ex. 132, Hubbard CWRT ¶ 6.10, Table 4.

JPFF345. Fourth, in preparing Table 1 of his Written Direct Testimony, Dr. Rysman relied only on Apple's use data [redacted]

[redacted]. 4/3/17 Tr. 4466:3-4468:1 (Rysman). Had he used the other data points he admits were readily available, the percentage increase in rates caused by the Copyright Owners' proposal would have been [redacted] than what Dr. Rysman reported in Table 1. *Id.* at 4465:13-4468:1.

JPFF346. Fifth, Dr. Rysman failed to show how his average effective royalty rates differ among service type. Trial Ex. 132, Hubbard CWRT ¶ 6.5. [redacted] Dr. Rysman did not show his effective rates vary across different categories. *Id.* Parsing these differences results in effective per-play rates that are [redacted] those proposed by the Copyright Owners. *Id.*; 4/13/17 Tr. 5921:11-5922:10 (Hubbard). Moreover, Dr. Rysman's weighted per-user rate does not rely on effective per-user data, nor does it distinguish between service categories. Trial Ex. 132, Hubbard CWRT ¶ 6.7. Including this data would have resulted in per-user royalties much lower than [redacted], and analyzing each service category reveals that [redacted]. *Id.* at ¶ 6.8. Making this adjustment shows that the Copyright Owners' proposal would be [redacted] *Id.* at ¶6.8, Table 2; 4/13/17 Tr. 5922:11-5923:8 (Hubbard).

JPFF347. Sixth, Dr. Rysman does not appear to account for the fact that the Copyright Owners' proposal includes the greater of a per-user prong and a per-play prong. Trial Ex. 886, Katz CWRT ¶ 176. When there are multiple prongs in a greater-of rate structure, the effective per-play rate may be higher than the rate specified in the per-play prong. *Id.*

JPFF348. Finally, Dr. Rysman's calculations are riddled with mistakes which render his calculations and overall analysis unreliable. For example:

- Figure 2 in Dr. Rysman's Written Rebuttal Testimony purports to show that the mechanical royalties paid by streaming services per user-month is [redacted] than the sound recording royalties paid by streaming services per user-month for December 2015. Trial Ex. 3032, Rysman WRT fig. 2. [redacted] 4/3/17 Tr. 4458:2-4463:13 (Rysman). [redacted]. *Id.* at 4464:8-12;
- Dr. Rysman reports a 2014 per-play rate of [redacted] in Table 1 of his initial testimony, which is [redacted] than NMPA's proposed rate $0.0015. However, Dr. Rysman's backup materials reveal that [redacted]. Trial Ex. 885, Katz WDT ¶ 176, n.296; 4/3/17 Tr. 4469:25-4471:25 (Rysman); Trial Ex. 1034 (Dr. Rysman's back-up data (NMPA00001670.xlsx).

b. *Dr. Rysman's Methodology is Flawed*

JPFF349. Beyond the flaws inherent in per-play rates for streaming services, another problem with Dr. Rysman's approach of focusing on individual services' effective per-play rates is that these rates exhibit very substantial variation from service to service and from year to year. All Dr. Rysman's analysis demonstrates is that, when one considers niche as well as mainstream services, the effective per-play rates paid by different services vary tremendously.[21] Trial Ex. 886, Katz CWRT ¶ 178.

JPFF350. To the extent one wishes to calculate an effective per-play rate, a more appropriate approach to examining the effective per-play rates in the industry is to calculate the

[21] Another problem with Dr. Rysman's methodology for calculating effective per-play rates is that it is based on disequilibrium outcomes. Trial Ex. 886, Katz WRT ¶ 180. Specifically, he uses numbers of streams per subscriber that do not reflect industry trends. Dr. Rysman himself observes that [redacted] Trial Ex. 3026, Rysman WDT ¶ 66 ("Data shows that the number of streams per user is increasing for those services."). He also observes that [redacted] tend to pay higher per-stream rates. *Id.* at ¶ 64.

overall weighted average per-play rate that has been paid by all interactive services as doing so better reflects the rates paid by the services that account for the vast majority of streams. Trial Ex. 886, Katz CWRT ¶ 179. In fact, Dr. Rysman used a weighted average to convert the Copyright Owners' proposed rate of .0015 per-play to the effective per-user rate of $1.06 [22] and did not provide any sound basis for why he chose not to do a weighted average to calculate the effective per-play rate. Trial Ex. 3026, Rysman WDT ¶ 66; 4/3/17 Tr. 4284:11-4285:25, 4383:22-4384:9 (Rysman).

JPFF351. As calculated by the Services' experts, using a weighted average shows that [redacted] and the Copyright Owners' proposal of $0.0015 per play is [redacted]. Trial Ex. 886, Katz CWRT ¶¶ 179, 181; Trial Ex. 1069, Marx WRT fig. 7; Trial Ex. 698, Leonard WRT ¶ 102, Ex. 3a; 4/3/17 Tr. 4385:1-5 (Rysman).

5. *Dr. Rysman's Evaluation of the Policy Objectives of Section 801(b)(1) is Unsound*

a. *Maximizing Availability*

JPFF352. Dr. Rysman takes the position that higher royalty rates will always induce songwriters to create a greater number of more appealing songs and that lowering the royalty rate will fail to maximize availability. Trial Ex. 3026, Rysman WDT ¶ 69. At the same time, he claims that even if a change in royalty rate structure led streaming services to reduce investment or exit the market entirely, it would not reduce the creative works available to the public. *Id.* at ¶ 70; 4/3/17 Tr. 4396:3-11 (Rysman). In fact, Dr. Rysman goes as far as opining in that even if only one music streaming service remains, the first factor of maximizing availability would still

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[22] Dr. Rysman's calculation of the effective per-user rate of [redacted] is also problematic. In calculating the effective per-user rate, Dr. Rysman only used 2015 data, even though he had data for 2012 through 2015. Had he used data for 2012 through 2015, Dr. Rysman would have calculated [redacted]

be satisfied, regardless of how much it may cost a consumer to access such creative works. 4/3/17 Tr. 4396:21-4397:25 (Rysman) ("JUDGE STRICKLER: So if all the available music was available on streaming services and the subscription price was $10,000 a month, that would be equally available as it would on an ad-supported service, according to the way—THE WITNESS: That's how I read availability….").

JPFF353. This claim has no basis in sound economics. Trial Ex. 886, Katz CWRT ¶ 184; Trial Ex. 698, Leonard WRT ¶¶ 108-111. Economists and public policy makers have long recognized that competition delivers benefits to consumers in the form of lower, cost-based prices, greater innovation and variety, and/or improved product and service quality. Trial Ex. 886, Katz CWRT ¶ 185; 4/7/17 Tr. 5531:19-5532:2 (Marx) (criticizing Dr. Rysman's opinion that so long as some Services are present in the market to offer distribution, availability is maximized); *see also* 4/3/17 Tr. 4398:2-10 (Rysman) (acknowledging that competition among streaming services is beneficial to consumers). It is also widely recognized that innovation competition and dynamic efficiency make especially important contributions to consumer welfare. Competition among interactive streaming services has led to many innovations being brought to market. Trial Ex. 886, Katz CWRT ¶ 185; Trial Ex. 698, Leonard WRT ¶ 111; *see* Section IV.B, *supra*.

b. *Afford Fair Return/Fair Income*

JPFF354. Dr. Rysman interprets "a fair rate of return to mean that when a copyright is used more intensively, the copyright owners should see increased returns." Trial Ex. 3026, Rysman WDT ¶ 73. He then asserts that this interpretation of fairness points to the fact that a revenue-based rate structure is inferior to the per-play and per-user rates. *Id.* at ¶ 75; 4/7/17

Tr. 5534:9-15 (Marx) (explaining that Dr. Rysman argues that per-user and per-play rates are fair but provides no analysis or economic grounds to support this conclusion).

JPFF355. As previously discussed (*see* Sections II.D, VII.B-C, *supra*), a revenue-based rate structure encourages investment and innovation by streaming services to build customer base and enhance usage. In turn, enhanced usage can be expected to lead to greater customer willingness to pay for streaming services and, ultimately, higher revenues, which translates into greater compensation for the Copyright Owners. Trial Ex. 886, Katz CWRT ¶ 189. Overall royalty revenues from streaming services have been increasing substantially as demand for streaming services has shifted outward. *Id.* at ¶ 189. In addition, conditional on the overall size of the royalty pool, payments are made proportional to consumption of each musical work. Thus, it follows that musical works with a greater number of plays will earn relatively more compensation under any structure for determining the overall pool. *Id.* at ¶ 190; Trial Ex. 1069, Marx WRT ¶ 211.

c. *Reflect Relative Roles*

JPFF356. In discussing the third statutory objective, Dr. Rysman notes that prices that emerge in a "free and well-functioning market" are likely to reflect the relative contributions of the negotiating parties. Trial Ex. 3026, Rysman WDT ¶ 84. Dr. Rysman then goes on to observe that the content costs of Netflix have increased, and he concludes that this fact demonstrates that, while content providers were willing to provide their content at low cost in the early days of video streaming, now that video streaming has matured, the content providers are no longer willing to do so. *Id.* at ¶¶ 87-88. Based on this single example, Dr. Rysman concludes that he "would expect content providers in the interactive streaming space to also raise prices to services if this market operated as an efficient free market." *Id.* at ¶ 88.

JPFF357. But, the increase in Netflix's costs had little or nothing to do with a shift from Netflix's being a new, uncertain service to an established one (as Dr. Rysman appears to suggest). Rather, it was due to a change in the service offering (now one that includes significant amounts of exclusive content) and a dramatically changed competitive landscape. Trial Ex. 886, Katz CWRT ¶ 192; Trial Ex. 1069, Marx WRT ¶¶ 102-104; 4/7/17 Tr. 5534:20-5535:17 (Marx); *see also* Trial Ex. 698, Leonard WRT ¶ 94 (discussing how Netflix employs a lump sum licensing structure rather than per-play). It is telling that Dr. Rysman did not even address this Netflix example during his hearing testimony.

d. *Minimize Disruptive Impact*

JPFF358. Dr. Rysman asserts that, in his opinion, "the Copyright Owners' rate proposal will not be disruptive and will hardly be noticed within such a dynamic industry." Trial Ex. 3026, Rysman WDT ¶ 92. However, Dr. Rysman's own analysis suggests that under either the per-play or the per-user prong of the Copyright Owners' proposal, [redacted]. 4/3/17 Tr. 4388:16-23 (Rysman); Trial Ex. 3026, Rysman WDT ¶ 87, Table 1. For example, based on his own calculation, [redacted]

23 [redacted]. 4/3/2017 Tr. 4465:13-4468:1 (Rysman).

[redacted][24][redacted].

4/3/17 Tr. 4388:24-4391:1 (Rysman); Trial Ex. 3026, Rysman WDT ¶ 87, Table 1.

JPFF359. Nonetheless, Dr. Rysman maintains that the proposed rates will not lead to market disruption because services can enhance revenue (*e.g.*, by raising rates to subscribers) or reduce costs. Trial Ex. 3026, Rysman WDT § VI.D. However, economic principles indicate that neither action would fully offset the loss of profits and that both types of action would harm consumers directly (*e.g.*, by raising prices and/or lowering the quality of existing services). Moreover consumers would be harmed by the loss of profits if it caused existing services to exit the industry or deterred new services from entering the industry. Trial Ex. 885, Katz WDT ¶ 194. Further, as Dr. Rysman himself acknowledged, higher pricing would lead to lower consumer demand and cutting of marketing and sales expenses could also decrease the number of subscribers and royalty source for rightsholders. 4/3/17 Tr. 4402:22-4404:19 (Rysman).

JPFF360. Moreover, Dr. Rysman claims that, because "the services are not yet in the profit-seeking phase of their development…a reasonable response to increased production costs would be for services to simply absorb the costs at this time without passing them through to consumers or offsetting expense reductions elsewhere." Trial Ex. 3026, Rysman WDT ¶ 101 (footnote omitted). This assertion is contrary to basic economic principles, as explained by Dr. Katz, who authored the very article that Dr. Rysman attempts to cite for this proposition. Trial

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[24] [redacted]. 4/3/2017 Tr. 4389:21-4390:20 (Rysman). [redacted]. Trial Ex. 3026, Rysman WDT ¶ 79, n.98; 4/3/2017 4392:2-4393:1 (Rysman). [redacted]. 4/3/2017 Tr. 4393:4-11 (Rysman). [redacted]

Ex. 886, Katz CWRT ¶¶ 196-198.[25] Further, Dr. Rysman's comparison of absorbing increase in cost due to the Copyright Owners' proposal to various voluntary discounts is invalid and misleading. Dr. Rysman acknowledged in response to Judge Strickler that this is an "apples to oranges" comparison because the discounts identified by Dr. Rysman are utilized to grow revenue and do not represent a pure increase in cost. 4/3/17 Tr. 4293:8-4294:22 (Rysman); *see also id.* at 4406:13-4407:2 (acknowledging that discount plans, such as student and family discounts, can attract new users to interactive streaming services and may increase the aggregate revenue of the Services). Dr. Rysman also concedes that, unlike a royalty rate increase that is passed through to consumers, discount plans, such as student and family discounts, only apply to a subset of consumers. *Id.* at 4407:3-25.

JPFF361. While opining that a rate increase will not result in disruption to streaming services, Dr. Rysman also speculates that "the current mechanical royalty structure may have been disruptions [*sic*] to the publishing and songwriting industry." Trial Ex. 3026, Rysman WDT ¶ 110. However, he presents no evidence to support this speculation. Dr. Rysman concedes has not done any kind of numerical analyses to support the assertion that there has been or soon to be a market exit of songwriters. 4/3/17 Tr. 4408:21-25 (Rysman); Trial Ex. 1069, Marx WRT ¶ 64.

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25 In that paper, Carl Shapiro and Dr. Katz examine a two-period model in which firms compete in a market subject to network effects. Because of the network effects—under which a firm's product becomes more valuable to any given consumer the greater the number of other consumers using that product—an increase in first-period sales tends to raise second period profits. Trial Ex. 886, Katz CWRT ¶ 197. Thus, firms have incentives to invest in first-period output which serves as an installed base that boosts second-period profits. *Id*. As a result, a firm may go so far as to set its first-period price below its first-period marginal cost in order to increase its installed base. *Id*. However, even in that situation, an increase in firms' first period costs will lead to higher equilibrium prices in the first period—a result that is directly contrary to Dr. Rysman's assertion. *Id*. More generally, most economic models predict positive pass-through such that an increase in a firm's marginal costs can be expected to cause the firm to raise prices. *Id.* at ¶ 198. These "price" increases can take the form of increased nominal prices or decreased product quality. Although the pass-through rate can vary depending on a variety of factors, the rate is always greater than zero except in extreme cases. *Id*. Dr. Rysman does not provide any evidence that interactive streaming is one of those extreme cases. Moreover, Copyright Owners' proposal would raise the marginal costs of all services, further reducing the likelihood that the services would find it profit-maximizing to pass through none of the proposed cost increases. *Id*.

XI. APPLE'S PROPOSAL IS ALSO FLAWED

JPFF362. Apple proposes a flat, all-in (mechanical *plus* performance), per-play rate of $0.00091 per stream (9.1 cents per 100 streams), for all streams regardless of whether they are on an ad-supported or paid service. Apple Inc. Proposed Rates and Terms, Nov. 1, 2016 p. 2. This proposal should be rejected because, for the reasons discussed above, a per-play rate for mechanicals directly contravenes the 801(b)(1) factors and is unsupported by any of the benchmarks offered in this proceeding. *See* Sections IX.A-B, *infra*.

JPFF363. Apple's proposal should be further rejected, however, because it would [redacted], in direct contravention of the 801(b)(1) factors. Lastly, the benchmarks Apple offers in support of its rate proposal are deeply flawed.

A. Apple's Proposal Would Dramatically Raise Rates for the Ad-Supported Services in Contravention of the First, Second, and Fourth Section 801(b)(1) Objectives

JPFF364. Apple's proposal would severely disrupt ad-supported services, such as Spotify's, [redacted]. For example, under Apple's proposal, Spotify would face a mechanical royalty rate hike on its ad-supported tier to a rate almost [redacted] the rate on its paid tier. *See* Trial Ex. 1068, Vogel WRT ¶ 52; *see also id.* at ¶ 48 (table summarizing the percentage change in royalties Spotify's ad-supported and paid tiers face under Apple's proposal, showing that paid would face a rate decrease to [redacted] of revenue whereas ad-supported would face a rate increase to [redacted] of revenue, which is [redacted]). Not only would Apple's proposal [redacted] more generally contravenes the first 801(b)(1) factor, because fewer services would be available to serve lower willingness-to-pay consumers. *See* 3/22/17 Tr. 2536:13-19 (Question from Judge Strickler asking whether "Apple intend[s] under its per-play rate to be able to provide streaming services even to potential listeners who have a zero or very low willingness to pay for streaming services," followed by a response from Mr. Dorn that Apple currently does not operate a free service).

JPFF365. Monetizing these lower willingness-to-pay consumers not only maximizes the availability of creative works—it also provides fair returns to the Copyright Owners, who would otherwise not see any (or at least would see less) income from these consumers. Research studies show that [redacted] *See* Trial Ex. 1067, Page WRT ¶ 48. As Dr. Marx testified, Spotify's ad-supported service pays the Copyright Owners *more* than other free options, including, of course, piracy. 4/7/17 Tr. 5503:15-19 (Marx). Accordingly, the Copyright Owners would be receiving *less*.

JPFF366. In sum, Apple's proposal fails to satisfy the first, second, and fourth objectives of Section 801(b)(1).

B. Apple's Conversion Ratio of 100 Streams to 1 Track Is Unsupported

JPFF367. Apple's rate proposal of $0.00091 per-stream was arrived at by applying a stream to download conversion ratio of 100:1 to the Subpart A rate for permanent digital downloads. Trial Ex. 1615R, Ramaprasad WDT ¶¶ 91-92, 95. Apple's expert, Dr. Ramaprasad, borrows the 100:1 ratio from the Official Charts Company, an entity that previously used this ratio when calculating the popularity of singles in the U.K. market. *Id.* at 91. Unfortunately, this ratio not only is derived from data drawn from a foreign market, but the ratio has since been abandoned by the Official Charts Company in favor of a higher 150:1 streams to download ratio. Trial Ex. 698, Leonard WRT ¶ 178; 3/22/17 Tr. 2603:1-15 (Ramaprasad) (admitting that the

100:1 ratio is outdated and that she failed to do any analysis comparing the U.S. and U.K. markets).

JPFF368. Additionally, all available evidence suggests that other conversion ratios—*i.e.*, 150:1 and 137:1—are more defensible. The 150:1 ratio now used by the U.K. Official Charts Company is identical to the ratio widely used by music industry participants in the United States, including the RIAA, Billboard, and even the NMPA. *See* Trial Ex. 1615R, Ramaprasad WDT ¶¶ 88-90; 3/29/17 Tr. 3865:17-3870:3 (Israelite) (admitting that the NMPA's Gold and Platinum certification program relies on RIAA metrics that employ the 150:1 ratio). Dr. Ramaprasad also considers a ratio of 137:1, which comes from an academic paper by Luis Aguiar and Joel Waldfogel entitled, "Streaming Reaches Flood Stage: Does Spotify Stimulate or Depress Music Sales?." Trial Ex. 1615R, Ramaprasad WDT ¶¶ 93-94. The study by Professor Waldfogel, who the Copyright Owners actually retained as an expert in the current proceeding, bases its ratio on consideration of streaming data from Spotify and Nielson. *Id.*; 3/22/17 Tr. 2635:25-2636:10 (Ramaprasad).

JPFF369. When pressed at trial regarding selection of the 100:1 ratio over the other, higher ratios, Dr. Ramaprasad could not state any principled reason why the 100:1 ratio would be preferable. Dr. Ramaprasad's primary reason for preferring 100:1 was that it is "on the more conservative end" (*i.e.*, a lower ratio than other alternatives). 3/22/17 Tr. 2601:18-2602:6 (Ramaprasad). She also explained that the number was chosen because it is "an easy number to understand" and agreed with Judge Strickler that one of her reasons was because "doing the math dividing by 100" is easy. *Id.* at 2496:20-2498:4. In short, her use of the ratio is indefensible.

CONCLUSIONS OF LAW:

XII. UNDER UNITED STATES COPYRIGHT LAW, THE "MECHANICAL" RIGHT HAS NEVER EXISTED WITHOUT THE PROTECTIONS OF THE COMPULSORY LICENSE

A. Mechanical Rights in Musical Works Have Always Been Licensed on a Compulsory Basis

JPCL1. The Copyright Owners bristle at the constraints of compulsory licensing and in particular the 801(b)(1) factors. Trial Ex. 3030, Israelite WRT ¶ 51; *id.* at ¶ 12 (claiming the compulsory licensing of mechanical rights is from 1909 and now outdated); 3/28/17 Tr. 3592:3-3593:1, 3594:13-3595:22 (Israelite) (testifying regarding his belief it is not appropriate for the government to "force" rates and rate structures upon Copyright Owners through a compulsory license); 3/29/17 Tr. 3674:20-3675:25 (Israelite); Trial Ex. 3014, Israelite WDT ¶¶ 55-64 (reciting the history of the compulsory license and calling on the CRJs to consider how the compulsory license "has served to unfairly (and unnecessarily) abrogate [copyright owners] rights"). But their laments ignore that the right to reproduce or distribute musical works has never existed without an accompanying compulsory license. That is because Congress, when debating whether to recognize the right to reproduce and distribute musical works, decided a compulsory license was also necessary to ensure the promotion of progress of science and the useful arts.

JPCL2. Prior to 1909, U.S. copyright holders had no protectable copyright in the reproduction or distribution of musical works. *See*, *e.g.*, *White-Smith Music. Pub Co. v. Apollo Co.*, 209 U.S. 1, 18 (1908) (finding that piano rolls were not "copies within the meaning of the copyright act").

JPCL3. Congress' decision to first grant copyright owners reproduction and distribution rights in musical works, under the Copyright Act of 1909, followed significant

Congressional debate regarding both (1) whether to grant to copyright owners this unprecedented new right of reproduction and distribution in musical works and (2) if so, whether such a right would be an "exclusive" right. H. R. Rep. No. 60-2222, at 6-7 (1909); Copyright Act of 1909, Pub. L. No. 60-349, ch. 320, § 1(e), 35 Stat. 1075 (1909).

JPCL4. Congress determined that it had the ability to grant such a right "not based upon any natural right that the author has in his writings. . . ." but instead "upon the ground that the welfare of the public will be served and progress of science and useful arts will be promoted by securing to authors for limited periods the exclusive rights to their writings." *Id.* at 7.

JPCL5. At first, Congress considered granting to copyright owners an exclusive right to reproduce and distribute musical works. *Id.* at 6. ("It was first thought by the committee that the copyright proprietors of musical compositions should be given the exclusive right to do what they pleased with the rights it was proposed to give them . . ."). "[B]ut the hearings disclosed that the probable effect of [granting such an exclusive right] would be the establishment of a mechanical-music trust. It became evident that there would be serious danger that if the grant of right was made too broad, the progress of science and useful arts would not be promoted, but rather hindered, and that powerful and dangerous monopolies might be fostered which would be prejudicial to the public interests. This danger lies in the possibility that some one company might secure, by purchase or otherwise, a large number of copyrights of the most popular music, and by controlling these copyrights monopolize the business of manufacturing the selling music-producing machines, otherwise free to the world." *Id.*

JPCL6. After weighing the appropriate "compensation" due to composers against the possibility of "establishing a great music monopoly," Congress determined that "after giving the composer the exclusive right to prohibit the use of his music by the mechanical reproducers," there should be a mechanism that would "provide that if [the composer] used or permitted the use of his music for such purpose then, upon the payment of a reasonable royalty, all who desired might reproduce the music." *Id.* at 7.

JPCL7. For the first time ever, copyright owners were entitled to compensation for the distribution and reproduction of musical works, but only subject to the protections against possible monopoly embodied in the compulsory licensing provisions of the 1909 Copyright Act. *See* Copyright Act of 1909, Pub. L. No. 60-349, ch. 320, § 1(e), 35 Stat. 1075.

JPCL8. Following the 1909 Act, music publishers lost little time in pressing Congress to untether this newly granted right from the compulsory license. In 1925, Representative Perkins introduced proposed legislation that would have done away with the mechanical compulsory licensing provisions of the Copyright Act. *See* H.R. 11258, 68th Cong., 2d sess. (1925); S. 4355, 68th Cong., 2d sess. (1925) (introduced by Senator Ernst).

JPCL9.Mr. Nathan Burkan of ASCAP testified in front of the House of Representatives in support of eliminating the compulsory license. *See* Hearings on H.R. 11258, 68th Cong., 2d sess., 148-168. Just as the Copyright Owners have argued here, he described how "[t]he musical composer is . . . forced to enter into a business relationship with a stranger" and the compulsory license "subjects the composers as a class to restrictions in the use of their property that other authors and inventors are not subject to." *Id.* at 149. Mr. Burkan's arguments failed to move Congress.

JPCL10. An identical bill to the ones introduced in the 68th Congress was introduced in December of 1925 before the 69th Congress. *See* H.R. 5841, 69th Cong., 1st sess. (1925). None of these bills moved forward.

JPCL11. In 1926, Representative Vestal introduced new legislation before the 69th Congress similarly aiming to abolish the compulsory license. *See* H.R. 10434, 69th Cong., 1st sess. (1926). ASCAP again submitted comments in support of eliminating the compulsory license, but Congress declined to take up the matter. *See* Hearings on H.R. 10434, 69th Cong., 1st sess., at 261.

JPCL12. Additional bills attempting to amend or abolish the compulsory mechanical license were introduced before the 70th, 71st, 72d, 74th, 75th, 76th, and 77th sessions of Congress.[26] None of these proposed bills was passed. *See generally*, Harry G. Henn, S. Comm. On the Judiciary, 86th Cong., The Compulsory License Provisions of the U.S. Copyright Law 21-36 (Comm. Print. 1960).

JPCL13. The Copyright Office and Congress next examined the compulsory license provisions in the decades leading up to the Copyright Act of 1976. At first, and similar to Mr. Israelite's testimony here (*see* Trial Ex. 3014, Israelite WDT ¶ 57; 3/29/17 Tr. 3675:13-25 (Israelite)), the Copyright Office advised that "the antimonopoly reason for the compulsory license is gone" and recommended eliminating the compulsory license. *See* U.S. Copyright Office, Register's Report on the General Revision of the U.S. Copyright Law 33-36 (1961). But after additional review, the Copyright Office reversed its position and concluded that the compulsory license still served an important purpose in the industry. U.S. Copyright Office,

[26] *See* H.R. 8912, 70th Cong., 1st sess. (1928); H.R. 10655 70th Cong., 1st sess. (1928); S. 3160, 70th Cong., 1st sess. (1928); H.R. 13452, 70th Cong., 1st sess. (1928); H.R. 6989, 71st Cong., 1st sess. (1929); H.R. 9639 71st Cong., 1st sess. (1929); H.R. 12549, 71st Cong., 1st sess. (1930); H.R. 139, 72d Cong., 1st sess. (1931); S. 176, 72d Cong., 1st sess. (1931); S. 2465, 74th Cong., 1st sess. (1935); S. 3047, 74th Cong., 1st sess. (1935); S. 7, 75th Cong., 1st sess. (1937); H.R. 2695, 75th Cong., 1st sess. (1937); H.R. 3004, 75th Cong., 1st sess. (1937); H.R. 5275, 75th Cong., 1st sess. (1937); S. 2240, 75th Cong., 1st sess. (1937); H.R. 926, 76th Cong., 1st sess. (1939); H.R. 4871, 76th Cong., 1st sess. (1939); H.R. 6160, 76th Cong., 1st sess. (1939); H.R. 9703, 76th Cong., 2d sess. (1940); S. 3043, 76th Cong., 2d sess. (1940); H.R. 3997, 77th Cong., 1st sess. (1941).

Supplementary Register's Report on the General Revision of the U.S. Copyright Law 53-55 (1965).

JPCL14. The Copyright Office also noted that "the compulsory license continues to have a favorable impact on competition by fostering the easy entry and growth of small companies within the industry." *Id*. at 54.

JPCL15. As phonorecords emerged as a means of selling and distributing recorded music, Congress similarly determined that "a compulsory licensing system is still warranted as a condition for the rights of reproducing and distributing phonorecords of copyrighted music." H.R. Rep. No. 90-3, at 67 (1967). Congress affirmed this conclusion in 1976: "The fundamental question of whether to retain the compulsory license or to do away with it altogether was a major issue during earlier stages of the program for general revision of the copyright law. At the hearings it was apparent that the argument on this point had shifted, and the real issue was not whether to retain the compulsory license but how much the royalty rate under it should be." H.R. Rep. No. 94-1476 (1976). Ultimately, the 1976 Copyright Act updated the Section 115 rates but left the long-standing compulsory license in place. 17 U.S.C. § 115; H.R. Rep. 94-1476, at 107-11.

JPCL16. Congress again reviewed the compulsory license as part of the process leading up to passing the 1998 Digital Millennium Copyright Act. Cognizant of the fact that the future of music distribution was digital, Congress reaffirmed the compulsory license and extended its protections to "digital phonorecord deliveries" in addition to physical copies. *See* S. Rep. No. 104-128, at 37 (1998) ("the intention in extending the mechanical compulsory license to digital phonorecord deliveries is to maintain and reaffirm the mechanical rights of songwriters and music publishers as new technologies permit phonorecords to be delivered by wire or over the airwaves rather than by the traditional making and distribution of records, cassettes and CD's.").

JPCL17. Congress has had numerous opportunities to evaluate the wisdom of the compulsory licensing provisions of Section 115, including the Copyright Owners' appeals to the Board regarding "forced partnership" and the general unfairness of the compulsory license. At each stage, Congress has determined that it is in the public interest to retain the compulsory licensing system to protect against the possibility of "establishing a great music monopoly" in which copyright owners would unjustly profit from withholding the rights to their works. H.R. Rep. No. 60-2222, at 7 (1909).

B. The Compulsory Mechanical License Has Always Been a Work-by-Work License Rather than a "Blanket" License

JPCL18. Since its creation under the 1909 Copyright Act, the compulsory license has always operated as a work-by-work license. *See* Copyright Act of 1909, Pub. L. No. 60-349, ch. 320, § 1(e), 35 Stat. 1075 (noting that "as a condition of extending the copyright control to such mechanical reproductions," for any musical works that have been made available, any person may reproduce such musical work if he provides "payment to the copyright proprietor of a royalty of two cents on each such part manufactured," and, if required, "a report under oath on the twentieth day of each month on the number of parts of instruments manufactured during the previous month").

JPCL19. The Section 115 compulsory license, unlike the Section 114 compulsory license, has never operated as a blanket license. Section 114 provides a compulsory license for all eligible "transmissions," rather than identified works, providing blanket coverage to eligible services. *See* 17 U.S.C. § 114(d)(2). The Section 115 compulsory license only allows for licensing of "phonorecords of the work" and establishes "notice of intent" provisions in which the user must identify the specific work to be used. See 17 U.S.C. § 115(a)(1)-(2). No such requirement of advance notice of a given work exists under Section 114.

JPCL20. In renewing and extending the compulsory license with the advent of physical and then digital phonorecords, Congress has affirmed the Section 115 license as a necessary guard against the "danger [that] lies in the possibility that some one company might secure, by purchase or otherwise, a large number of copyrights of the most popular music, and by controlling these copyrights monopolize the business." *Id.* The music publishers represented by the NMPA are these companies. The availability of the Section 115 license and the faithful application of the Section 801(b)(1) objectives are thus part and parcel of the very existence of the Copyright Owners' mechanical rights.

XIII. INTERPRETATION OF THE SECTION 801(B)(1) POLICY OBJECTIVES

JPCL21. The purpose of copyright law, and the exclusive rights granted thereunder, is "not to reward the labor of authors, but 'to promote the Progress of Science and useful Arts.'" *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340, 349 (1991) (quoting U.S. Const. Art. I, §8, cl. 8); *see also* H.R. Rep. No. 100-887(1), at 10 (1988) ("As this [House Judiciary] Committee observed during the 1909 revision of the copyright law, "[n]ot primarily for the benefit of the author, but primarily for the benefit of the public, such rights are given.'" (quoting H.R. Rep. No. 60-2222, at 7 (1909))). "The limited scope of the copyright holder's statutory monopoly…reflects a balance of competing claims upon the public interest: Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting *broad public availability* of literature, music, and the other arts." *Twentieth Century Music Corp. v. Aiken*, 422 U.S. 151, 156 (1975) (emphasis added).

JPCL22. To support the goal of maximizing the availability of creative works to the public, Congress created specific exceptions to the statutory grants of exclusive rights, such as the limitation on the exclusive rights to reproduce and distribute musical compositions under Section 115. *See* Section XIII.A.

JPCL23. Congress established four objectives to guide the determination (absent voluntary agreement) of a reasonable royalty rate payable under such licenses: (A) To maximize the availability of creative works to the public; (B) To afford the copyright owner a fair return for his or her creative work and the copyright user a fair income under existing economic conditions; (C) To reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication; and (D) To minimize any disruptive impact on the structure of the industries involved and on generally prevailing industry practices. 17 U.S.C. § 801(b)(1).

JPCL24. The Section 801(b)(1) rate-setting standard requires that the Board exercise "legislative discretion" in making independent policy determinations that balance the interests of copyright owners and users. *SoundExchange, Inc. v. Librarian of Cong.*, 571 F.3d 1220, 1224 (D.C. Cir. 2009); *see also RIAA v. CRT*, 662 F.2d 1, 8-9 (D.C. Cir. 1981) (analyzing identical factors applied by predecessor rate-setting body and holding that the statutory policy objectives of 801(b)(1) "invite the [Board] to exercise a legislative discretion in determining copyright policy in order to achieve an equitable division of music industry profits between the copyright owners and users").

JPCL25. The purpose of setting regulated rates under Section 801(b)(1) is to lower barriers for music licensees. *See, e.g.*, *Adjustment of Royalty Payable Under Compulsory License for Making and Distributing Phonorecords; Rates and Adjustment of Rates*, 46 Fed. Reg. 10,466, 10,480 (Feb. 3, 1981) ("Mechanical Royalty Determination"); *Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings*, 63 Fed. Reg. 25,394, 25,409 (May 8, 1998) ("Librarian PSS Determination"); *see also* H.R. Rep. No. 60-222, at 7 (1909) (statutory license created to prevent monopolization of musical playback technology by copyright owners); *Music Licensing Issues: Hearing Before the Subcommittee on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary*, 109th Cong. 2 (June 21, 2005) (statement of Marybeth Peters, Register of Copyrights) ("Peters 2005 Statement").

A. Maximizing the Availability of Creative Works to the Public

JPCL26. In setting a reasonable rate for this statutory license, the first policy objective guiding this Panel is to "maximize the availability of creative works to the public." 17 U.S.C. § 801(b)(1)(A).

JPCL27. It is important to observe that the policy objective here is not only to foster the "creation" of creative works—the focus is on the "availability" of works to the public, of which creation of the works is only a part. Thus, this objective is served by both the creation and *dissemination* of copyrighted works. *See Mechanical Royalty Determination*, 46 Fed. Reg. at 10,479 ("[T]he adjustment of the statutory rate payable under Section 115 of the Act is intended to encourage the creation and *dissemination* of musical compositions.") (emphasis added). As the Supreme Court has recognized, "the widespread distribution of creative works through improved technologies" helps to "generate audiences for emerging artists." *Metro-Goldwyn-Mayer Studios,* *Inc. v. Grokster, Ltd.*, 545 U.S. 913, n.8 (2005) (citing *Eldred v. Ashcroft*, 537 U.S. 186, 223-26) (2003) (Stevens, J., dissenting)).

B. Affording the Copyright Owner a Fair Return for Creative Work and the Copyright User a Fair Income Under Existing Economic Conditions

1. *"Fair Return" under Section 801(b)(1) is Not Based on Subjective "Inherent Value" or Objective Free Market Value*

JPCL28. The second policy objective under Section 801(b)(1) requires that royalty rates "afford the copyright owner a fair return for his or her creative work, and the copyright user a fair income under existing economic conditions." 17 U.S.C. § 801(b)(1)(B).

JPCL29. The Copyright Owners have asserted that their rate proposal is driven by an interpretation of fair income as based on the "inherent value" of music. *See* Copyright Owners' Introductory Memorandum p. A6-7; Trial Ex. 3014, Israelite WDT ¶¶ 29, 31, 33; Trial Ex. 3015, Herbison WDT ¶ 35; Trial Ex. 3016, Brodsky WDT ¶ 68; Trial Ex. 3025, Bogard WDT ¶ 22; 3/29/17 Tr. 3712:5-10 ("Q. So I understand, and you're on record, 801(b)(1) governs and I get that. But you believe that the inherent value of music should drive the rates to be consistent for all categories of interactive streaming, correct? A. I do.") (Israelite).

JPCL30. But the "inherent value" concept advanced by the Copyright Owners has no place in this proceeding, and indeed the Copyright Owners failed on their promise to define it. "Inherent value" is a subjective concept: the value that *inheres* in a song, unrelated to anyone's recording, use, or listening of the song, could only ever be determined by the copyright owner himself—and arbitrarily at that.

JPCL31. Indeed, David Israelite, President and CEO of the NMPA, conceded this subjectivity in his testimony. In response to a question from Judge Strickler—"[H]ow do you define the inherent value of [] music?"—Mr. Israelite responded, "I actually prefer that I don't define it but that whoever owns an individual copyright is the one to define it. I think that would be the most appropriate definition of it." 3/29/17 Tr. 3707:13-18 (Israelite); *see also id.* at 3710:21-23 ("I can't speak for any one of my individual members as to what number they would put on it for themselves.").

JPCL32. When asked to put a finer point on how the "inherent value" in music might be determined, Mr. Israelite defined it as "what someone is willing to license it for" 3/29/17 Tr. 3707:13-21. *see also id*. at 3708:19-3709:3 ("My view is that for that copyright owner, *if they want to price their property in the free market* at a certain number, I think for that property owner, that would be an inherent value to that owner. That's my view of—of what it should—how it should work.") (emphasis added)*; see also* Trial Ex. 3014, Israelite WDT at ¶ 76; Trial Ex. 3025, Bogard WDT at ¶ 34.

JPCL33. This subjective approach to valuation is inappropriate for judicial determinations of an appropriate license fee, let alone the legislative determination at issue in this proceeding. *See, e.g.*, *Bell v. Taylor*, 827 F.3d 699, 709 (7th Cir. 2016) ("[Copyright owner's] subjective belief as to the fair market value of his photo is not enough to prove damages.") (citing *On Davis v. The Gap, Inc.*, 246 F.3d 152, 166 (2d Cir. 2001)). *Cf. Jarvis v. K2 Inc.*, 486 F.3d 526, 534 (9th Cir. 2007) ("The court's inquiry was objective, avoiding references to what [the copyright owner] thought he should have earned or wished he had charged."); *Mackie v. Rieser*, 296 F.3d 909, 917 (9th Cir. 2002) (noting that the copyright owner's "subjective view, which really boils down to 'hurt feelings' over the nature of the infringement, has no place in this [damages] calculus."); *Thornton v. J. Jargon Co.*, 580 F. Supp. 2d 1261, 1278 (M.D. Fla. 2008) ("'[I]nherent value' is not the issue for the purpose of calculating actual damages.") (quoting *Deltak, Inc. v. Advanced Sys., Inc.*, 767 F.2d 357, 361-62 (7th Cir. 1985))).

JPCL34. Moreover, this proposed view—that the Copyright Owners could first decide "*if* they want to price their property in the free market"**—**is precisely the type of monopoly meant to be prevented by the compulsory license in Section 115. *See, e.g.*, H.R. Rep. No. 60-2222, at 7 (1909) (stating that Section 115 mechanical license designed, in part, to "prevent the formation of oppressive monopolies, which might be founded upon the very rights granted to the composer for the purpose of protecting his interests."). Indeed, much of the Copyright Owner's argument is directed not at the appropriate rates and terms under Section 115, but railing against the wisdom of the entire legislation itself. *See* Section XII.A, *supra*.

JPCL35. Nor does the Copyright Owners' advocacy for the use of a more objective "market-determined ratio" between royalty payments for sound recording rights and music work rates in an unconstrained market (*see* Sections IX.A-B, *supra*) bring their approach within the proper analysis under section 801(b)(1). *See* Trial Ex. 1623R, Brief Statement of Proposed Rates and Terms of National Music Publishers' Association and the Nashville Songwriters Association International, In the Matter of Determination of Royalty Rates for Making and Distributing Phonorecords (*Phonorecords III*), July 15, 2016.

JPCL36. Putting aside the defects in the benchmarks implicated in this approach (which is discussed further at Section XI, *supra*), the statute does not define "fair return" to mean "market determined" value. *See RIAA v. Librarian of Cong.*, 176 F.3d 528, 533 (D.C. Cir. 1999) ("The statute does not use the term 'market rates,' nor does it require that the term 'reasonable rates' be defined as market rates. Moreover, there is no reason to think that the two terms are coterminous, for it is obvious that a 'market rate' may not be reasonable,' and vice versa."); *Librarian PSS Determination*, 63 Fed. Reg. at 25,399 (the standard for setting rates under section 801(b)(1) "is not fair market value").

JPCL37. "Unlike a marketplace rate which represents a negotiated price a willing buyer will pay a willing seller, reasonable rates are determined based on policy considerations." *Librarian's PSS Determination*, 63 Fed. Reg. at 25,399. (internal citation omitted). Indeed, a statutory rate set under section 801(b)(1) "rarely" will "mirror a freely negotiated marketplace rate…because it is a mechanism whereby Congress implements policy considerations which are not normally part of the calculus of a marketplace rate." *Id.* at 25,409. *Accord CARP PSS Determination* at 36 ("[R]easonable compensation is not synonymous with fair market rate.").

JPCL38. To the extent a market rate is relevant at all to this proceeding, it is to show what the hypothetical upper limit on a reasonable rate could be. As the RIAA had argued, and the Copyright Royalty Tribunal had agreed in an analogous proceeding, "[a] rate that is deliberately fixed above the level that the market can bear . . . cannot be 'reasonable.' Such a rate would yield more than the 'fair return' to copyright owners mandated by the statute." *Mechanical Royalty Determination,* 46 Fed. Reg. at 10,478 (quoting RIAA's Proposed Findings of Fact and Conclusions of Law).

JPCL39. Applying this principle, a rate that would [redacted], is by definition a rate "above the level the market can bear." *See* Sections VIII.C-E, *supra* ([redacted]).

2. *Fair Return and Fair Income Must Be Balanced to Achieve the Overall Objectives of the Statute*

JPCL40. The objective of Section 801(b)(1)(B) is to "regulate[] the price of music" to "permit any [licensee] to enter the market at will." *Mechanical Royalty Determination*, 46 Fed. Reg. at 10,480. The Section 801(b)(1) factors thus "invite the [Board] to exercise a legislative discretion in determining copyright policy in order to achieve an equitable division of music industry profits between the copyright owners and users." *RIAA v. CRT*, 662 F.2d at 8-9 (analyzing identical factors applied by predecessor rate-setting body). A fair rate under Section 801(b)(1)(B) must balance "the owners' right to compensation against the users' need for access to the works at a price that would not hamper their growth." *Librarian's PSS Determination*, 63 Fed. Reg. at 25,409

JPCL41. A rate structure that does not allow the Services to maintain sustained profits will not allow for the continued operation of interactive streaming services as stand-alone businesses. Such an outcome is plainly at odds with the statute, and cannot constitute a "fair income" to the licensees under this provision. Instead, a "fair income" to the Services must mean an income that can allow for a profit while also sustaining growth and advancement. This is a result that cannot be achieved if royalty rates rise when the evidence is that streaming services are unprofitable even under the current rate structure.

C. Reflecting the Relative Roles of the Copyright Owner and the Copyright User in the Product Made Available to the Public

JPCL42. Under 801(b)(1)(C), the royalty rate must "reflect the relative roles of the copyright owner and the copyright user in the product made available to the public with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication." 17 U.S.C. § 801(b)(1)(C).

JPCL43. The "product made available to the public" is not just the musical work (or collection of musical works); instead, the "product made available to the public" is the digital music service in its entirety. *See Librarian's PSS Determination*, 63 Fed. Reg. at 25,408 (finding that "'product made available to the public' applied to both the sound recordings and the entire digital music service").

JPCL44. Any contrary interpretation that focused primarily on the creation of the copyrighted works themselves would necessarily elevate the "creative contribution" consideration above the "technological contribution," "opening of new markets," and other contributions enumerated in Section 801(b)(1)(C), in contravention of the plain language of the statute. Indeed, the technological and capital contributions articulated by the statute are crucial to the analysis of this factor.

D. Minimizing Any Disruptive Impact on the Structure of the Industries Involved and on Prevailing Industry Practices

JPCL45. Finally, Section 801(b)(1)(D) requires the setting of "a reasonable rate that minimizes the disruptive impact on the structure of the industries involved and on generally prevailing industry practices."

JPCL46. This factor requires the setting of a rate that does not "hamper the arrival of new technologies." *Librarian's PSS Determination*, 63 Fed. Reg. at 25,408. As the Board has explained, as an example a "mechanical royalty rate may be considered to be disruptive 'if it directly produces an adverse impact that is substantial, immediate and irreversible in the short-run because there is insufficient time for [the parties impacted by the rate] to adequately adapt to the changed circumstances produced by the rate change and, as a consequence, such adverse impacts *threaten the viability of the music delivery service currently offered to consumers under this license.*" *Determination of Rates and Terms for Preexisting Subscription Services and Satellite Digital Audio Radio Services*, 78 Fed. Reg. 23,054, 23,069 (Apr. 17, 2013) ("Satellite II"); *Phonorecords I*, 74 Fed. Reg. at 4525; *Determination of Rates and Terms for Preexisting*

Subscription Services and Satellite Digital Audio Radio Services, 73 Fed. Reg. 4080, 4097 (Jan. 24, 2008) (codified at 37 C.F.R. pt. 382) ("SDARS") (emphasis added).

JPCL47. [redacted] would be highly disruptive, and detrimental to all industry participants (including consumers). *See SDARS*, 73 Fed. Reg. at 4097 ("Economic experts for both sides agree that a royalty rate that would cause the SDARS to cease operating or dramatically change the nature of its product would clearly be disruptive.").

JPCL48. Finally, the fact that under the existing market conditions, licensees may be "struggling to create a sustainable subscriber base," have not turned profits, and might not even "expect to reach profitability in the near future" is a reason to set a rate as low as possible. *Librarian PSS Determination*, 63 Fed. Reg. at 25,410 (setting low rate so as to "not harm the industry at this critical point in its development."). Sections VII.C-E, *supra*.

XIV. THE COPYRIGHT OWNERS' RATE PROPOSAL DOES NOT SATISFY THE SECTION 801(B)(1) OBJECTIVES

A. The Copyright Owners' Proposal Would Not Maximize the Availability of Creative Works to the Public

JPCL49. Under Section 801(b)(1)(A), any rate must be calculated to maximize the availability of creative works to the public. The Copyright Owners' rate proposal represents a significant departure from the existing rates and terms in that it is comprised of one-size-fits-all rates, one of which is a per-play rate. Both of those features run counter to the objective of maximizing the availability of creative works to the public.

1. *Streaming Services Play a Critical Role in Making Creative Works Available to the Public*

JPCL50. There can be no dispute that the Services' massive libraries of songs, and various means of accessing them via desktop, mobile, cars, and other access points, have made musical works available to consumers in unprecedented ways. For example, the average physical store (such as, say, Wal-Mart) carried about 4,200 CDs, or a total of about 50,000 tracks, in 2005. *See* Section VII, *supra*. Spotify, for example, offers over 30 million tracks that can be almost instantly delivered to a user's computer or mobile device. *Id*. The same is true of services offered by Amazon, Apple, Google, and Pandora. *Id*. There is "no doubt" that these are more accessible than if you were to try to find a physical version of these songs. *See* 3/29/17 Tr. 3769:9-18 (Israelite).

JPCL51. Beyond the sheer volume of songs available, the Services also encourage music discovery, and thus expose listeners to more music than they would otherwise seek out on their own. *See* Sections II.A, C, *supra*. This not only increases access to music in general, but specifically increases access to songs by lesser-known artists and composers (often referred to as "long tail" works), in a way never possible through terrestrial radio or other non-streaming distribution channels. *See* Section II.B, *supra*.

JPCL52. The Services' variety of service offerings, and accompanying variety in pricing options (such as ad-supported, student and family plans, and service and product bundles), aims to—and does—capture music consumers who would not otherwise effectively have access to music, at least not at the level provided by the Services. *See* Section II.D, *supra*.

2. *An Inflexible One-Size-Fits-All Rate Structure Would Restrict the Availability of Creative Works to the Public*

JPCL53. In an industry where consumers are known to have heterogeneous preferences both in terms of listening and spending, an assortment of streaming offerings at different prices serves to expand the customer base for streaming music. Section II, *supra*. Expanding the customer base for streaming music exposes more people to more music, thereby maximizing the availability of creative works to the public. At the same time, growing the royalty pool generates more money for music publishers and songwriters, better incentivizing the discovery and development of songwriting talent and the creation of new songs. This too works to maximize the availability of creative works to the public. Sections II, III, *supra*.

JPCL54. As such, the ideal rate structure will be one that facilitates an assortment of different streaming services at different prices. Sections VII.B-C, *supra*. Indeed, there is good evidence to suggest that retaining a diversity of rates and terms will do just that. Indeed, the rates and terms established via settlement of the participants in *Phonorecords II*—which provide one of the best available benchmarks—have already facilitated the development of the diverse array of streaming services that exist today and which have been fueling the recent and indisputable revitalization of the recorded music industry. Sections I.C, III.A, *supra*.

JPCL55. A rigid one-size-fits-all rate structure, on the other hand, makes it very difficult to accommodate a diverse array of service offerings that will expand the customer base for music streaming while also maximizing royalties. Section VII.B, *supra*. As a practical matter, either the rate will be set too high (rendering some service offerings uneconomic and shrinking the customer base), or the rate will be set too low (leaving significant value on the table). Section IX.A, *supra*. Even a rate that might be appropriate in the first year or two of the five-year rate period may well be problematic in years three, four, and five.

JPCL56. In this case, the Copyright Owners' inflexible one-size-fits-all proposal would set rates far too high, rendering a number of existing services uneconomic. Section VII.B, *supra*. As those services disappear, there will be fewer options that appeal to a narrower band of potential consumers. *Id*. Thus, the customer base—and with it, the royalty pool—will shrink. *Id*. As a consequence, fewer creative works will be made available to a smaller audience, and the availability of creative works will not be maximized.

JPCL57. In support of their proposal, the Copyright Owners argue that the rate structure for mechanical licensing should be neutral with respect to the business model for interactive streaming services regardless of its features because each play of an interactive stream or limited download has an inherent value that has nothing to do with how a Service chooses to offer it. Sections II.D, XII.B, *supra*. To support this claim, Professor Gans references the "efficient component pricing rule" ("ECPR") and argues that rightsholders should receive the same compensation regardless of the features of the distribution channels, because rightsholders' opportunity costs for licensing are constant across streaming channels. *See* 3/30/17 Tr. 3972:16-3974:9 (Gans); *see also* Trial Ex. 3028, Gans WDT ¶¶ 45-53.

JPCL58. Professor Gans is mistaken, and his argument is flawed for at least two reasons. First, the opportunity cost of licensing a particular musical work does actually vary depending on a service's features and the particular consumer segments that it targets. *See* Section II, *supra*. Second, Professor Gans's simplified application of the ECPR, in which he sidesteps issues related to bargaining power and competition, is simply not applicable in the context of interactive streaming. The ECPR considers the pricing by a monopoly producer who directly serves the end client. However, rightsholders cannot by themselves provide the final product—here, streaming music—to end users. As a result, rightsholders and service providers do not compete as the incumbent and the entrant as in the classic development of the ECPR framework. Instead, service providers and rightsholders offer complementary products: service providers are continually creating new technologies and business models, while rightsholders are continually creating new musical works. Section IV.B, *supra*. As such, Professor Gans's argument is inapt and cannot be used to justify the Copyright Owners' one-size-fits-all rate.

3. *A Per-Play Rate Structure Also Hampers Services' Ability to Maximize the Availability of Creative Works to the Public*

JPCL59. The adoption of a per-play rate introduces new risks that would also hinder Services' ability to maximize the availability of creative works to the public. Services already take on significant financial risk to offer streaming music services. But in an industry increasingly driven by fixed-fee monthly subscription services, a per-play rate shifts even more risk to the Services, exposing them—at least theoretically—to virtually uncapped liability. For instance, if a service is guaranteed to take in $9.99 per-month for each subscriber to its full-catalog service—but is forced to pay out $0.0015 per-play with no cap, on top of public performance and sound recording royalties—it is left with little control over its margins and no upper limit on its potential payments. *See* Sections VII.B, VIII.A, *supra*.

JPCL60. This, in turn, creates perverse incentives that work against maximizing the availability of creative works to the public. With regard to streaming subscription services, it is well understood that customer engagement drives retention. Under the existing rate structure, Services' and rightsholders' incentives are aligned because both benefit from maximum engagement and retention in the form of increased revenues (for services) and royalties (for rightsholders). With a per-play structure, however, Services' and rightsholders' incentives are misaligned. Rightsholders continue to benefit from maximum engagement, but services are incentivized to limit engagement in order to control content costs. Section VII.B, *supra*.

JPCL61. These concerns are far from theoretical. [redacted], and already [redacted]. [redacted]

[redacted]. [redacted] [redacted]. Section VIII.A-B, *supra*. [redacted].

4. *There is No Evidence That Greater Returns to the Copyright Owners Are Needed to Maximize Availability*

JPCL62. Of course, maximizing the availability of creative works to the public does require incentives for the creation of the works by songwriters. But that is just one significant piece, and must be balanced against the incentives for Services to make those works available to the public as broadly as possible. While it may be true, as the Board acknowledged in *Phonorecords I*, that "the songwriting occupation is financially tenuous for many songwriters," "the reasons for this are many and include the inability of a songwriter to continue to generate revenue-producing songs, competing obligations both professional and personal, the current structure of the music industry, and piracy. The mechanical rates alone neither can nor should seek to address all of these issues." 74 Fed. Reg. at 4523-24. There, the Board found "no persuasive evidence in the record to support the notion that the current mechanical royalty rates are leading to a shortage of musical compositions…[and] no persuasive evidence in the record that an undiminished nominal mechanical rate will fail to ensure adequate incentives for songwriters and publishers over the course of the license period in question." *Id.* Nothing in the record of this proceeding changes this analysis.

JPCL63. Growing the entire music industry effectuates the objective of maximizing the availability of creative works to the public. The record demonstrates that allowing Services to offer various service options to capture various levels of consumer demand and willingness to pay leads to overall growth of the industry, which leads to higher royalty payments for songwriters and publishers. *See* Section II.D, *supra*. Indeed, the record shows that the growth of interactive streaming is the clearest path to growth of the music industry overall. *See* Sections I.C, III, *supra*.

B. The Copyright Owners' Proposal Would Deny Services a Fair Income

JPCL64. Under Section 801(b)(1)(B), any rate must afford the copyright owner a fair return for his or her creative work *and* the copyright user a fair income under existing economic conditions. 17 U.S.C. § 801(b)(1)(A) (emphasis added).

JPCL65. Given that royalty rates are already high and that the Copyright Owners' proposal represents a sizable increase, it is clear that any such increase would not result in a fair income for copyright users like the Services.

1. *Royalty Rates Are Already Very High*

JPCL66. After more than a decade of precipitous decline caused by rampant digital piracy and the disaggregation of the album associated with digital downloading, music publishing industry revenues stabilized over the past few years and have now turned the corner. Section I, *supra*. As set forth more completely above, annual increases in royalties generated by interactive streaming are now outpacing annual declines in digital download sales and working to revitalize the recorded music industry. Sections I.C, III, *supra*. At the same time, no interactive streaming service has yet been able to achieve sustained profitability in accordance with generally accepted accounting principles. Section IV, *supra*.

JPCL67. This dichotomy owes principally to outsized content costs—at current levels, royalty payments already represent an overwhelming proportion of the costs of goods sold ("COGS") in the digital music business—in the case of at least one Service representing a substantial segment of the market, [redacted]. Section IV.A, *supra*. At the same time, the streaming era has introduced a number of new costs for Services, including investments in features such as personalized playlist and station programming and curation and the development of voice capabilities. Section IV.B, *supra*. The combination of inflated royalty obligations and other new and burgeoning costs results in low gross margins and little margin for error. Section VI, *supra*.

JPCL68. As a result—as empirical evidence demonstrates—digital music businesses are already characterized by high failure rates and low rates of investment relative to other comparable digital businesses. Section IV.C, *supra*. Suboptimal investment, in turn, threatens to stifle growth and innovation in the industry, depressing both revenues and the total royalty payments to rightsholders. Section IV.C, *supra*. The Copyright Owners' rate proposal would increase costs to the Services, threatening their economic viability and putting them in an even more precarious situation, contrary to the goals of Section 801(b)(1)(B). *See Librarian's PSS Determination*, 63 Fed. Reg. at 25,409 (stating goal to balance "the owners' right to compensation against the users' need for access to the works at a price that would not hamper their growth.").

JPCL69. As set forth above, there is ample evidence to suggest that the existing rates and terms should be largely preserved, but if royalty rates are to be adjusted, they should be decreased, not increased.

2. *The Copyright Owners' Proposal Represents a Dramatic Increase in Rates*

JPCL70. Increasing rates would only make things worse, foreclosing paths to profitability and effectively assuring that Services will be unable to earn a fair income. Section IV, *supra*. Yet the Copyright Owners' rate proposal represents a dramatic increase in royalty rates. Section VIII.A, *supra*. By way of example, according to Dr. Hubbard's calculations, the Copyright Owners' proposed rates of $0.0015 per-play and $1.06 per-user (per-month) represent increases of [redacted], respectively, as compared to the average effective per-play and per-user rates currently being paid across all services. Section VIII, *supra*. The effects are even more pronounced for [redacted], which would see increases of approximately [redacted] and [redacted] over current average effective per-play and per-user rates. *Id*.

JPCL71. These figures are generally corroborated by testimony from multiple fact witnesses. According to Mr. Mirchandani, the Copyright Owners' proposed rates would cause Amazon's mechanical publishing costs to increase by more than [redacted] for its locker services, by more than [redacted] for its Prime Music service, by more than [redacted] for its Unlimited for Echo service, and by more than [redacted] for its Unlimited service. Section VIII.A, *supra*. Spotify, too, would face massive increases. According to Mr. Vogel, the Copyright Owners' proposed rates would cause Spotify's mechanical publishing costs to increase by more than [redacted] and by more than [redacted] totaling a service-wide increase of [redacted]. *Id.* As Mr. Herring explained, the Copyright Owners' proposal would increase Pandora's mechanical publishing costs by over [redacted]. *See* Section VIII.A, *supra*. At these rates, it is a virtual certainty that Services will be unable to earn a fair income under existing economic conditions.

3. *No Rate Increase is Needed to Guarentee the Copyright Owners a Fair Return*

JPCL72. The implication of the "fair return and fair income" objective under Section 801(b)(1)(B) is that the rate must balance "the owners' right to compensation against the users' need for access to the works at a price that would not hamper their growth." *Librarian's PSS Determination*, 63 Fed. Reg. at 25,409.

JPCL73. As the record reflects, publishing royalties have steadily *increased* under the current rates and rate structure, reversing a downward trend. 4/12/17 Tr. 5569:17-11, 5570:19-22 (Zmijewski); Trial Ex. 1070, Zmijewski WRT ¶ 17; Trial Ex. 1691, Zmijewski SWRT ¶ 13; 3/29/17 Tr. 3724:4-17 (Israelite); 3/30/17 Tr. 3939:24-3940:2 (Kalifowitz); *see generally* Sections V.A-C, *supra*. As is discussed in greater detail in Section II.B, *supra*, the Services have invested tremendous resources to build technological infrastructure and substantive content to make their services more attractive to users than piracy, and thus have contributed enormously to generating revenue for the Copyright Owners.

JPCL74. In addition, *more* copyright owners are receiving more royalties than ever before, largely due to the "democratizing" effect of the Services' efforts to expose and promote lesser-known artists. *See* Section II.B, *supra*.

JPCL75. Thus, the Copyright Owners are much better off overall financially as a result of the interactive streaming services' growth, which has reversed downward trends caused by other industry factors (including, especially, piracy), and there is no objective evidence that the Copyright Owners are not currently receiving a fair return for their creative investment.

C. The Copyright Owners' Proposal Would Not Reflect the Relative Roles of Rightsholders and Services

JPCL76. Under Section 801(b)(1)(C), any rate must reflect the relative roles of the copyright owner and the copyright user in the digital music services with respect to relative creative contribution, technological contribution, capital investment, cost, risk, and contribution to the opening of new markets for creative expression and media for their communication. 17 U.S.C. § 801(b)(1)(C).

JPCL77. The existing rates and terms—which were established via carefully negotiated agreements—already roughly reflect the relative roles of rightsholders and services. Sections V.C-D, *supra*. As such, in order to justify the dramatic rate increase they now seek, the Copyright Owners would need to demonstrate that their roles relative to the Services have greatly expanded in recent years. In fact, however, it is the Services' roles that have grown while the Copyright Owners' have remained largely unchanged.

1. *The Existing Rates and Terms Already Reflect the Relative Roles of Rightsholders and Services*

JPCL78. The fact that the existing rates and terms are the product of the collective efforts of numerous industry participants over more than 10 years and two Board rate-setting proceedings—both of which were resolved by carefully negotiated settlement agreements—indicates that they already roughly reflect the relative roles of rightsholders and services, at least as the participants understood them at the culmination of *Phonorecords II*. Sections V.C-D, *supra*. As such, any deviation from these baseline rates and terms should necessarily be tied to changes in relative roles that have transpired in recent years.

2. *The Services' Roles Have Increased During the Streaming Era*

JPCL79. The streaming era has seen the Services' roles expand across each of the specific categories identified in the relevant statute.

JPCL80. The consideration of the parties' relative roles with respect to *technological contribution* encompasses "the technological developments made by the Services in opening a new avenue for transmitting sound recordings to a larger and more diverse audience." *Librarian PSS Determination*, 63 Fed. Reg. at 25,407. Examples of such technological developments have included "the creation of technology to uplink the signals to satellites and transmit them via cable; technology to identify the name of the sound recording and the artist during the performance; and technology for programming, encryption, and transmission of the sound recording." *Id.* There can be no question that the Services have made major technological contributions—including those related to streaming technologies, personalized playlist and station programming, music curation and analysis, and machine learning and metadata associated with voice capabilities—that played a critical role in broadening the appeal of licensed streaming services and fueling the recent growth of interactive streaming. Sections II, IV.B, *supra*.

JPCL81. With respect to *the opening of new markets for creative expression and media for their communication*, this contribution is being made almost exclusively (if not exclusively) by the Services. *See* Sections I, II, *supra.* The record is demonstrates the Services' creativity and ingenuity in conceptualizing, building, and launching a variety of interactive streaming services. The Services have essentially developed an entirely new industry for consumers to pay for digital music — a new industry that was desperately needed at the time interactive streaming began to take off, in light of plummeting CD and PDD sales, rampant piracy, and falling revenues. *See* Section I, *supra*; *cf. Librarian's PSS Determination*, 63 Fed. Reg. at 25,407, 25,410 (affirming CARP's determination that this subfactor supported a PSS rate at the low end of the range because the PSS, by the very development of the first digital music services, contributed more to the opening of new markets for creative expression and new media for their communication.).

JPCL82. Highlighting the importance of *capital investment*, the Librarian found in an analogous proceeding evidence "reveal[ing] a large investment of capital by the Services to create a new industry that expands the offerings of the types of music beyond that which one receives over the radio, through live performances, and other traditional means of public performance." *Librarian's PSS Determination*, 63 Fed. Reg. at 25,408. Likewise, in *Satellite I*, the Board concluded that the "relative contribution" factor "may weigh in favor of a discount from the market rate because of the SDARS' demonstrated need to continue to make substantial new investments to support the satellite technology necessary to continue to provide this specific service during the relevant license period." *SDARS*, 73 Fed. Reg. at 4096.

JPCL83. The Services have made enormous capital investments and also took on the majority of the *costs* and *risks* associated with opening these new markets and developing new media. Section IV, *supra*. Indeed, Amazon alone has invested over [redacted] in headcount, technology infrastructure, and marketing expenses over the last 5 years as it built out its interactive streaming business. Section IV.B, *supra*; *See also* 3/14/17 Tr. 951:17-953:2 (Herring) (explaining how Pandora has invested [redacted] to develop its interactive service offerings). Google has also made significant investments to grow its music subscription service, acquiring Songza for [redacted]. 3/13/17 Tr. 780:7-782:24 (Joyce); Trial Ex. 693, Joyce WDT ¶¶ 7, 11. Further, with existing rates as high as they are, there is no guarantee that such investments will pan out, as evidenced by the abnormally high failure rate for digital music companies. Section IV.C, *supra*. *Cf. Librarian's PSS Determination*, 63 Fed. Reg. at 25,407 (crediting determinations that the PSS had undertaken substantial costs and risks associated with creating an entirely new market for music services, the very first digital music services, and that market conditions made it unclear whether the PSS could survive).

JPCL84. Finally, the Services have contributed significant and unique value with respect to "*creative contribution*." The Services have made many creative contributions to the way music is distributed, discovered, and enjoyed, including personalized recommendations, curated playlists and radio stations, and social tools for fans to interact with artists and each other. *See* Sections II, IV, *supra*; *cf. Librarian PSS Determination*, 63 Fed. Reg. at 25,407 (finding that even relatively modest creative contributions associated with performing sound recordings “enhanced the presentation of the final work through unique programming concepts”).

3. *The Copyright Owners’ Roles Remain Unchanged in the Streaming Era*

JPCL85. At the same time, rightsholders contributions essentially remain unchanged. Section II, *supra*.

JPCL86. Undoubtedly, songwriting and publishing requires significant capital investment (in addition to creative investment), as well. But that has always been true, and the royalty rates at issue in this proceeding will not impact that. The record is clear that, almost all (if not all) of the relevant technological contribution and capital investment driving the music industry today is being made by the Services, and that the contribution of the publisher has not really changed. *See* Section III, *supra*.

JPCL87. As evidence of their risk associated with the interactive streaming model, the Copyright Owners point to the purported displacement of permanent downloads. Section X.C, *supra*. But the record shows that the shift in consumer demand for interactive streaming was brought about by years of piracy, and technological advancement leading to the disaggregation of the album. Even if interactive services were forced out of the market (an inevitable result of the Copyright Owners’ proposed rate increase), consumers would not go back to the old consumption models. The financial challenges associated with the transition from physical to digital distribution will not be ameliorated by a rate hike that constrains the market for interactive digital services; in fact, these services have helped reverse the financial challenges experienced by copyright owners as a result of piracy and unbundling. Section I, *supra*.

JPCL88. As the Register of Copyrights has recognized, "Legal music services can combat piracy only if they can offer what the 'pirates' offer…. In cases where they cannot succeed in obtaining all the rights they need in order to make a musical composition available, the legal music services simply do not offer that selection, thereby making them less attractive to the listening public than the pirates." Statement of Marybeth Peters The Register of Copyrights before the Subcommittee on Intellectual Property, Committee on the Judiciary (Jul. 12, 2005) pp. 11-12. Without question, the continuous entry and development of digital music providers—services that consumers actually *want to pay for*—is the most important protection against piracy, minimizing the risks to the Copyright Owners. Section I.C, *supra*.

JPCL89. While the Copyright Owners attempt to argue that their contributions to the *creation* of works should be given decisive weight, there is no evidence that those contributions have increased since *Phonorecords II*. Nor is there any basis for elevating the "creative contribution" consideration above the "technological contribution," "opening of new markets," and other enumerated contributions, in contravention of the plain language of the statute.

JPCL90. Moreover, as discussed in previous sections, the Services have made significant creative contributions as well. Sections II, IV.B, *supra*; c*f. Librarian's PSS Determination*, 63 Fed. Reg. at 25,407 (finding that even relatively modest creative contributions associated with performing sound recordings "enhanced the presentation of the final work through unique programming concepts").

JPCL91. As a result, if rates are to be altered, they should be significantly reduced to reflect the Services' expanded roles in the interactive streaming era.

D. The Copyright Owners' Proposal Would Massively Disrupt the Interactive Streaming Industry

JPCL92. Under Section 801(b)(1)(D), any rate must be calculated to minimize the disruptive impact on the structure of the industries involved and on generally prevailing industry practices. 17 U.S.C. § 801(b)(1)(D).

JPCL93. In this case, the Services' proposed rates and terms are benchmarked to the existing rates and terms with a handful of minor adjustments that will have—at most—minor effects on a handful of peripheral industry practices. The Copyright Owners' proposal, on the other hand, would render a number of existing streaming services uneconomic, upending the structure of the interactive streaming industry and disrupting a number of prevailing industry practices.

1. *The Copyright Owners' Proposed Rate Hike Would Render Many Services Uneconomical*

JPCL94. As set forth above, the Copyright Owners' current proposal represents a dramatic increase in royalty rates. Sections VII.A, VIII.B *supra*. Critically, this increase would render a number of existing streaming services uneconomic, upending the interactive streaming landscape. Section VIII.A, D, E, *supra*.

JPCL95. As Mr. Mirchandani testified, the Copyright Owners' proposal would leave Amazon with [redacted]. Section VIII.A, *supra*. Moreover, under such conditions, Amazon's principal business strategy and *raison d'être* in the music business—offering differentiated services that appeal to a broad array of customers—

would no longer be possible, and Amazon would be [redacted]. Section VIII.A, *supra*.

JPCL96. Under the Copyright Owners' rate proposal, Pandora would also have little choice but [redacted]. *See* Trial Ex. 888, Herring WRT ¶ 10. As Mr. Herring testified, under the Copyright Owners' proposal, Pandora Plus, would [redacted]. Trial Ex. 888, Herring WRT ¶ 9; *see also* 3/14/17 Tr. 911:15-18 (Herring); Trial Ex. 889. Even under the Copyright Owners' proposed per user rate, Pandora would pay [redacted] the amount it currently pays for both mechanical and performance royalties; royalties would be even higher based on the number of songs played, *See* Trial Ex. 888, Herring WRT ¶ 7, even though the overwhelming majority of streams on Pandora Plus are non-interactive and do not implicate the mechanical right. *See* Trial Ex. 888, Herring WRT ¶ 16.

JPCL97. Similarly, Mr. Vogel testified that the Copyright Owners' rate proposal would [redacted]. Indeed, as Mr. Vogel explained, even if the Copyright Owners backed off their proposal to apply a per-user rate to all ad-supported accounts and instead only applied it to monthly active users, Spotify's mechanical publishing costs would still increase by more than [redacted]. Again, Spotify would [redacted]. Moreover, [redacted]. Sections VIII.A, D, *supra*.

JPCL98. [redacted] of an entire tier or type of music service—which is a source of significant income for rights-holders, and [redacted]—would be highly disruptive, and detrimental to all industry participants (including consumers).

See SDARS, 73 Fed. Reg. at 4097 ("Economic experts for both sides agree that a royalty rate that would cause the SDARS to cease operating or dramatically change the nature of its product would clearly be disruptive.").

2. *There Is No Evidence that Services Can Adjust to Compensate for the Proposed Rate Increase, and Even if They Could, Such Adjustments Would be Disruptive*

JPCL99. As the Board has explained, a "mechanical royalty rate may be considered to be disruptive 'if it directly produces an adverse impact that is substantial, immediate and irreversible in the short-run because there is insufficient time for [the parties impacted by the rate] to adequately adapt to the changed circumstances produced by the rate change and, as a consequence, such adverse impacts *threaten the viability of the music delivery service currently offered to consumers under this license.*" *Satellite II*, 78 Fed. Reg. at 23,093; *Phonorecords I*, 74 Fed. Reg. at 4516; *SDARS*, 73 Fed. Reg. at 4097 (emphasis added).

JPCL100. The Copyright Owners argue that services have strategic options to offset the impact of increases in royalty rates, including increasing prices, serving more advertisements, or reducing costs. Section VIII.B, *supra*. The evidence adduced in this proceeding, however, suggests otherwise.

JPCL101. Critically, though both Professors Rysman and Gans suggested that Services could offset rate increases by raising prices, neither could offer any support for those opinions when pressed on cross examination. Section VIII.B, *supra*. The Services, on the other hand, *have* attempted to understand the price elasticity of demand for subscription streaming services along with potential consequences of raising consumer prices. In particular, Amazon conducted a pricing study that revealed that demand for the $9.99 per-month plan was "highly elastic" and that small changes in price could have pronounced effects on subscribership. *C*

Amazon also commissioned a consumer market research survey that revealed that increases in the prices of on-demand music streaming services will reduce demand and move customers towards free and ad-supported streaming alternatives, including unlicensed sources, as well as other non-streaming alternatives. *Id*.

JPCL102. Professor Rysman also failed to provide support for his opinion that ad-supported services could offset royalty increases by delivering more advertisements to consumers. *Id*. The Services, on the other hand, offered ample evidence to demonstrate that serving more ads (or more expensive ads) would not be a viable strategy to offset the effects of the Copyright Owners' proposed rate increase. *Id*. Professor Rysman was also unable to defend his opinion that services could offset the Copyright Owners' proposed rate increase by reducing costs, conceding on cross examination that cutting marketing and sales expenses could lead to a decrease in subscribership and that such an effect could have a negative impact on the Copyright Owners. *Id*.

JPCL103. Even if the Services could continue offering the existing service features under the Copyright Owners' proposal—which, as discussed above, is in serious doubt—the smaller sacrifices and cuts that would have to be made would still amount to significant disruption in contravention of this policy objective. *See* Section VIII, *supra*. Even having to shift business strategy away from fostering consumer engagement, and into a model that discourages such engagement, is disruptive in that it changes the nature of the interactive product offered to consumers. Indeed, there is no guarantee that such a new product or business model would be as attractive to consumers as the current model (or attractive to consumers at all)—as Pandora's experience applying listening caps demonstrates. *See* Section VII.C, *supra*. Accordingly, the Board should avoid rates and rate structures that would unduly constrain the ability of a licensee to "successfully undertake satellite investments planned for the license period . . . and [disrupt] current customer service." *SDARS*, 73 Fed. Reg. at 4097.

3. *Higher Rates Would Disrupt the Struggling Streaming Industry*

JPCL104. Finally, the fact that under the existing market conditions, licensees may be "struggling to create a sustainable subscriber base," have not turned profits, and might not even "expect to reach profitability in the near future" is a reason to set a rate as low as possible. Librarian's PSS Determination, 63 Fed. Reg. at 25,410 (setting low rate so as to "not harm the industry at this critical point in its development"). *See* Section IV, *supra*.

E. The Section 801(b)(1) Rate-Setting Standard Disfavors [redacted]

JPCL105. If a rate proposal would cause [redacted], that proposal would *per se* fail to satisfy any of the four Section 801(b)(1) policy factors.

JPCL106. The first factor, Section 801(b)(1)(A), would disfavor [redacted]—because its [redacted] would reduce, instead of maximize, the availability of creative works. Availability has two elements, creation and dissemination. *Mechanical Royalty Determination*, 46 Fed. Reg. at 10.479. Both elements would be impacted by the [redacted]. [redacted] would have direct deleterious effects on the dissemination of creative works because [redacted] may also have a negative impact on the creation of future works because artists would have a reduced incentive to create in a situation where, [redacted], songs reach a smaller audience and are no longer fully monetized. This would impact all royalties, not only mechanical royalties at issue in this proceeding. Therefore the first factor disfavors the [redacted].

JPCL107. It would also fail the second Section 801(b)(1) objective, which is to afford a fair return to the copyright owner and a fair income to the copyright user, under existing economic conditions. 17 U.S.C. § 801(b)(1)(B). As the Board has previously explained, a rate that is above what the market can bear cannot be reasonable. *RIAA v. CRT*, 662 F.2d at 12 ("A rate that is deliberately fixed above the level that the market can bear so that a lower rate can be negotiated in the marketplace cannot be 'reasonable.' Such a rate would yield more than the 'fair return' to copyright owners mandated by the statute."). [redacted] under a proposed statutory rate, that necessarily means that the rate is "above what the market can bear," and thus unreasonably more than a "fair return" to copyright owners.

JPCL108. Further, the [redacted] will shrink the overall pie, because, although some users will [redacted], many will transfer their consumption to avenues that are more poorly monetized—including avenues that do not generate royalties at all (such as piracy). 3/28/17 Tr. 3603:23-3604:8 (Israelite); *see also* Sections VIII.D-E, *supra*. The result will be an overall reduction in royalty revenues generated, and thus a reduction in the copyright owners' returns.

JPCL109. Moreover, the goal of this policy factor is to find "a price that [does] not hamper . . . growth" (*Librarian PSS Determination*, 63 Fed. Reg. at 25,409), and that "permit[s] any [licensee] to enter the market at will." 46 Fed. Reg. at 10,480. [redacted] both hampers the growth of those businesses and implies that new entrants would not be able to come into the market, either. Thus, a proposal that eliminates [redacted] contravenes the policy objectives of Section 801(b)(1)(B).

JPCL110. A rate proposal that triggers [redacted] also necessarily fails to reflect the relative roles of the copyright owner and the copyright user in the product made available to the public under Section 801(b)(1)(C), which specifically considers the respective "contribution[s] to the opening of new markets for creative expression and media for their communication." [redacted] wipes out the efforts of all those who devoted substantial resources to building that particular service, which, in the case of the [redacted], effectively eliminates or at least constrains a new "market" for the consumption of music. It would also essentially penalize, rather than reward, the Services for their significant capital investments and technological contributions, and assumptions of costs and risks, in developing the interactive digital music market. Such a result plainly fails to satisfy the third Section 801(b)(1) factor.

JPCL111. Finally, and most significantly, a rate proposal that would cause [redacted] is antithetical to the fourth Section 801(b)(1) objective of "minimiz[ing] any disruptive impact on the structure of the industries involved and on generally prevailing industry practices." 801(b)(1)(D). The situation would be analogous to a hypothetical from SDARS, in which the Board observed that "[e]conomic experts for both sides agree that a royalty rate that would cause the SDARS to cease operating or dramatically change the nature of its product would clearly be disruptive." (*See SDARS*, 73 Fed. Reg. at 4097.) A rate can be disruptive "if it directly produces an adverse impact that is substantial, immediate and irreversible in the short-run because there is insufficient time for either the [Services] or the copyright owners to adequately adapt to the changed circumstances produced by the rate change and, as a consequence, such adverse impacts threaten the viability of the music delivery service currently offered to consumers under this license." (*SDARS*, 73 Fed. Reg. at 4097; *Phonorecords I*, 74 Fed. Reg. at 4516; *Satellite II*, 78 Fed. Reg. at 23,061.) [redacted] is more than a *threat* to the "viability for the music delivery service currently offered"; it is a [redacted] of that viability. Sections VIII.D-E, *supra*. It is clear that where a proposed rate is so onerous that its enactment would cause the Services to [redacted], that rate is "disruptive" under Section 801(b)(1)(D).

XV. THE BOARD SHOULD SET AN "ALL-IN" HEADLINE RATE FOR MUSICAL WORKS RIGHTS

JPCL112. The rates determined by the Board should include a deduction for payments for the performance right in musical works. As discussed in Sections V.C, V.F, *supra*, this "all-in" rate structure is consistent with the parties' expectations in settling *Phonorecords I* and *II*, supported by license agreements between interactive services and publishers, supported by expert testimony, and consistent with prior decisions of the Board.

JPCL113. Both the *Phonorecords I* and *Phonorecords II* settlements adopted by the Board included all-in rates. *Phonorecords I*, 74 Fed. Reg. at 4531; *see also Adjustment of Determination of Compulsory License Rates for Mechanical and Digital Phonorecords*, 78 Fed. Reg. 67,938 (Nov. 13, 2013) ("Phonorecords II") (carrying forward *Phonorecords I* settlement). Under the terms of these prior settlements, the royalty pool for the mechanical right included a deduction for "the total amount of royalties for public performance of musical works that has been or will be expensed pursuant to public performance licenses in connection with uses of musical works…." 37 C.F.R. § 385.12(b)(2). These settlements—and the existing regulations—reveal a preference for a royalty structure where the licensee pays an all-in royalty rate for both the mechanical and performance rights in musical works. *See e.g.*, Trial Ex. 695, Leonard WDT ¶ 12 ("The parties to these agreements have demonstrated a preference for a structure in which the licensee pays an all-in royalty rate for the package of rights."). While some of the service categories under Subpart B of the existing regulations have mechanical-only floors, the services did not expect those floors to be triggered. Trial Ex. 692, Levine WDT ¶ 35; Trial Ex. 875, Parness WDT ¶ 9.

JPCL114. The Board has made similar determinations for analogous sets of rights in other proceedings. For instance, the Board has set an "all-in" licensing rate for reproductions of sound recordings and performances of sound recordings under 17 U.S.C. §§ 112 and 114. As with the mechanical and performance rights in musical works, the reproduction (or ephemeral) right and performance right in sound recordings are perfect complements. *See Web VI*, 81 Fed. Reg. at 26,397-98 (discussing bundling of §§ 112 and 114 rights). In the past, the Board has bundled these rights together, and set only de minimis rates for the § 112 license. Just two years ago, in *Web IV*, the Board continued "the current bundling of the Section 112 and 114 rates" because they were based on license agreements and supported by expert testimony, and the Board understood that users "would prefer that the rates for the two licenses be bundled and that they would be agnostic with respect to the allocation of those rates to the Section 112 and 114 license holders." *Id.* at 26398.

XVI. THE *WEB IV* PROCEEDING DOES NOT SUPPORT IMPOSING A PER-PLAY RATE FOR MUSICAL WORKS HERE

JPCL115. Although the Board adopted per-play royalty rates in *Web IV*, that decision is distinguishable in several key respects. In *Web IV*, the Board, after considering proposals to adopt a greater of rate structure, concluded that a per-play rate was still appropriate, in part based on the fact that "none of the percentage-of-revenue prongs in the greater-of agreements in the record ha[d] been triggered" and that none of the benchmarks relied on by the copyright owners actually contained percentage-of-revenue rates. *Web IV*, 81 Fed. Reg. at 26,325. The rate structure in this proceeding similarly should be based on a benchmark that is appropriate for, and reflective of, the marketplace for musical works at issue here. *See* Sections V.C-G, *supra*.

JPCL116. The parties have proposed two types of benchmarks in this proceeding: per-play and percentage-of-revenue based agreements. But, for the reasons discussed above, none of the per-play agreements that the Copyright Owners propose are proper benchmarks. *See* Sections VII.C, IX, *supra*. Moreover, a per-play rate is almost unprecedented in the musical works context. *See* Section IX.B, *supra.*

JPCL117. Second, *Web IV* was decided under a willing seller/willing buyer standard. 17 U.S.C. § 114(f)(2)(B); *Web IV*, 81 Fed. Reg. at 26316. By contrast, in the current rate setting procedure subject to Section § 115, rates "must be calculated to achieve the objectives set forth in section 801(b)(1)(A) through (D)" of the Copyright Act. *See Phonorecords I*, 74 Fed. Reg. at 4517. As discussed above, a per-play rate for musical works does not satisfy the Section 801(b)(1) factors. *See* Section XVII.A, *supra*. Therefore, the Board should not institute a per-play rate structure. *See Recording Indus. Ass'n of Am., Inc. v. Librarian of Cong.*, 608 F.3d 861, 865 (D.C. Cir. 2010) (finding that the Board may choose among rates within a "zone of reasonableness" that "'would serve all [the statutory] objectives adequately but to differing degrees.'") (quoting *RIAA v. CRT*, 662 F.2d at 9) (internal quotation marks omitted).

JPCL118. Finally, the per-play rate structure in *Web IV* applied to a situation that is not present in the current proceeding. The webcasting services in *Web IV* argued that their per-performance rates should be adjusted downwards because non-music content—such as on-air personalities, news, and weather content—was responsible for driving listeners to their stations. *Web IV*, 81 Fed. Reg. at 26,321. The Board found that the *Web IV* per-performance rate structure accounted for the relatively reduced number of recorded music performances aired by stations featuring non-music content. *Id*. By contrast, the Services involved in this proceeding drive listeners based on their music offerings and the technology behind the listening experience, not on-air personalities, therefore there is no similar need to account for non-music streaming. *See Web IV*, 81 Fed. Reg. at 26,321 n.34 (noting that that a per-performance rate structure could be applied to webcasting services without adjustment, but a revenue-based royalty structure would have to be adjusted in that context, "to reflect the lower percentage of recorded music as compared with an Internet music service.").

JPCL119. For all of the foregoing reasons, the Board, which is "under no obligation to salvage benchmarks they found to have fundamental problems," *Music Choice v. Copyright Royalty Bd.*, 774 F.3d 1000, 1012 (D.C. Cir. 2014), should reject the inappropriate per-play benchmarks proposed by the Copyright Owners.

XVII. THERE IS NO SUCH THING AS A "LATE" PAYMENT UNDER THE STATUTE OTHER THAN PAYMENT OF AMOUNTS OWED TO OWNERS IDENTIFIED IN THE COPYRIGHT OFFICE RECORDS PRIOR TO DISTRIBUTION

JPCL120. The Copyright Owners propose the addition of a late fee "of 1.5% per month, or the highest lawful rate, whichever is lower, for any payment received by the Copyright Owner after the due date set forth in Section 210.16(g)(1)..." Trial Ex. 1677R, Copyright Owners' Proposed Rates and Terms p. B-9. The Copyright Owners assert that this late fee is necessary to address "chronically late" payments made by the Services "*because Digital Services have difficulty in matching their streaming data*" to ownership data. Introductory Memorandum of National Music Publishers' Association and Nashville Songwriters Association International p. A-9 (emphasis added).

JPCL121. This "difficulty in matching" argument is a red herring, that has nothing to do with the timing of payments that are actually due under Section 115 licenses, under Section 210.16(g)(1). With respect to such statutory license royalty payments, there is no evidence that payments are often, or ever, made after they are due under the regulations. Any issues of late payments under private agreements, or late Notices of Intention to invoke statutory licenses, are far beyond the scope of this proceeding. And the late fee term in Subpart A does not alter the analysis.

A. Payments Are Not "Due" Under Section 115 Licenses Unless And Until the Registered Copyright Owner Is Identified

JPCL122. Under Section 115, a licensee may obtain a compulsory license by sending a Notice of Intention ("NOI") to the copyright owner identified in the Copyright Office records; where insufficient ownership information is found in the Copyright Office records, licensees are directed to file NOIs with the Copyright Office itself. *See* 17 U.S.C. § 115(b); U.S. Copyright Office, Circular 73, Compulsory License for Making and Distributing Phonorecords (Oct. 2015).

JPCL123. The statute is very clear: "To be entitled to receive royalties under a compulsory license, the copyright owner must be identified in the registration or other public records of the Copyright Office. The owner is entitled to royalties for phonorecords made and distributed *after being so identified, but is not entitled to recover for any phonorecords previously made and distributed*." 17 U.S.C. § 115(c)(1) (emphasis added). As Professor Nimmer explains in the leading copyright law treatise: "Assuming . . . that the licensee has complied with the formalities required of her, the copyright owner is entitled to royalties under such a [Section 115] license *only if he has theretofore identified himself in the Copyright Office by registration, or other recordation. Failing that identification, the compulsory licensee may make and distribute phonorecords royalty-free*." 2 Nimmer on Copyright § 8.04 (2017) (emphasis added). And 37 C.F.R. § 210.16(g)(4)(ii) confirms that "[t]he Copyright Office will not accept any royalty fees submitted with Monthly Statements of Account under this section."

JPCL124. Thus, where the copyright owner is unknown—under the hypothetical "unmatched" scenario—there is no payment due date under the statute and regulations that is being lapsed.

JPCL125. To the extent that the Copyright Owners are alleging that royalty payments to *identified, matched works* are chronically paid "late", *i.e.*, after the "20th day of the immediately succeeding month" under 37 CFR § 210.16(g)(1), there is simply no evidence in the record that this occurs at all (let alone "chronically").

B. Payments Are "Due" Under Private Agreements According to the Terms of Those Agreements, and Not the Regulations

JPCL126. Where the Services obtain mechanical licenses through voluntary agreements (such as ones administered by the Harry Fox Agency or those made directly with music publishers), often the payment logistics, including timing of payment, are different (and more relaxed) than what is prescribed in the regulations. *See Phonorecords I*, 74 Fed. Reg. at 4524 ("[I]n determining reasonable mechanical rates, we considered evidence that there is little if any actual current use of the Section 115 statutory license even when an identical rate is agreed upon by users and owners."); Opening Br. of RIAA, *RIAA v. Librarian of Congress*, No. 09-1075, 2010 WL 1068121, at *10 (D.C. Cir., filed Feb. 9, 2010) ("Most mechanical licensing is carried out through voluntary licenses issued on behalf of Copyright Owners by The Harry Fox Agency ('HFA')".) (LEXIS cite unavailable). *See also* Trial Ex. 3027, Eisenach WDT ¶ 27 ("[M]usic publishers often grant direct licenses to streaming services, with terms relating to payment schedules and audit structures modified from the 'compulsory' terms."); 3/27/17 Tr. 3220:3-19 (Kokakis) (discussing the different payment timing obligations in direct license deals between publishers and digital services).

JPCL127. And even if the terms of the payment timing obligations in the voluntary agreements are identical to what is required by the regulations, the remedy for late payments will be determined by the agreement itself.

C. Data Matching is an Industry Issue Outside the Scope of this Proceeding

JPCL128. As discussed above, any "matching" issues have nothing to do with whether royalty payments due under Section 115 licenses are being paid in a timely fashion pursuant to the regulations. In connection with matching copyright ownership information for other purposes (such as licensing through private agreement), there is no dispute that the lack of a comprehensive and reliable data source for copyright ownership of musical works is a challenge for the whole industry. *See*, *e.g.*, 3/8/17 Tr. 147:12-17 (Levine) (testifying as to the absence of a publicly available database with complete and accurate ownership information); 3/23/17 Tr. 2959:1-10, 2962:24-2964:1 (Herbison) (acknowledging that transparency of ownership is a problem and that he previously stated the industry's ownership "data is crap").

JPCL129. Both Copyright Office and private industry data sources suffer from serious deficiencies. *See* U.S. Copyright Office, Transforming Document Recordation at the United States Copyright Office, 55-56 (Dec. 2014) (noting that copyright records are "sometimes inaccurate" and have many "shortcomings," including "no standard format in which the information is entered" for some data fields); Statement of Marybeth Peters Register of Copyrights before the U.S. House, Committee on the Judiciary, 25 (Mar. 11, 2004) ("Where there is a [registration or recordation] record, it is not necessarily up to date."); 3/23/17 Tr. 2963:3-23 (Herbison) ("[O]ur data is crap. . . . The data is junk. ASCAP's data system is different from BMI's, which is different from SESAC's, which is different from Harry Fox's.

And even good players in the digital space that want to go get a license . . . they don't know who owns the song. The metadata is junk.").

JPCL130. The Copyright Owners are in the best position to address these data deficiencies, as they possess the relevant information, and can claim their works at any time. But, again, this is a matter outside the scope of this proceeding, because matching ownership data is not relevant to the timeliness of payments being made under the statutory terms being set by this Board.

JPCL131. To the extent that the Copyright Owners are really complaining about late NOIs to invoke the Section 115 license in the first place, based on any matching difficulties—*see, e.g.* 3/27/17 Tr. 3213:10-23 (Kokakis asserting that "the Service makes a decision to illegally use music . . . they are using the music first and then trying to identify the owner of the music after the fact . . . [s]o it is unlicensed content.")—that is an allegation relating to copyright *infringement*, for which the statute already provides extensive remedies (*see* 17 U.S.C. § 504) and which is entirely beyond the purview of this proceeding.[27]

D. The Subpart A Late Fee Does Not Dictate the Addition of a Late Fee in Subpart B

JPCL132. The Copyright Owners argue that "there is no reason why one group of licensees who frequently make late payments (the record labels) [subject to Subpart A] should be subject to a late fee provision while another group of licensees who frequently make late payments (the Digital Services) should not be subject to such a provision." Introductory Memorandum of National Music Publishers' Association and Nashville Songwriters Association International, at A-10. However, as noted above, there is no evidence in the record that the digital services "frequently make late payments" on statutory licenses.

[27] To be clear, such an allegation also lacks merit.

JPCL133. Indeed, there is no evidence in the record that licensees are triggering this late fee under Subpart A.

JPCL134. In *RIAA v. Librarian of Congress*, the court affirmed the Board's decision to institute a 1.5 percent per-month late fee for late royalty payments under Subpart A based on "evidence in the record suggest[ing]" that late payments were a significant problem. 608 F.3d 861, 867 (D.C. Cir. 2010) (citing *Phonorecords I*, 74 Fed. Reg. at 4527, 4550). For example, the Court cited evidence "indicating that payments were frequently made to copyright owners after they were due," based on figures cited in the Copyright Owners' Proposed Findings of Fact as figures reported by *HFA* based on *HFA's direct license agreements*—which the copyright owners characterized in the same Proposed Findings as "'variant[s]'" or "'derivative[s]'" of the Section 115 compulsory license" and noted that HFA's license contains terms that are "variant" from the Section 115 compulsory license. *Determination of Rates and Terms for Mechanical and Digital Phonorecord Delivery Rate Adjustment Proceeding*, Docket No. 2006-3 CRB DPRA (Proposed Findings of Fact of National Music Publishers' Association, Inc., The Songwriters Guild of America, and The Nashville Songwriters Association International, CRB-279) (July 2, 2008), at 318, 324. In the instant case, there is no such evidence. Further, the evidence relied upon by the Board in *Phonorecords I* is irrelevant to the issue of purported late payments under the compulsory Section 115 license—which, unlike private licenses, is the subject of this proceeding. Further, it certainly is not relevant to any issue of "unmatched" works.

JPCL135. In sum, there is no late payment problem with respect to true *Section 115 licenses* (as distinguished from payments made under direct, contractual licenses, that incorporate the Section 115 rate). Any concerns about late payments made under *direct licenses* are properly addressed by the terms of those agreements. Further, any concerns about "*unlicensed*" works are properly addressed through the remedies provided for copyright infringement in Section 504 of the Copyright Act. Thus, there is no basis in the statute or on the evidentiary record for imposing a late fee on statutory mechanical royalty payments.

XVIII. DEFINING "PLAYS" AS STREAMS OF 30 SECONDS OR MORE, AND EXCLUDING FRAUDULENT STREAMS, AVOIDS DISRUPTION AND ALLOCATES FAIR RETURNS TO THE COPYRIGHT OWNERS

JPCL136. As discussed above, the 801(b)(1) factors strongly counsel against disruption of not only the *structure* of the industries involved, but of *prevailing industry practices. See* Section XIV.D, *supra*. Ample record evidence in this proceeding shows that standard industry practice is to define "play" for purposes of mechanical royalties as streams of 30 seconds or more. Moreover, defining "play" in this way also ensures fair returns to the Copyright Owners under the second 801(b)(1) factor because it avoids allocating money in the royalty pool to skips and fraudulent streams, ensuring that only those works consumers are actually *listening to*—and only those legitimate, non-fraudulent works—are receiving royalties.

JPCL137. Further, the Services' proposals all support preserving currently-existing regulations (with, in some instances, limited modifications), based on both the 801(b)(1) factors and on the Services' experts' benchmarks. While the term is not explicitly defined in the current regulations, because this industry term of art was the product of a settlement between music industry players in *Phonorecords I* and *II*, one must by necessity look to standard industry practice for the definition. That definition clearly bespeaks to limiting "play" to streams of 30 seconds or longer.

A. "Play" Is an Industry Term of Art, and The Industry Defines "Plays" As Streams of 30 Seconds or More

JPCL138. 37 C.F.R. § 385.12 sets forth how a service should calculate royalty payments. There, the regulations provide for a "per-work royalty allocation," which is determined by "dividing the payable royalty pool…by the total number of *plays* of all such musical works through such offering during the accounting period…to yield a *per-play* allocation" (emphasis added). Unlike, for example, under Section 114 for non-interactive services, "play" is not currently explicitly defined in the regulations or under Section 115. *Cf.* 37 C.F.R. § 380.7 (114 regulations) (defining "Performance" as "each instance in which *any portion* of a sound recording is publicly performed to a listener") (emphasis added).

JPCL139. Because the language in the regulations was adopted from the *Phonorecords I* and *Phonorecords II* settlements, it necessarily follows that the participants in those settlements were abiding by industry definitions of what the term means. It is common industry practice in interactive streaming to consider a song "played" only if it has been streamed for 30 seconds or more.

JPCL140. Not only would defining "play" in this manner comport with the common understanding of the industry, in line with the fact that *Phonorecords I* and *Phonorecords II* were settlements made between industry participants, but Section 801(b)(1)(D) further counsels against disrupting that industry practice. *Id.* (stating that the Board must determine rates that "minimize any disruptive impact on the structure of the industries involved *and on generally prevailing industry practices*") (emphasis added); *see also Mills Music, Inc. v. Snyder*, 469 U.S. 153, 171, 105 S. Ct. 638, 649, 83 L. Ed. 2d 556 (1985) (assuming that Congress intended to incorporate prevailing industry practice when it enacted the Copyright Act).

B. Limiting Plays to Those Streams of 30 Seconds or More (and Excluding Fraudulent Streams) Also Allocates Fair Returns to the Copyright Owners

JPCL141. Limiting plays to those streams of 30 seconds or more also allocates fair returns to the Copyright Owners, by making sure that only those works that are actually *played and listened to by a user,* rather than skipped, are adequately compensated. *See* 17 U.S.C.

§ 801(b)(1)(B) (setting forth the policy objective of affording "the copyright owner a fair return"). In fact, the Services' proposed definition limiting streams to those over 30 seconds (excluding tracks that are in their entirety under 30 seconds), and excluding fraudulent streams, addresses precisely the type of revenue dilution issues that the Copyright Owners are concerned about. *See* Trial Ex. 3032, Rysman WRT n.24. Professor Rysman accurately notes in his WRT that "the royalty pool is allocated based on percentage of streams." *Id.* He then points to past fraudulent practices by artists, such as a well-publicized stunt by one band who released a 5-minute long album composed of tracks, each just over 30 seconds. *See id.* (citing Trial Ex. 2711 (*Forbes* article)). The band encouraged its fans to play the album on repeat while they were sleeping, netting the band a total of $20,000 for these repeat streams. *See id.* Professor Rysman complains that such a practice could be used to "dilute royalties." *Id.*

JPCL142. Professor Rysman provides a classic example of fraudulent practices by artists, and the Services' proposed term seeks to introduce clarity and discourage exactly the type of royalty dilution the Copyright Owners are concerned about. Notably, if there were no 30 second stream limitation on the definition of "play," nor an added clarification that Services need not pay on fraudulent streams—or, moreover, a change to the statute that requires Services to pay on *all* streams, no matter the duration or with regard to fraudulent practices—then artists could take advantage of this loophole by releasing albums of nothing more than a few short seconds of "tracks," racking up royalties *at the expense of other, legitimate artists*. *Cf.* Trial Ex. 3032, Rysman WRT n.24.

JPCL143. The Services' proposed clarification to the definition of "play" therefore ensures that the royalty pool is not diluted or manipulated, that only tracks consumers are *listening to* and therefore receiving *value* from are counted, and that rightsholders will be receiving fair allocations for those *actual* plays pursuant to the second policy objective of 801(b)(1).

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Respectfully submitted,

MAYER BROWN LLP

/s/ A. John P. Mancini / AYL

A. John P. Mancini
Xiyin Tang
Florina Yezril
1221 Avenue of Americas
New York, New York 10020-1001
Telephone: (212) 506-2295
jmancini@mayerbrown.com
xtang@mayerbrown.com
fyezril@mayerbrown.com

Richard M. Assmus
Kristine M. Young
71 South Wacker Drive
Chicago, Illinois 60606
Telephone: (312) 701-8623
rassmus@mayerbrown.com
kyoung@mayerbrown.com

Anita Y. Lam
Peter O. Schmidt
1999 K Street NW
Washington, DC 20006
Telephone: (202) 263-3492
pschmidt@mayerbrown.com
alam@mayerbrown.com

Counsel for Spotify USA Inc.

WINSTON & STRAWN LLP

/s/ Michael S. Elkin / AYL

Michael S. Elkin
Thomas Patrick Lane
Daniel N. Guisbond
Stacey Foltz Stark
200 Park Avenue
New York, NY 10166
Telephone: (212) 294-6700
Facsimile: (212) 294-4700
melkin@winston.com

tlane@winston.com
dguisbond@winston.com
sfstark@winston.com

Counsel for Amazon Digital Services, Inc.

WEIL, GOTSHAL & MANGES LLP

/s/ Benjamin E. Marks/AYL
Benjamin E. Marks
Jacob Ebin
Jennifer Ramos
767 Fifth Avenue
New York, NY 10153
Telephone: (212) 310-8170
Facsimile: (212) 310-8007
benjamin.marks@weil.com
jacob.ebin@weil.com
jennifer.ramos@weil.com

Peter D. Isakoff
1300 Eye Street, NW, Suite 900
Washington, D.C. 20005
Telephone: (202)682-7000
Facsimile: (202) 857-0940
peter.isakoff@weil.com

David R. Singh
Hong-An Tran
WEIL, GOTSHAL & MANGES LLP
201 Redwood Shores Parkway
Redwood Shores, CA 94065
Telephone: (650) 802-3010
Facsimile: (650) 802-3100
david.singh@weil.com
an.tran@weil.com

Counsel for Pandora Media, Inc.

KING & SPALDING LLP

/s/ Kenneth Steinthal /KYL

Kenneth Steinthal
Joseph Wetzel
Katherine E. Merk
Ivana Dukanovic
101 Second Street
Suite 2300
San Francisco, CA 94105
Telephone: (415) 318-1200
Facsimile: (415) 318-1300
ksteinthal@kslaw.com
jwetzel@kslaw.com
kmerk@kslaw.com
idukanovic@kslaw.com

J. Blake Cunningham
401 Congress Avenue
Suite 3200
Austin, TX 78701
bcunningham@kslaw.com

David P. Mattern
1700 Pennsylvania Avenue
Suite 200
Washington, D.C. 20006
dmattern@kslaw.com

Counsel for Google Inc.

CERTIFICATE OF SERVICE

I hereby certify that on May 11, 2017, I caused a copy of the foregoing PUBLIC version of the Services' Joint Proposed Findings of Fact and Conclusions of Law to be served by email to the following parties listed below:

SERVICE LIST

Michael S. Elkin Thomas Patrick Lane Daniel N. Guisbond Stacey Foltz Stark Winston & Strawn, LLP 200 Park Avenue New York, NY 10166 melkin@winston.com tlane@winston.com dguisbond@winston.com sfstark@winston.com *Counsel for Amazon Digital Services, Inc.*	R. Bruce Rich Todd D. Larson Benjamin E. Marks David R. Singh Jennifer Ramos Jacob Ebin Weil, Gotshal & Manges LLP 767 Fifth Avenue New York, NY 10153 bruce.rich@weil.com todd.larson@weil.com benjamin.marks@weil.com david.singh@weil.com jennifer.ramos@weil.com jacob.ebin@weil.com Gary Greenstein Wilson Sonsini Goodrich & Rosati PC 1700 K Street, NW, Fifth Floor Washington, DC 20006-3817 ggreenstein@wsgr.com *Counsel for Pandora Media, Inc.*

Dale Cendali Johanna Schmitt Mary Mazzello Claudia Ray Kirkland & Ellis LLP 601 Lexington Avenue New York, NY 10022 dale.cendali@kirkland.com johanna.schmitt@kirkland.com mary.mazzello@kirkland.com claudia.ray@kirkland.com *Counsel for Apple Inc.*	Kenneth Steinthal Joseph Wetzel Katherine E. Merk Ivana Dukanovic King & Spalding LLP 101 Second Street, Suite 2300 San Francisco, CA 94105 ksteinthal@kslaw.com jwetzel@kslaw.com kmerk@kslaw.com idukanovic@kslaw.com J. Blake Cunningham King & Spalding LLP 401 Congress Avenue Suite 3200 Austin, TX 78701 bcunningham@kslaw.com David P. Mattern King & Spalding LLP 1700 Pennsylvania Avenue Suite 200 Washington, D.C. 20006 dmattern@kslaw.com *Counsel for Google Inc.*

Donald S. Zakarin Frank P. Scibilia Lisa M. Buckley Benjamin K. Semel James A. Janowitz William L. Charron Marion R. Harris Joshua Weigensberg Kaveri Arora Dasha Chestukhin Pryor Cashman LLP 7 Times Square New York, New York 10036-6569 dzakarin@pryorcashman.com fscibilia@pryorcashman.com lbuckley@pryorcashman.com bsemel@pryorcashman.com jjanowitz@pryorcashman.com wcharron@pryorcashman.com mharris@pryorcashman.com jweigensberg@pryorcashman.com karora@pryorcashman.com dchestukhin@pryorcashman.com *Counsel for National Music Publishers Association (NMPA) and Nashville Songwriters Association International (NSAI)*	Steve Bene Pandora Media, Inc. 2100 Franklin St., Suite 700 Oakland, CA 94612 sbene@pandora.com *Pandora Media, Inc.*
Elizabeth Miles Robert Windom David Weiskopf Apple Inc. 1 Infinite Loop MS 169-41SM Cupertino, CA 95014 elizabeth.miles@apple.com windom@apple.com dweiskopf@apple.com *Apple Inc.*	Google Inc. 1600 Amphitheatre Parkway Mountain View, CA 94043 kevingm@google.com *Google Inc.*

David M. Israelite Danielle M. Aguirre Erich C. Carey 975 F Street, NW Suite 375 Washington, DC 20004 disraelite@nmpa.org daguirre@nmpa.org ecarey@nmpa.org *National Music Publishers Association (NMPA)*	Barton Herbison Jennifer Turnbow 1710 Roy Acuff Place Nashville, TN 37203 bart@nashvillesongwriters.com *Nashville Songwriters Association International (NSAI)*
George Johnson GEO Music Group 23 Music Square East, Suite 204 Nashville, TN 37203 george@georgejohnson.com *GEO Music Group*	

/s/Anita Lam
Anita Lam