

Before the  
COPYRIGHT ROYALTY BOARD  
LIBRARY OF CONGRESS  
Washington, D.C.

In the Matter of:

DETERMINATION OF RATES  
AND TERMS FOR MAKING AND  
DISTRIBUTING PHONORECORDS  
(PHONORECORDS III)

Docket No. 16–CRB–0003–PR  
(2018–2022)

**PROPOSED FINDINGS OF FACT  
OF COPYRIGHT OWNERS**

**PUBLIC VERSION**

PRYOR CASHMAN LLP  
7 Times Square  
New York, New York 10036-6569  
Phone: (212) 421-4100  
Facsimile: (212) 326-0806

*Attorneys for Copyright Owners*

*Of Counsel:*

Donald S. Zakarin  
Frank P. Scibilia  
Lisa M. Buckley  
Benjamin K. Semel  
Email: dzakarin@pryorcashman.com  
fscibilia@pryorcashman.com  
lbuckley@pryorcashman.com  
bsemel@pryorcashman.com

## COMMONLY-USED ABBREVIATIONS

TERM/ABBREVIATION	DEFINITION
CARP	Copyright Arbitration Royalty Panel
CO	Copyright Owners
COF	Copyright Owners' Proposed Findings of Fact
COL	Copyright Owners' Proposed Conclusions of Law
Copyright Law	Title 17 of the U.S. Code
COR	Copyright Owners' Proposed Rate
CORS	Copyright Owners' Proposed Rate Structure
CRB	Copyright Royalty Judges
First Factor	17 U.S.C. § 801(b)(1)(A)
Fourth Factor	17 U.S.C. § 801(b)(1)(D)
HX	Hearing Exhibit
Judges	Copyright Royalty Judges
MW	Musical Work
NOI	Notice of Intent
PROs/PRO	Performance Rights Organizations
RMs	Revenue-Based Models
Second Factor	17 U.S.C. § 801(b)(1)(B)
SR	Sound Recording
TCC	Total Content Cost
The Four Services	Google, Spotify, Pandora & Amazon
The Services	Apple, Google, Spotify, Pandora & Amazon
Third Factor	17 U.S.C. § 801(b)(1)(C)
Tr.	Hearing Transcript
Tribunal	Copyright Royalty Tribunal
WDT	Written Direct Testimony
WRT	Written Rebuttal Testimony
WST	Written Supplemental Testimony

### *Note on Pending Motions*

The COs have moved to exclude a number of survey and internal reports that Spotify introduced at the hearing, on the grounds that they are unreliable hearsay and/or unreliable surveys and analyses without, in either case, a foundation for admission. As of the date of this filing, those motions have not been granted. The COs continue to believe that the motions should be granted, but until then consider it necessary to address the material in two of these documents (HX-215 and HX-997, each a MusicWatch survey), much of which contradicts Spotify's arguments.

TABLE OF CONTENTS

I. THE COPYRIGHT OWNERS AND MUSIC PUBLISHERS.....1

II. THE COPYRIGHT OWNERS’ PROPOSED RATE STRUCTURE AND TERMS (THE “CORS”) ARE APPROPRIATE AND SERVE THE FOUR SECTION 801(B)(1) POLICY FACTORS .....3

    A. Maximizing Availability of Creative Works (“First Factor”).....3

    B. Fair Return For COs and Opportunity For Fair Income For Services (“Second Factor”) .....11

        1. The Current Approach Of Including Streams Of Any Length Is Appropriate .....20

    C. Relative Roles (“Third Factor”).....23

    D. Minimize Industry Disruption (“Fourth Factor”) .....24

    E. The CORS Is Reasonable For All Interactive Streaming Uses .....31

    F. The CORS Late Fee Term Is Appropriate.....33

III. THE COPYRIGHT OWNERS’ RATE (“COR”) IS REASONABLE AND CONSISTENT WITH THE 801(b)(1) POLICY OBJECTIVES.....39

    A. The Publishing And Songwriting Industries Are Suffering Losses In Mechanical Income While Interactive Streaming Use and Number Of Users Booms .....39

        2. Publishers Provide A Variety Of Services That Add Value To The Music Industry, Incurring Substantial Costs And Assuming Substantial Risk .....39

        3. The Publishing Industry's Mechanical Revenues Are Declining .....53

        4. Despite Declining Mechanical Revenues, Interactive Streaming Has Grown Dramatically .....57

    A. Shapley Value Analysis Supports The COR .....58

        1. Shapley Is An Excellent Economic Model To Evaluate And Fulfill The 801(b)(1)(B) and (C) Policy Objectives.....58

- 2. Marx, Gans, And Watt Shapley Analyses All Support COR.....61
- B. The Copyright Owners’ Benchmark Analysis Supports The Proposed Rate .....65
  - 1. The Benchmark Of Interactive Service Label Deals Is An Excellent Comparable .....65
  - 2. Relative Value Benchmark Analysis Is A Robust Approach To Establishing A Reasonable Rate .....66
    - a. The Eisenach Benchmark Survey Shows A Reasonable Range Of Rates Based On The Ratio Between Sound Recording Right And Musical Work Rights .....66
    - b. The YouTube Benchmark Is An Excellent Comparable.....69
    - c. Pandora Opt-Out Agreements .....74
  - 3. Dr. Eisenach Calculates Reasonable Rates Based On The Benchmark Ratios.....75
  - 4. The Copyright Owners’ Rate Is Below What Fair Market Benchmarks Indicate The Copyright Owners Would Obtain In A Free Market .....77
  - 5. Spotify Data Is Not Appropriate For Inclusion In The Benchmark Analysis.....79
- C. The Copyright Owner’s Proposed Rate Should Not Be Adjusted Downwards.....83
  - 1. There Are No Grounds For An Adjustment For Disruption Under 801(b)(1)(D).....83
    - a. The Range Of Historical Royalties Is Consistent With The Copyright Owners’ Rate .....83
    - b. The Copyright Owners Rate Will Not Disrupt The Viability Of The Interactive Service Industry.....84
    - c. The Interactive Streaming Industry Is Thriving .....86
    - d. Services Have Presented No Evidence That The CORS Or COR Would Cause Industry Disruption .....93

- e. Service Viability Is Driven By Massive Competition For Valuable Market Share And Growth, Not By Mechanical Royalty Rates.....98
- 2. There Is No Evidence Supporting An Adjustment For “Market Power” ..... 104
  - a. The Record Contains No Evidence Of Abuse Of Market Power ..... 104
  - b. The Record Contains No Evidence To Indicate Sound Recording Licenses Are Unfair Or Reflect Undue Market Power ..... 106
- IV. THE SERVICES’ PROPOSED RATE STRUCTURES FAIL TO SATISFY THE STATUTORY POLICY OBJECTIVES..... 109
  - A. The Percentage Of Revenue Based Models (RMs) That The Services, Other Than Apple, Propose To “Roll Forward” - Even As They Propose To Materially Modify Them Downward - Are Unreasonable And Inconsistent With The Policy Objectives ..... 109
    - 1. The 2008 and 2012 Settlements Were Experimental And Were Not To Be “Rolled Forward” But Determined De Novo In Future Proceedings ..... 109
    - 2. The Services Have Provided No Economic Basis Or Evidence To Support Rolling Forward The Current Rate Structure, With Or Without The Changes They Propose ..... 112
      - a. TCC Prong Has Definitional And Enforcement Problems ..... 112
      - b. The Services Provided No Evidence Nor Explanation For How Different Per-User Minima Were Determined, Or Whether They Are Still Valid, Assuming They Ever Had An Economic Basis To Begin With..... 113
      - c. The Services’ Proposed Definition of “Service Revenue” Allows For Royalty Avoidance ..... 114
    - 3. RMs Do Not Fairly Compensate The Rightsholders Because Services Have Adopted Business Models That Defer And/Or Displace Revenue..... 115
      - a. Some Services Engage In Revenue Deferment, To The Detriment of Copyright Owners ..... 116

- b. Some Services Engage in Displacing Revenue To Other Parts Of Their Ecosystems To The Detriment of Copyright Owners ..... 119
        - c. The Services’ Focus In This Proceeding On Their Financial Performance Under GAAP Provides An Incomplete And Inaccurate Picture Of Their Financial Performance ..... 137
        - d. The Services’ Own Witnesses Admit That They Displace Revenue, And The Difficulties Measuring Revenue Are Indisputable ..... 138
        - e. Streaming Cannibalizes Revenues From Multiple Other Distribution Channels ..... 146
  - B. Every Service Proposal Involves An “All-In” Rate Structure, Offsetting Mechanical Income Against Public Performance Income, For Which There Is Neither Statutory Authority Nor Evidence ..... 148
  - C. Apple’s Proposed “All-In” Per Play Rate Structure Is Unreasonable And Inconsistent With The Policy Objectives ..... 154
    - 1. Apple’s Proposal Leads To Some Services Paying Zero Mechanical Royalties For Billions Of Plays ..... 154
    - 2. Apple’s Proposal Ignores Value Of On-Demand Access That Separates Interactive From Noninteractive As Reflected In The Copyright Owners’ Proposed Rates And Terms ..... 155
  - D. RM Services Have No Economic Grounds For Their Proposed Rate Structure; They Are Simply Trying To Lower Rates ..... 157
    - 1. There Can Be No “Reliance” On The Current Rates ..... 157
    - 2. Removal Of Mechanical Floors Is Purely An Attempt To Sharply Reduce Mechanical Royalty Payments Below Their Already Low Rate ..... 160
- V. THE SERVICES’ PROPOSED RATES ARE UNREASONABLE..... 162
  - A. Apple’s Proposed Per-Play Rate Is Unreasonable And Not Consistent With Policy Objectives ..... 162
    - 1. There Is No Economic Basis For The Conversion Ratio Benchmark..... 162
      - a. RIAA..... 163

- b. The Aguiar/Waldfoegel Working Paper ..... 164
      - c. Charts ..... 169
    - 2. Downloads And Streams Are Not Equivalentents ..... 175
    - 3. Apple’s Rate Proposal Would Drastically Reduce Royalty Payments And Lead To Zero-Dollar Royalty Payments..... 176
  - B. The Interactive Services’ Proposed Rates Are Unreasonable And Not Consistent With Policy Objectives ..... 177
    - 1. Current Statutory Rates And Direct Deals Under The Compulsory Shadow Are Not Useful Benchmarks..... 177
      - a. The Statutory Rate Is a Ceiling For Agreements Made In Its Shadow ..... 177
      - b. Subpart A Is Not A Useful Benchmark ..... 180
      - c. The Market Has Changed Dramatically Since The Current Statutory Rates And Terms Were Negotiated ..... 181
      - d. The Marx Shapley Delivers A Relative Ratio Of Value Between Sound Recording And Musical Works Licenses Of ■ ..... 183
      - e. The Statutory Rate For Ownership Is Not Informative About The Market Rate For Access..... 184
    - 2. Marx’s Shapley Analysis Suffers From Serious Flaws..... 184
- C. The Threat Of Piracy Is Not A Basis For Reducing Statutory Rate, Nor Did The Services Eradicate It..... 192

**I. THE COPYRIGHT OWNERS AND MUSIC PUBLISHERS**

The National Music Publishers' Association ("NMPA")

COF-1. The National Music Publishers' Association is a nonprofit trade association comprised of music publishers whose catalogs represent the vast majority of musical compositions licensed for mechanical uses in the United States. (Israelite WDT ¶¶ 9, 10 (HX-3014))

Nashville Songwriters Association International ("NSAI")

COF-2. NSAI was established in 1967 as an advocacy group for the American songwriting profession. It is the largest not-for-profit songwriter association in the world, representing some 5000 writers to advocate for the legal and economic interests of songwriters. In addition to representing songwriters on Capitol Hill, it provides a wide variety of service for the benefit of its songwriter members, including educational and professional activities. (Herbison WDT ¶¶ 8-10, (HX-3015))

Sony/ATV Music Publishing ("SATV")

COF-3. SATV owns and/or administers approximately 3 million musical works on its own behalf and on behalf of EMI. (Tr. 4480:4-7 (Brodsky))

COF-4. In addition to current songwriters, SATV owns or administers, on its own behalf, and on behalf of EMI, catalogues of existing musical works including iconic catalogues such as the Lennon/McCartney, Leonard Cohen, Bob Dylan, Sting, Queen, Motown, the MGM and Paramount film catalogues, among others. (Tr. 4480:12-21 (Brodsky))

COF-5. All of the relevant information to obtain a license for SATV and EMI songwriters is listed on SATV's website. It is freely available to the Services, as well as anyone else who wish to access the information. (Tr. 4483:11-16 (Brodsky))

Universal Music Publishing Group (“UMPG”)

COF-6. UMPG owns or administers close to 4 million songs. (Tr. 3192:15-18 (Kokakis))

COF-7. Some of UMPG’s current artists include Adele, Coldplay, Justin Timberlake, Justin Bieber, Ariana Grande, Selena Gomez, among many others. (Tr. 3192:19-23 (Kokakis))

COF-8. In addition, UMPG owns or administers copyrights in catalogues of existing works, including the catalogues of Neil Diamond, Billy Joel, Paul Simon, catalogues containing jazz standards, classical music catalogues, and R&B catalogues, such as Def Jam Music. (Tr. 3193:17 (Kokakis))

Warner/Chappell Music Publishing (“Warner/Chappell”)

COF-9. Warner/Chappell owns or administers some 1.3 million songs, including many of the most successful songs and music catalogues. The songwriters include Led Zeppelin, Cole Porter, John Williams and James Brown. Warner/Chappell also administers or co-publishers songs written by such contemporary writers as Katy Perry, Kendrick Lamar, Twenty one Pilots and Vance Joy. (Yocum WDT ¶ 8 (HX- 3021))

BMG Music Publishing (“BMG”)

COF-10. BMG is an international music publisher established in 2008. From 2008, BMG has grown its catalogue from 2000 songs to 2.5 million today and in fact, the entirety of its revenue growth over the period is a consequence of the growth in its catalogue. Its catalogue includes songs written by Elvis Presley, John Denver, the Black Eyed Peas, Steven Tyler and Joe Perry (of Aerosmith), Andy Grammar, Bruno Mars, Burt Bacharach, Hal David, David Bowie, Frank Ocean, John Legend, Johnny Cash, Kurt Cobain, Mick Jagger and Keith Richards (of the Rolling Stones). (Barron WDT ¶ 5 (HX-3020); Tr. 4549:5-4550:7, 4558:2-4559:23 (Barron))

Downtown Music Publishing (“Downtown”)

COF-11. Downtown Music Publishing is one of the leading independent music publishers and royalty collection platforms. It was founded in 2007 by Justin Kalifowitz with one employee and has grown to over 50 employees. It has acquired the catalogues of such songwriters as John Lennon and Yoko Ono, Bruce Springsteen, Hans Zimmer, Motley Crue, Imogen Heap, Jason Isbell, Sturgill Simpson and One Direction. Since its founding in 2007, it has grown its revenues largely by picking up new clients. (Tr. 3932:21-3933:4 (Kalifowitz); Kalifowitz WDT ¶ 4 (HX-3022))

**II. THE COPYRIGHT OWNERS’ PROPOSED RATE STRUCTURE AND TERMS (THE “CORS”) ARE APPROPRIATE AND SERVE THE FOUR SECTION 801(B)(1) POLICY FACTORS**

**A. Maximizing Availability of Creative Works (“First Factor”)**

COF-12. Unlike a percent of revenue based mechanical royalty rate structure, a per-play royalty rate structure provides transparency and simplicity in reporting to songwriters and publishers, requiring only the number of reported streams multiplied by the rate, making it much easier to calculate, report and understandable to songwriters. (Rysman WDT ¶ 56 (HX-3026); Wheeler WDT ¶ 19 (HX-1613); Ghose WDT ¶ 83 (HX-1617); Ramaprasad WDT ¶ 41 (HX-1615); Tr. 2476:16-2478:2 (Dorn); Tr. 2855:22-2856:14 (Ghose))

COF-13. A transparent metric tied to actual usage is superior to a metric based on service revenue which can be manipulated through bundling, discounting, accounting techniques and the pursuit of market share in lieu of profits. (Rysman WDT ¶¶ 43-45 (HX-3026))

COF-14. A per-play royalty rate structure requires only one metric for calculation besides the rate itself: the number of streams. (Brodsky WDT ¶ 76 (HX-3016); Ghose WDT ¶ 84 (HX-1617))

COF-15. A per-user royalty rate structure requires only one additional metric (beyond the number of plays) for calculation: the number of users. (Brodsky WDT ¶ 76 (HX-3016))

COF-16. Unlike the cumbersome and convoluted current rate structure, under which the Services are required to perform a series of greater of and lesser of calculations, which are different for different business models, in order to even determine which prong of the rate structure is operative (before rendering statements and payments which end up allocating royalties on a per-play basis to Copyright Owners), a per-play royalty rate structure would simplify royalty reporting and payment. (Wheeler WDT ¶ 5 (HX-1613))

COF-17. A simple and transparent royalty structure incentivizes songwriters to create musical works and make them available, because it fosters a level of trust and certainty regarding the royalty payments songwriters are receiving. (Rysman WDT ¶ 56 (HX-3026); Tr. 2477:5-16; 2480:15-2481:10 (Dorn))

COF-18. The current rate structure under the statute, by contrast, is complex and many of the required inputs are not easily verifiable by songwriters and publishers. (Brodsky WDT ¶ 76 (HX-3016); Ghose WDT ¶ 80, 81, 82 (HX-1617); Ramaprasad ¶ 4, 38, 42-44 (HX-1615); Rysman WDT ¶ 57 (HX-3026); Tr. 2865:15-24 (Ghose); Tr. 824:8-17 (Joyce); Tr. 2477:5-2478:2 (Dorn))

COF-19. Under the current rate structure, there are wide variations in the royalty rates payable and being paid by different services and the royalty payments to songwriters and publishers are not correlated to either the volume of streaming activity or the number of users of a service but instead depend on the specific business model adopted by the particular streaming service, whether ad-supported, subscription based or bundled, creating uncertainty, fluctuation

and unpredictability in actual payments to songwriters. (Tr. 2862:13-21 (Ghose); Joyce WDT ¶ 21 (HX-693))

COF-20. Under a per-play mechanical royalty rate structure, services are free to adopt any business model they choose without advantaging any one business model over another in the payment of mechanical royalties or disadvantaging any songwriter based on the particular service whose customers are streaming the songwriter's songs. The business model adopted by a streaming service will not dictate either the rate or quantum of mechanical royalties that will be payable to the songwriters and publishers, who will be paid on the same transparent, fixed amount per stream - whether calculated on a per-stream or a per-user basis - whereas under a percentage of revenue rate structure, one service may pay more (or less) per stream than another service (and, indeed, frequently default to statutory minima). (Tr. 2863:2-15, 2849:9-12 (Ghose))

COF-21. Under a per-play royalty rate structure, there is no decoupling of the value of a stream from the consumption of music. As consumption increases, the mechanical royalties will increase because copyright owners will be paid based on actual demand for and use of their songs. (Tr. 2872:5-17 (Ghose))

COF-22. As the Copyright Royalty Board has previously noted, there is a natural connection between usage and fair returns, stating that “[D]ramatically expanded usage without a corresponding expectation of increased compensation suggests an upward adjustment to the existing statutory rate is warranted . . . [the copyright user's] planned increase in usage . . . argues in favor of an increase in the rates going forward to fairly compensate the licensors for the additional performance.” (Rysman WDT ¶ 73, N68 (HX-3026); SDARS II Final Rule, 78 Fed. Reg. 23,053, 23,060 (April 17, 2013))

COF-23. A royalty based on the number of plays or number of users who have obtained access to the music aligns the compensation paid to the creators of the content with the actual demand for and consumption of their content, whether it is the consumption of streams (per play) or the consumption of subscriptions or access (per user). (Ghose WDT ¶ 84 (HX-1617); Rysman WDT ¶¶ 9, 58 (HX-3026); Dorn WDT ¶ 33 (HX-1611))

COF-24. Per-play royalty rates compensate songwriters and publishers directly based on the actual usage of their songs. (Rysman WDT ¶ 56 (HX-3026); Tr. 2661:13-24 (Ramaprasad); 2851:8-13 (Ghose))

COF-25. As David Israelite testified, “tying the statutory rate to a narrowly defined version of the Services’ revenues (one that excludes sources of revenue such as the sale of other products linked to the sale of music) as opposed to users’ consumption -- the basis of most statutory rates, including the rates for Subpart A products such as downloads and ringtones -- results in publishers and songwriters being paid less and less on an effective per-play basis as consumption increases . . . . It is counterintuitive for something that is so highly valued that it gets played more and more to earn less. (Israelite WDT ¶ 39 (HX-3014))

COF-26. As Dr. Hubbard testified, Prime Music [REDACTED]  
[REDACTED]  
[REDACTED]. Prime Music [REDACTED]  
[REDACTED]. (Exhibit 1 to Hubbard  
WRT (HX-133); Hubbard WRT ¶ 2.22 (HX- 129); Tr. 5971:1-5972:8 (Hubbard))

COF-27. Yet, as Dr. Hubbard also admitted, at the same time that [REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED] (Hubbard WRT ¶ 3.9; Tr. 5971:1-5973:21 (Hubbard))

COF-28. As Dr. Hubbard admitted, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 5972:11-5973:21 (Hubbard))

COF-29. To incentivize songwriters to continue to create new songs, there must be sufficient and fair returns for the creative effort. The creation of additional works is an ongoing process, requiring the investment that is made by Publishers in discovering and developing new songwriters and providing advances to both new and existing songwriters to support and sustain their creation of new works. (Rysman WDT ¶ 69 (HX-3026); Kelly WDT ¶¶ 24-36 (HX-3017); Sammis WDT ¶¶ 10, 11, 18-35 (HX-3019); Yocum WDT ¶¶ 10-15, 20-29 (HX-3021); Brodsky WDT ¶¶ 12-33 (HX 3016); Kokakis WDT ¶¶ 12-21, 39-44 (HX 3018); Tr. 2923:9-13 (Herbison))

COF-30. The market exit of songwriters, which has been dramatic, with the number of songwriters in Nashville alone plummeting from over 4000 twenty years ago to only 400 to 500 today, due in part to the continuing drop in mechanical royalties and consequent inability of songwriters to earn a living and the corresponding drop in available publishing deals, will inevitably result in a decreased availability of new songs. (Rysman WDT ¶ 69 (HX-3026); Herbison WDT ¶¶ 7, 25, 31-36 (HX-3015); Bogard WDT ¶¶ 5, 40-49 (HX-3025); Rose WDT ¶ 33 (HX-3024); Barron WDT ¶ 60 (HX-3020); Kelly WDT ¶ 2 (HX-3017); Yocum WDT ¶ 2 (HX-3021))

COF-31. A royalty rate structure that assures that creators will be rewarded for their successful creation of new songs will enhance the availability of new songs and by increasing the body of available new songs, will increase the likelihood that among such songs will be the “standards” of the future. (Rysman WDT ¶ 69 (HX-3026); Yocum WDT ¶ 62 (HX-3021), Sammis WDT ¶ 55 (HX-3019), Kelly WDT ¶ 68 (HX-3017), Brodsky WDT ¶ 110 (HX-3016), Kalifowitz WDT ¶ 35, 39 (HX-3022))

COF-32. Songwriters reasonably expect that the mechanical royalties they will receive will correspond to the demand for their songs as reflected in the number of streams. A rate structure that decouples royalties from usage reduces the economic incentive for a songwriter to create new songs. (Ghose WDT ¶ 53 (HX-1617); Brodsky WDT ¶¶ 56, 57 (HX-3016); Kokakis ¶¶ 48-54 (HX-3018); Dorn WDT ¶ 7 (HX-1611))

COF-33. The songwriters will be incentivized to create new works by fair compensation. (Tr. 2658:18-2659:2 (Ramaprasad); Yocum WDT ¶ 62 (HX-3021); Sammis WDT ¶ 55 (HX-3019); Kelly WDT ¶ 68 (HX-3017); Brodsky WDT ¶ 110 (HX-3016); Kalifowitz WDT ¶¶ 35, 49 (HX-3022))

COF-34. Interactive streaming is dramatically increasing, both in terms of users and numbers of streams, but because the current royalty structure decouples royalties from such growth in both exploitation and consumption, songwriters do not understand why their royalty payments do not reflect the popularity of their songs and the payments they receive make no sense to them. (Ramaprasad ¶ 47 (HX-1615), n.85; Ramaprasad WDT ¶ 65, 66 (HX 1615))

COF-35. Music publishers provide financial support to both new and existing songwriters by paying advances against royalties that may or may not be earned in the future, advances that music publishers have been able to fund by virtue of the income generated by their

existing catalogues. For more than a century, it has been the income generated by current songs that support the ability of music publishers to finance the investment in the songwriters of tomorrow and the creation of tomorrow's popular songs. Music publishers also bear the very significant costs to market, promote and arrange for the worldwide exploitation and licensing of the songs. They track the exploitation of the songs, collect and process all of the income received from thousands of users and issue royalty statements to the writers and composers. They protect the copyrights against unauthorized use, both through their in-house counsel and through outside litigation counsel. (Kelly WDT ¶¶ 11, 24-36 (HX-3017); Sammis WDT ¶¶ 18-35 (HX-3019); Yocum WDT ¶¶ 10-29 (HX-3021))

COF-36. In or around 2014, Amazon saw that its customers were migrating “in droves” from downloading to streaming and concluded that the sale of downloads was not going to be a long-term business. As streaming has replaced the sale of physical recordings and downloads, songwriters have experienced a decline in mechanical royalties. (Bogard WDT ¶¶ 32, 33, 38, 43 (HX-3025); L.T. Miller WDT ¶ 7 (HX-3023); Rose WDT ¶ 29 (HX-3024); Herbison WDT ¶ 33 (HX-3015); Tr. 1458:5-1461:4, 1462:25-1464:16 (Mirchandani))

COF-37. As Professor Zmijewski, an accounting expert for the Services (other than Apple), admitted in his written rebuttal report, the data obtained from both the NMPA and music publishers confirms that mechanical royalties from physical records and digital downloads have dropped as interactive streaming has substituted for the purchases of physical records and digital downloads but the increased mechanical royalties from interactive streaming services have not been sufficient to replace the lost mechanical royalties from the sale of physical records and digital downloads. Professor Zmijewski admitted that, in those instances where music publishers have received increased mechanical income, he has not considered the fact that the growth has

come from either increased market share or the growth in the publisher's catalogues, although he admitted that such growth would have an impact on revenues. (Zmijewski WRT ¶¶ 38, 49-52, 69, 79-80, 91-92, 97, 104-106 (HX-1070); Tr. 5819:11-17, 5820:14-5823:3, 5823:8-5824:22, 5842:2-24-5844:3, 5848:9-5850:8 (Zmijewski))

COF-38. Many songwriters have already left the profession and even today's successful songwriters will be forced to exit the profession if the compulsory mechanical rate structure does not change, as they are unable to make a living under the current structure as streaming becomes a primary method of music consumption. (Bogard WDT ¶ 5, 39, 46, 47, 49 (HX-3025); L.T. Miller WDT ¶ 11 (HX-3023); Rose WDT ¶ 2, 22, 33 (HX-3024); Brodsky WDT ¶¶ 77-81 (HX-3016); Ramaprasad ¶ 63 (HX-1615); Herbison WDT ¶¶ 22-24, 31-36 (HX-3015))

COF-39. Songwriting is a full-time job. There is no assurance that any song written will achieve any success or even be recorded and even if a successful song is written, it often is only after years of effort. Songwriters devote long hours and significant effort to creating songs. (Bogard WDT ¶¶ 20, 43 (HX-3025); L.T. Miller WDT ¶ 12 (HX-3023); Rose WDT ¶ 32 (HX-3024); Ramaprasad WDT ¶ 63 (HX-1615))

COF-40. For the songwriters "there is obviously some mental and physical cost, but there is also an opportunity cost." (Tr. 2847:25-2848:13 (Ghose))

COF-41. Songwriters depend on advances from music publishers to sustain their lives while they devote themselves to writing. (Rose WDT ¶ 22 (HX-3024); Kelly ¶¶ 27-33 (HX-3017); Sammis ¶¶ 22-27 (HX-3019); Yocum ¶¶ 18-23 (HX-3021); Brodsky ¶¶ 29-33 (HX-3016); Kokakis ¶¶ 20, 40-43 (HX-3018))

COF-42. Spotify's expert Dr. Marx admitted that including a per-play rate in a royalty rate structure does not compel a licensee to charge a per-play fee to its users. She further admitted that she has no evidence that a per-play royalty structure would have a material effect on the pricing decisions of streaming services. (Tr. 2009:6-9, 2024:11-2025:2 (Marx))

COF-43. Dr. Marx also admitted that Spotify's ad-supported service already exacts a user-facing per-play price from its users in the form of advertisements. (Tr. 2010:7-2011:18, 2014:13-24 (Marx))

COF-44. Dr. Marx testified that, under the current rate structure, there is a deadweight loss under the subscription model because some consumers would get value from the service but are unwilling to pay the subscription fee. As such, retaining the current structure will not eliminate the deadweight loss perceived by Dr. Marx and adoption of the Copyright Owners' proposed rates and terms will not alter the fact that there are consumers who are unwilling to pay. (Tr. 2019:22-2020:10 (Marx))

COF-45. Dr. Marx admits that even for an ad-supported service, there is some deadweight loss because there are a significant number of users for whom advertisements exact a cost. (Tr. 2014:13-2016:16 (Marx))

**B. Fair Return For COs and Opportunity For Fair Income For Services ("Second Factor")**

COF-46. Songs have value, representing the investments in time, effort and money by the music publishers and songwriters in their creation. (Israelite WRT ¶ 66 (HX-3030); Tr. 2851:18-24, 2852:11-2854:10, 2863:16-2864:11 (Ghose))

COF-47. Songs are the foundation for the value of the music industry, without which there are no recordings and without which interactive music streaming services would

have no content to offer their users. (Brodsky WDT ¶ 8 (HX-3016); Ghose WDT ¶ 51 (HX-1617))

COF-48. Dr. Marx agrees that an increase in plays of music is associated with an increase in economic value and consumer surplus. (Tr. 2004:25-2005:11 (Marx); Marx WDT ¶¶ 38-40 (HX-1065))

COF-49. Because plays of music have economic value, as Dr. Marx testified, per-play royalties are “a feature of a number of statutorily set and some privately negotiated rates.” (Marx WDT ¶ 134 (HX-1065))

COF-50. The ability to play virtually any song at any time in any location is of great value to consumers. Such value is vigorously promoted to consumers by interactive services, including by participants Spotify and Apple Music. (Brodsky WDT ¶¶ 53-54, 111-121 (HX-3016); Kalifowitz WDT ¶¶ 32, 50 (HX-3022); Israelite WRT ¶ 44 (HX-3030); Barron WDT ¶ 29 (HX-3020); Page WDT ¶¶ 65, 67 (HX-1061); Rysman WDT ¶ 58 (HX-3026))

COF-51. Songwriters and publishers, through their hard work and investment, create and provide the massive catalogs of songs that make it possible for streaming services like Apple, Spotify, Google Play and Tidal to offer access to catalogues of over 30 million songs. (Kalifowitz WDT ¶¶ 32, 50 (HX-3022); Brodsky WDT ¶¶ 53-54, 111-121 (HX-3016); Ramaprasad WDT ¶ 68 (HX-1615))

COF-52. A vast catalog of songs available from the services eliminates the need to purchase 30 million individual songs (or any songs, for that matter). (Hubbard WRT ¶ 2.8 (HX-132); Ghose WDT ¶¶ 46, 50 (HX-1617))

COF-53. There is a benefit of mobility and the elimination of the need to store digital files or physical products. These music libraries are vastly larger than any individual

could have in his or her personal music collection, and that any individual could physically store on a smartphone or other device. This vastly larger library of music also promote an increased diversity of listening. (Ramaprasad WDT ¶ 68 (HX-1615); Marx WDT ¶ 38 (HX-1065); Hubbard WRT ¶¶ 3.3-3.6 (HX-132))

COF-54. Dr. Eisenach notes that on-demand access to music is a substantial value, separate and apart from the value obtained from listening to music (which alone can be obtained from non-interactive sources and radio at lower costs), which is why on-demand services market the size of the catalogs they offer, and why they feel the need to obtain (and provide to their users) access to the full repertoires of the major publishers and record labels, as well as songs of major independent publishers and labels. (Eisenach WRT ¶ 51 (HX-3033))

COF-55. Michael Herring, President of Pandora Media, Inc., admits that “a big part of why people are paying for the subscription, the value proposition, is that they can hear a specific song when they enter it.” So instead of millions of songs, a service needs tens of millions of songs. (Tr. 938:8-939:6 (Herring))

COF-56. Spotify's economic expert Dr. Marx testified that an increase in immediate access to an extensive catalogue of songs is associated with an increase in economic value as measured by an increased willingness to pay for a service that offers such access. (Tr. 2004:8-24 (Marx))

COF-57. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED] (Tr. 208:19-209:14 (Levine))

COF-58. As Spotify's witness Will Page testified, the economic value of access to music comes into play even in the context of physical phonorecords and permanent digital downloads, where the user pays a fee to access the music that has been reproduced on the physical phonorecord or download. (Tr. 1799:12-1801:22 (Page))

COF-59. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (HX-113, at p. 6-7; Tr. 2228:3-22 (Hubbard))

COF-60. Google's economic expert, Dr. Leonard, admitted that access to a large library of music has value even if a user never streams all or many of the songs in the library. (Tr. 1100:8-1101:11 (Leonard))

COF-61. Dr. Marx also agrees that an increase in music experimentation is likely to increase consumer surplus or economic value. (Tr. 2005:12-15 (Marx))

COF-62. Dr. Ghose agrees that consumers value the option to stream music that comes with access, apart from any value in plays, and that this calls for a per-user rate to compensate for situations where access is given but there are no plays. In fact, as reflected in

[REDACTED]  
[REDACTED]  
[REDACTED]. (HX-113 at pp. 6-7; Tr. 5730:6-5733:10 (Ghose))

COF-63. Dr. Ghose testified that a per-subscriber rate best reflects the value that a consumer derives from a paid locker service because a user gets the benefit not only of streaming the songs but also being able to store them. (Tr. 5730:6-5731:3 (Ghose); Ghose WDT ¶ 90 (HX-1617))

COF-64. As Dr. Watt testified, the “all you can eat” unlimited access business model is akin to a buffet. The service (or the buffet owner) may lose money on certain users that stream (or eat) more than the norm, but it makes more on users that stream (or eat) at below the norm. (Watt WRT ¶¶ 12, 17 (HX-3034))

COF-64A. [REDACTED], *i.e.*, in agreements made between interactive streaming services and record labels.

[REDACTED]	HX-2737	Exhibit A ¶ 1 , p. A-1 (at AMZN00004714) Fees Annex , p. A-8 (at AMZN00004721)
[REDACTED]	HX-2740	Exhibit B Schedule B-1 ¶ 6, p. 6 (at AMZN00004801) Annex 1-A (at AMZN00004807)
[REDACTED]	HX-2739	Exhibit , p. 35-36 (at AMZN00004949-50)
[REDACTED]	HX-1589	¶ 1(mm), p. 5 (at APL-PHONO_00008932) Exhibit C (at APL-PHONO_00008964)
[REDACTED]	HX-1590	¶ 1(mm), p.P6 (at APL-PHONO_00008981) Exhibit C (at APL-PHONO_00009013)

[REDACTED]	HX-776	¶ 1(nn) , p. 7 (at APL-PHONO_00009027) Exhibit C (at APL-PHONO_00009066)
[REDACTED]	HX-3220	Exhibit G ¶ (a) , p. 10 (at GOOG-PHONOIII-00003495)
[REDACTED]	HX-3219	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003440)
[REDACTED]	HX-3221	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003523)
[REDACTED]	HX-3224	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003999)
[REDACTED]	HX-3223	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003607)
[REDACTED]	HX-3222	Exhibit G ¶ (a) , p. 6 (at GOOG-PHONOIII-00003541)
[REDACTED]	HX-388	Exhibit A, p. 8 (at GOOG-PHONOIII-00000353)
[REDACTED]	HX-974-40	¶ 3(c) (at PAN_CRB115_00097974)
[REDACTED]	HX974-45	¶ 3(c), p. 7 (at PAN_CRB115_0097479)
[REDACTED]	HX-0974-69	¶ 3(c), p. 10 (at PAN_CRB115_00098027)
[REDACTED]	HX-0974-58	¶ 3(c) , p. 11 (at PAN_CRB115_00094059)
[REDACTED]	HX-0974-70	¶ 11, p. 11 (at PAN_CRB115_00094108)
[REDACTED]	HX-0974-85	¶ 3(c), p. 7 (at PAN_CRB115_00097455)
[REDACTED]	HX-2762	Schedule 1 ¶ 3.1 (at PAN_CRB115_000093983)

[REDACTED]	HX-2770	¶ 11, p. 10 (at PAN_CRB115_00094172)
[REDACTED]	HX-2765	¶ 10, p. 27-28 (at SPOTCRB0005574-5) Exhibit H P46 (at SPOTCRB0005593)
[REDACTED]	HX-2760	Schedule B (at SPOTCRB0005285) Annex 5 (at SPOTCRB0005380)
[REDACTED]	HX-925	¶ 6(b), p. 28 (at SPOTCRB0006245) Rate Card (at SPOTCRB0006331)

COF-65. Per-user rates are, unsurprisingly, also common in deals between interactive services and music publishers, which are made under the shadow of the compulsory license. For example, [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Brotsky WDT ¶¶ 73, 85, 89, 98-105 (HX-3016))

COF-66. Every subscription music streaming service is priced to the user as an “all you can eat” unlimited access service. (Rysman WDT ¶ 58 (HX-3026))

COF-67. Because value is inherent in access - [REDACTED]  
[REDACTED]  
[REDACTED] - rightsholders should not be expected to provide free interactive access to their entire repertoires with no guaranteed minimum payment. (Rysman WDT ¶ 58 (HX-3026); (HX-113, pp. 6-7))

COF-68. Pandora’s listeners were having pain points around features that Pandora’s ad-supported, non-interactive streaming service and its ad-free non-interactive tier lacked and

which were causing listeners to use other services. “Pain points” included limits on skips, no ability to replay songs and no offline use so that its listeners could not access the music anytime and anywhere. (Tr. 391:14-25 (Phillips))

COF-69. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr.

946:22- 947:8, 948:12-15 (Herring); HX-2694; Tr. 393:6-11; 393:12-16 (Philips))

COF-70. Pandora redesigned its service to incorporate interactive features, including adding some interactive features to its ad-free service, now called Pandora Plus, and adding a full on demand service called Pandora Premium. The subscription price for Pandora Plus is \$4.99 and the subscription price for Pandora Premium is \$9.99. (Tr. 394:18-25 (Philips))

COF-71. [REDACTED]

[REDACTED]

[REDACTED]	HX-120	¶ 7(f), p. 4 (at AMZN00001695)
[REDACTED]	HX-121	¶ 5(f), p. 4 ( at AMZN00001336)
[REDACTED]	HX-122	¶ 5(f), p. 4 ( atAMZN00001620)
[REDACTED]	HX-123	¶ 5(e), p. 5 (at AMZN00001707)
[REDACTED]	HX-168	¶ 5(f) p. 3 (at DR0000101)
[REDACTED]	HX-158	¶ 7(f), p. 4 (at AMZN00001369)

[REDACTED]	HX-2737	¶ 5(a), p. 8 (at AMZN00004699)
[REDACTED]	HX-2740	¶ 10(b), p. 8 (at AMZN0004786)
[REDACTED]	HX-2739	¶ 7.2, p. 11 (at AMZN00004925)
[REDACTED]	HX-2598	¶ 4, p. 2 (at SONY-ATV00000998)
[REDACTED]	HX-2597	¶ 4, p. 2 (at SONY-ATV00001266)
[REDACTED]	HX-371	Exhibit B ¶ III, p. 12 (at GOOG-PHONOIII-00000208)
[REDACTED]	HX-380	¶ 4, p. 2 (at GOOG-PHONOIII-00000273)
[REDACTED]	HX-390	¶ 4, p. 2 (at GOOG-PHONOIII-00000380)
[REDACTED]	HX-2531	¶ 4A, p. 2 (at BMG00000210)
[REDACTED]	HX-2604	¶ 6, p. 5 (at SONY-ATV00001768)
[REDACTED]	HX-2603	¶ 6, p. 5 (at SONY-ATV00000660)
[REDACTED]	HX-2614	¶ 5(a) p. 6 (at WC00000358)
[REDACTED]	HX-0974-01	p. 2 (at PAN_CRB115_00094093)

[REDACTED]	HX-2762	Schedule 1 (at PAN_CRB115_00093982)
[REDACTED]	HX-2770	¶ 10, p. 9 (at PAN_CRB115_94171)
[REDACTED]	HX- 924	¶ 4, p. 5 (at SPOTCRB0006033)

COF-72. The current regulations all allocate royalties on a per-play basis at the conclusion of the calculation of the payable royalty pool. *See, e.g., 37 C.F.R. § 385.12(b)(4).* Interactive streaming marketplace agreements for sound recording rights also employ the same type of allocation method. For example, an agreement between [REDACTED]

1. The Current Approach Of Including Streams Of Any Length Is Appropriate

COF-72A. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	HX-1589	¶ 1(xx), p. 7 (at APL-PHONO_00008934)
[REDACTED]	HX-1590	¶ 1(uu), p. 7 (at APL-PHONO_00008982)
[REDACTED]	HX-776	¶ 1 (aaa), p. 9 (at APL-PHONO_00009029)

COF-73. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 5349:15-5350:1,

5350:14-22, 5351:5-11, 5352:5-21, 5354:7-5357:11, 5357:19-5358:4 (Vogel))

COF-74. Dr. Hubbard states that “the length of streams is not explicitly reported” to HFA, but “promotional streams, which are typically streams less than 30 seconds in length,” are excluded from the mechanical rate calculation. However, Dr. Hubbard incorrectly conflates “promotional streams” with any stream on Spotify of less than 30 seconds. But a “promotional stream” has a precise definition in the existing regulations that have nothing to do with streams of less than 30 seconds. Promotional streams are streams that are offered in the context of a free trial period for a Section 115 subscription streaming service, and that are authorized by a record company that owns the sound recordings that are the subject of the promotion. (Hubbard WRT ¶ 6.9, n.149 (HX-22), citing 37 C.F.R. § 385.14; 6.10; 37 C.F.R. §§ 385.14((a)(1); 385.14 (b))

COF-75. Dr. Hubbard's attempt to borrow an entirely-inapplicable (and carefully-circumscribed) statutory provision regarding promotions authorized by record labels that are subject to a zero rate, and apply it to justify reporting on streams only of 30 seconds in length or longer has no basis in the current regulations and reflects only his misunderstanding of the regulations, which he acknowledged. (Tr. 5994:3-5995:13 (Hubbard))

COF-76. The per-user prong of the Copyright Owners' proposal aligns the interests of the Copyright Owners with the interests of the interactive services. The services are paid subscription fees for the access they provide to the music created by the Copyright Owners regardless of actual usage. Copyright Owners too should be assured of payment for such access as both services and Copyright Owners will have an interest in maximizing the number of users. (Brodsky WDT ¶ 73 (HX-3016); Kokakis WDT ¶ 69 (HX-3018))

COF-77. There is a benefit of mobility and the elimination of the need to store digital files or physical products. These music libraries are vastly larger than any individual could have in his or her personal music collection, and that any individual could physically store on a smartphone or other device. This vastly larger library of music also promote an increased diversity of listening. (Ramaprasad WDT ¶ 72 (HX-1615); Marx WDT ¶ 38 (HX-1065); Hubbard WRT ¶¶ 3.3-3.6 (HX-132))

COF-78. The per-user prong of the Copyright Owners' rate proposal provides protection to the Copyright Owners where users are paying services for access which they do not fully utilize or where there is piracy of songs through the service. The service is paid for the access to music it provides to consumers regardless of usage and so should the Copyright Owners who created the music for which the services are paid. (Kokakis WDT ¶ 69 (HX-3018))

COF-79. A percentage of revenue structure “basically decouples demand from actual payment.” (Tr. 5712:6-23 (Ghose))

COF-80. A rate structure that decouples compensation from demand will disincentivize songwriters and publishers to create and distribute new musical works. (Dorn WDT ¶ 33 HX-1611))

COF-81. In the digital environment, interactive streaming services are the functional equivalent of the distributors and brick and mortar retailers that sold recordings (and before that, sheet music) under the historical business model. (Israelite WRT ¶ 45 (HX-3030); CO. Ex. R171 (HX-325))

**C. Relative Roles (“Third Factor”)**

COF-82. The greater of a per-play and per-user rate structure places a value on the copyrighted work that does not depend on the business objectives and pricing models of services, which may be subject to incentives to defer revenue to the future, or to recognize or drive revenue to other products or services. (Rysman WDT ¶ 89 (HX-3026); Tr. 2862:13-21, 2863:2-15, 2851:8-13 (Ghose); Tr. 2661:13-24 (Ramaprasad); Tr. 5955:8-5956:23, 5957:12-5959:15 (Hubbard))

COF-83. Mr. Dorn explained that the risks Apple faced as a streaming service market entrant were no different than risks faced in other industries, and does not justify insulating services from their business judgments and forcing rightsholders to share in those risks by departing from the standard fixed per-unit cost structure. (Dorn WDT ¶ 60 (HX-1611))

COF-84. A per-play rate rewards services for innovation and incentivizes innovation by not requiring a service to share the upside of revenue generated by such innovation. (Dorn WDT ¶ 64 (HX-1611); Ramaprasad WDT ¶ 76 (HX-1615); Tr. 2660:2-7, 2865:2-11 (Ramaprasad))

COF-85. A per-play rate structure properly allocates risk and reward; basically, each party gets what it contributes. The payment is commensurate with the actual contribution. For example, with a per-play rate, when a service increases its revenue by developing attractive features that allows it to charge higher advertising prices than its competitors, or by creating perks in addition to the opportunity to stream music that draws subscribers to the service, it is rewarded because it can keep these gains. A payment structure that balances risk and reward, and is commensurate with actual demand, encourages parties to innovate and maximize profits. (Tr. 2873:4-11 (Ghose); Dorn WDT ¶ 64 (HX-1611))

COF-86. Dr. Gans explained how the CORS appropriately balances relative contributions and risk, allowing the Services to keep the gains from their innovation, while not passing on the downside of their unilateral business decisions on to the COs. (Tr. 4184:13-4185:24; 3978:5-3987:8 (Gans))

COF-87. Dr. Gans testified about the importance of per-unit rates to ensure the proper division of risks and rewards, and questioned why the services were lobbying for a rate that would force them to share their upside with licensors. (Tr. 4043:5-4047:25 (Gans))

COF-88. Dr. Rysman also testified that the CORS properly reflects relative roles. (Tr. 4262:9-4271:15 (Rysman))

COF-89. Dr. Ghose further supported the idea that a per-unit rate structure balances relative contributions by appropriately allocating risk and reward between the upstream and downstream (Ghose WDT ¶¶ 62-81 (HX-1617); Tr. 2848:11-2851:13 (Ghose))

**D. Minimize Industry Disruption (“Fourth Factor”)**

COF-90. As noted above (*see* COF-64A), per-user rates are near-universal in the marketplace outside of the statutory context. They are also surprisingly common in publisher deals negotiated under the shadow of the compulsory license. For example, [REDACTED]

[REDACTED] (See, e.g., HX-2787, at KOBALT00000012; HX-3386, at SONY-ATV00000235, 239; HX-1432, at APL-PHONO\_00005381, 5385; HX-1434, at APL-PHONO\_00005389; HX-1435, at APL-PHONO\_00005400; HX-731, at BMG00000093) [REDACTED] [REDACTED] (Tr. 2555:1-22, 2557:5-2558:2 (Dorn); HX-1432; HX-1590; Brodsky WDT ¶ 89 (HX-3016); see, e.g., HX-371, at GOOG-PHONOIII-00000206; HX-390, at GOOG-PHONOIII-00000380; HX-2616, at PAN\_CRB115\_00088933; HX-974-01, at PAN\_CRB115\_00094095; HX-749, at SONY-ATV00001604; HX-748, at SONY-ATV00001243)

COF-91. [REDACTED]

[REDACTED] (Tr. 826:24-827:9 (Joyce))

COF-92. [REDACTED]

[REDACTED] (Tr. 829:6-12 (Joyce))

COF-93. [REDACTED] (Rysman WDT ¶ 60 (HX-3026); Tr. 829:8-12 (Joyce))

COF-94. Apple’s own proposal includes a per-user prong for paid locker services, touting such a rate as simple to implement and understand. (Dorn WDT ¶ 92 (HX-1611); Ghose WRT ¶ 90 (HX-1617))

COF-95. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1633:4-1634:12 (Mirchandani); HX-162; HX-163; HX-164)

COF-96. Because plays of music have economic value, as Dr. Marx testified, per-play royalties are “a feature of a number of statutorily set and some privately negotiated rates.”

(Marx WDT ¶ 134 (HX-1065))

COF-97. Dr. Katz acknowledges that some of the Services’ voluntarily-negotiated label deals provide for payments to the labels on a per-play basis. (Tr. 5075:19-23 (Katz))

COF-98. Several of the Services’ voluntarily negotiated label deals provide for payments to the labels on a per-play basis. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1560:11-1570:5

(Mirchandani))

[REDACTED]	HX-2736 (amending HX-2618 and HX-1146)	¶ 7.1,p. 4 (at AMZN00063087)
[REDACTED]	HX-976 (amending HX-3006)	¶ 3(ii) (at AMZN00053866)
[REDACTED]	HX- 975	Exhibit A (at AMZN00001198)
[REDACTED]	HX-2760	Annex 5 (Fees Annex) (at SPOTCRB0005380)
[REDACTED]	HX-925	Rate Card (at SPOTCRB0006331)

	HX-2765	Exhibit H p. 46 (at SPOTCRB0005593)
---	---------	--

COF-99. In fact, in *Phonorecords I*, the then-existing services, represented by DiMA, proposed minimum per-play mechanical royalty payments for limited download services (DiMA proposed no rates for interactive streaming services because they were taking the position at that time that no mechanical rights are implicated in interactive streams). DiMA stated that their proposed minima “recognize that business models are evolving and that both subscription and ‘non’-subscription offerings may develop more over the next five years.” DiMA proposed a per-play minimum of \$0.00129 per play for plays of limited downloads to non-subscribers. (HX-322 ¶ 28, p. 13)

COF-100. Even the current rate structure results in the payment of royalties on a per-play basis (albeit one that can vary by time period and service). In fact, the Services are required to account for and report royalties on a per-stream basis for purposes of allocating payments to publishers and songwriters based on actual consumption, even though the mechanical royalty pool is not based on consumption under the current rate structure. (Rysman WDT ¶ 44 (HX-3026), n 47 (HX-790, at Kobalt 00000305); Tr. 1490:10-1494:3 (Mirchandani), HX-3059; Leonard WRT ¶ 183 (HX-698))

COF-101. The Services claim that a per-play royalty will lead to cost uncertainty or perverse incentives for services to set limits on consumption but, in fact, as Dr. Ghose testified at length, such an assertion is demonstrably untrue. (Levine WDT ¶¶ 20, 21 (HX-695); Tr. 1625:7-23 (Mirchandani); Tr. 2878:13-25 (Ghose))

COF-102. A per-play rate structure is not disruptive because once you fix a per-play rate, it is not difficult for the streaming services to predict the number of streams it can expect

during a particular time period based on data they already collect and, based on that data, to predict the amount of mechanical royalties to be paid to songwriters and publishers. (Tr.

2878:13-25 (Ghose))

COF-102A. [REDACTED]

[REDACTED]

[REDACTED]. (Kokakis WRT ¶¶ 4-5, 9 (HX-3031))

[REDACTED]	HX-1074	p. 3 (at UMPG00002279)
[REDACTED]	HX-1075	p. 16 (at UMPG00002305)
[REDACTED]	HX-1076	p. 6 (at UMPG00002315)

COF-103. Most, if not all, of the streaming services employ very smart data scientists, some of whom are economists, some of whom are computer scientists, to create predictor models. The ability of the streaming services to predictor forecast costs once you fix a per-play rate is not complicated. (Tr. 2875:10-2877:1. 2877:8-2879:20 (Ghose))

COF-104. A per-play rate structure is business model agnostic. (Tr. 2871:11-22 (Ghose))

COF-105. A per-play rate structure makes it easier for ad-supported services because if they are able to predict demand accurately, they would know how many streams are going to be streamed for a given song or a given genre of songs, then they can insert the appropriate quantity and frequency of ads and can price the ads appropriately. (Tr. 2887:11-2893:22 (Ghose))

COF-106. A per-play rate is consistent with the rate structure used for other music distribution platforms. (Dorn WDT ¶ 13 (HX-1611); Tr. 1564:22-1568:2 (Mirchandani))

COF-107. Dr. Katz testified in support of a per-play rate in *Web IV*. (Rysman WRT ¶ 49 (HX-3032))

COF-108. Spotify has presented no evidence to support its assertion that the 50-cent per-subscriber minimum in the current rate structure disincentivizes Spotify from offering discounts. In fact, Spotify currently offers pricing discounts such as its student plans. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 5334:14-5337:9 (Vogel))

COF-109. [REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 792:18-25 (Joyce))

COF-110. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 1741:15-1742:14, 1801:23-1802:19 (Page))

COF-111. [REDACTED]  
[REDACTED] (Tr. 2151:3-2152:24 (McCarthy))

COF-112. As Dr. Ghose testified, because of their experience with their users over time and the data they collect, it is not difficult for the Services to forecast the level of streaming on their services, and so a per-play rate would not “cause any disruptive surprises for streaming services.” (Tr. 2877:4-2879:20 (Ghose))

COF-113. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

COF-114. [REDACTED]

[REDACTED]

COF-115. [REDACTED]

[REDACTED]

[REDACTED]. (Tr. 2868:8-12 (Ghose))

COF-116. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Mirchandani WRT 9/9/

3, 46 (HX-111))

COF-117. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1472:4-16, 1474:3-1475:15, 1570:14-1571:16  
(Mirchandani); HX-1373, at AMZN00076220; HX-3007)

**E. The CORS Is Reasonable For All Interactive Streaming Uses**

COF-118. A locker service involves making a copy of a copyrighted work separate from the original copy that is purchased. (Tr. 5746:5-16 (Ghose))

COF-119. The Services offer two reasons why rates for locker services should be different. They argue that paid locker services “only allow consumers to listen to music they already own.” They also argue that, for the purchased locker, the rate should be zero because the service “is merely for ability to re-download [a purchased] song to [a user’s] device. (Dorn WRT ¶ 4.8 (HX-1612); Tr. 2520:22-2521:2 (Dorn))

COF-120. However, as a matter of technology or copyright law, there is no difference between a stream that is delivered to a user via a “locker” business model and a stream delivered to a user via any other interactive streaming business model (*e.g.*, portable standalone subscription). In all cases, [REDACTED]

[REDACTED]. (*See, e.g.*, Google’s Amended Response to Copyright Owners’ Second Set of Interrogatories, Response to Interrogatory No. 14 (HX-3372))

COF-121. As is the case with “standard” interactive streaming services, [REDACTED]  
[REDACTED]. (Google’s Amended Response to Copyright Owners’ Second Set of Interrogatories, Response to Interrogatory No. 14 (HX-3372); Tr. 829:22-830:12 (Joyce))

COF-122. [REDACTED]  
[REDACTED] (Amazon’s Response

to Copyright Owners' Second Set of Interrogatories, Response to Interrogatory No. 14

[REDACTED]

[REDACTED]

COF-123. As Mr. Mirchandani admitted, locker services never scaled for Amazon or anyone. (Tr. 1458:5-1461:4 (Mirchandani))

COF-124. Google offers a locker service, which is a "scan and match" locker service similar to a paid locker service, which it gives away for free to both subscribers and non-subscribers. (Joyce WDT ¶¶ 6-9 (HX-693); Tr. 269:7-9 (Levine))

COF-125.

[REDACTED]

[REDACTED]

(Tr. 829:22-830:12 (Joyce))

COF-126.

[REDACTED]

[REDACTED]

[REDACTED]

(Tr. 829:17-21, 831:9-12 (Joyce))

COF-127. While the Services were very interested in locker services during the negotiations of the 2012 settlement, these services have decreased in popularity and significance, as permanent downloading has become less prevalent and interactive streaming has become more prevalent. (Tr. 159:25-160:11 (Levine); Kokakis WDT ¶ 82 (HX-3018))

COF-128. Lockers are essentially tied to an ownership model, and the evidence is clear that consumers are shifting away from purchasing downloads and CDs towards interactive streaming. (Israelite WDT ¶ 70 (HX-3014); Kokakis WDT ¶ 45 (HX-3018); Mirchandani WDT ¶ 33(HX-1))

COF-129. A locker service gives users access to all of their music without the inconvenience of physically carrying a collection of CDs. It is because of this ease of access that

paid locker services may charge a subscription fee, a portion of which is paid (as royalty payments) to copyright owners. (Ghose WDT ¶¶ 89-90 (HX-1617))

COF-130. Apple once had a paid locker service, but it no longer offers it to new customers. (Tr. 2523-2524 (Dorn))

COF-131. Amazon offers a free locker service that allows anyone to access tracks or albums purchased at Amazon's music store and up to 250 additional music files on their hard drive (and acquired through alternative channels). Because it is offered for free, Amazon's locker service is not technically a paid locker service under the regulations. Amazon does offer a paid locker service that permits users to access up to 250,000 tracks (*i.e.*, if on the user's hard drive and matched to Amazon's server copy) for a fee of \$24.99 per year. (Hubbard WDT ¶ 3.1 (HX-22); Mirchandani WDT ¶ 16 (HX-1))

**F. The CORS Late Fee Term Is Appropriate**

COF-132. Interactive services, despite their status as technology and data companies, have not been able to fulfill their tracking and payment obligations. Mechanical royalty payments by digital services are chronically late. The duration in the delays in paying royalties has, in some cases, been more than [REDACTED]. Some mechanical royalties are, in fact, not paid at all, not paid in full, or paid to the wrong entity. (Israelite (HX-3014) WDT ¶¶ 49-53 (HX-3014); Brodsky WDT ¶ 74 (HX-3016); Kokakis WDT ¶ 67 (HX-3018); Kelly WDT ¶ 63 (HX-3017); Kalifowitz WDT ¶ 33 (HX-3022); Barron WDT ¶ 31 (HX-3020); Sammis WDT ¶ 52 (HX-3019); Yocum WDT ¶ 58 (HX-3021))

COF-133. Delayed royalty payments compound the problem of declining mechanical income, and are particularly problematic for songwriters who are dependent on the receipt of such income. Such delays also negatively affect publishers' return on investment and return on capital employed, force publishers to expend additional capital, and further increase the difficulty

that some publishers face in forecasting income from both new and existing songs. (Kelly WDT ¶ 65-66 (HX-3017); Sammis WDT ¶ 52-53 (HX-3019); Yocum WDT ¶ 59-60 (HX-3021))

COF-134. Spotify and the National Music Publishers' Association recently reached a [REDACTED] settlement to compensate songwriters and music publishers for years of unmatched songs and unpaid royalties. (Kalifowitz WDT ¶ 33 (HX-3022))

COF-135. While some interactive services have blamed incomplete copyright ownership data for their payment shortcomings, those services are responsible for a number of data problems, including poor data management practices, bad data merges once clean data is ingested by the Digital Services, and sloppy practices maintained by third party vendors to whom the Digital Services outsource the responsibility of matching publishing data to usage within the Digital Services concerned. (Kokakis WDT ¶ 67 (HX-3018))

COF-136. There is a procedure in place under the Copyright Act for a licensee to get a license when they cannot locate the copyright owner. This includes filing an NOI with the Copyright Office. Thus, assuming that the Services could not properly, after an attempt to do so, identify the copyright owner(s), they have the means under the Copyright Act to avoid liability. (Tr. 3882:20-3883:14 (Israelite))

COF-137. A simpler and more straightforward means of calculating mechanical royalties – such as the simple per-stream rate – rather than the methods under the current statutory rate structure should simplify reporting and payment and alleviate some of the delays in payment and accounting. (Kelly WDT ¶ 67 (HX-3017); Sammis WDT ¶ 54 (HX-3019); Yocum WDT ¶ 61 (HX-3021))

COF-138. Timely payment will allow music publishers to more accurately forecast income (which is important in modeling advances and evaluating deals), and to continue to

invest in the discovery, development, exploitation and administration of new and existing music.  
(Sammis WDT ¶¶ 53-55 (HX-3019); Yocum WDT ¶¶ 59-61 (HX-3021))

COF-139. Late fees are warranted. First, labels are paying late fees when accountings are in arrears. And with the interactive services, publishers encounter the same problem they experienced with the labels for years, which resulted in the adoption of the late fee provision in the current regulations: improper accountings, payments amounting to tens of millions of dollars in revenue that are held by the services for many years before they are paid through to the publishers and songwriters. In some instances, services use the unpaid royalties as interest free loans that they use to defray their expenses. The unpaid royalties are not deposited into segregated interest bearing accounts. The services exploit songs on a current basis and “try” to identify the owner after the fact even as they continue to exploit songs that they know they have not paid on. The Copyright Act provides a specific statutory method enabling the services to exploit songs where the owners cannot be identified but the services do not adhere to the statutory formalities. (Tr. 3211:12-3214:2 (Kokakis); Tr. 3882:20-3883:14 (Israelite))

COF-140. Google’s interrogatory responses confirm that [REDACTED]  
[REDACTED] Google’s Amended Response to Copyright Owners’  
Second Set of Interrogatories show that [REDACTED]  
[REDACTED]. These responses further prove that [REDACTED]  
[REDACTED]. (Response to  
Interrogatory No. 7 & Appendix B (HX-3372))

COF-141. [REDACTED]  
[REDACTED]

[REDACTED] (HX-553; Tr. 808:3-810:14 (Joyce))

COF-142. [REDACTED]

[REDACTED]

[REDACTED] (Brodsky WDT ¶¶ 74-75 (HX-1617); Tr. 3286:19-3288:6 (Kokakis))

COF-143. As several witnesses testified, the source of the “data problems” lies not with the publishers or songwriters. Copyright Owners such as Universal Music Publishing Group and Sony/ATV Music Publishing make all of their song data available to the Services on their websites or web portals. That information includes song title, writer, ISWC code (a songwriter works code) and, where available, an ISRC code (a sound recording code). On the other hand, the Services and the third party vendors to whom they outsource the responsibility of matching publishing data to usage within the Services concerned engage in poor data management practices and bad data clean is ingested. (Tr. 3286:19-3288:6 (Kokakis); Kokakis WDT ¶ 67 (HX-3018); Brodsky WDT ¶¶ 74-75 (HX-3016))

COF-144. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 3288:7-3289:3 (Kokakis))

COF-145. By way of example, Services have engaged in automated processes to search Copyright Office records, and such processes have resulted in the Services claiming to be unable to identify the owners of songs by even such writers as Billy Joel, Paul Simon or Jon Bon Jovi, whose ownership could plainly have been identified from those records with minimal (manual) effort. (Tr. 3286:19-3289:11 (Kokakis))

COF-146. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	HX-2615	¶ 6 (d) and (e), p. 6 (at BMG00000277)
[REDACTED]	HX-2610	¶ 6 (c) and (d), p. 6 (at DR00000006)
[REDACTED]	HX-2604	¶ 8 (d) and (e), p. 8 (at SONY-ATV00001771)
[REDACTED]	HX-2616	¶ 6 (c) and (d), p. 6 (at PAN_CRB115_00088935)
[REDACTED]	HX-2603	¶ 8 (d) and (e), p. 9 (at SONY-ATV00000664)
[REDACTED]	HX-2614	¶ 7 (c) and (d), p.10-11 (at WC00000362-3)

	HX-749	¶ 8(d) and (e), p. 3-4 (at SONY-ATV00001605-6)
	HX 748	¶ 8(d) and (e), p. 3-4 (at SONY-ATV00001244-5)
	HX-2600	¶ 5(c) and (d), p. 12 (at SONY-ATV000001901)
	HX--2599	¶ 5(c) and (d), p. 12 (at SONY-ATV000001695)
	HX-2577	¶ 5(c) and (d), p. 10 (at SONY-ATV00000126)
	HX-2576	¶ 5(c) and (d), p. 10 (at SONY-ATV00000090)

COF-147. INTENTIONALLY OMITTED

**III. THE COPYRIGHT OWNERS' RATE ("COR") IS REASONABLE AND CONSISTENT WITH THE 801(b)(1) POLICY OBJECTIVES**

**A. The Publishing And Songwriting Industries Are Suffering Losses In Mechanical Income While Interactive Streaming Use and Number Of Users Booms**

**1. Publishers Provide A Variety Of Services That Add Value To The Music Industry, Incurring Substantial Costs And Assuming Substantial Risk**

COF-148. Music publishers play a significant role in the creation and exploitation of songs. They discover new songwriters and provide advances and other financial support to songwriters. They provide creative support, such as by arranging collaborations between songwriters, and promoting songs to recording artists, record labels, and other potential licensees. They negotiate and administer licenses on behalf of their songwriters and take other steps to protect their songwriters' interests, such as by securing copyright registration for their songwriters' songs and engaging in litigation to protect and enforce those copyrights. (Brodsky WDT ¶ 9 (HX-3016); Kokakis WDT ¶ 6 (HX-3018); Kalifowitz WDT ¶ 8, 13 (HX-3022); Kelly WDT ¶ 3 (HX-3017); Sammis WDT ¶ 3 (HX-3019); Yocum WDT ¶ 3 (HX-3021))

COF-149. The services that music publishers provide enable songwriters to create new musical works and provide the financial inducements for them to do so and, relatedly, result in the licensing of those musical works to a variety of different types of licensees, thereby helping to maximize the public availability of musical works. (Brodsky WDT ¶ 9 (HX-3016))

COF-150. The three largest music publishers alone own or administer over [REDACTED] songs. Sony/ATV Music Publishing LLC ("SATV") owns or administers [REDACTED], Universal Music Publishing Group ("UMPG") owns or administers more than [REDACTED], and Warner/Chappell owns or administers [REDACTED]. BMG owns or administers an additional [REDACTED]

████ songs. (Kelly WDT ¶ 12 (HX-3017); Sammis WDT ¶ 9 (HX-3019); Yocum WDT ¶ 8 (HX-3021); Barron WDT ¶ 5 (HX-3020))

COF-151. Discovering talented songwriters is one of the most important functions of a music publisher. (Brodsky WDT ¶ 13 (HX-3016); Kelly WDT ¶¶ 24, 26 (HX-3017))

COF-152. Publishers employ a large number of artist & repertoire staff (also sometimes referred to as creative staff) whose job it is to discover new musical talent. In the United States alone, UMPG employs approximately █████ artist & repertoire staff, SATV employs █████, and Warner/Chappell employs █████. Worldwide, UMPG employs approximately █████, SATV employs █████, and Warner/Chappell employs █████. BMG employs a full-time creative staff of █████ individuals. In 2015, UMPG's overhead expenses for its artist & repertoire department were █████; SATV's overhead costs for its United States creative departments were █████ █████ Warner/Chappell's overhead expenses for its United States artist & repertoire departments totaled █████ in fiscal year 2015 and █████ in fiscal year 2016. (Brodsky WDT ¶ 14 (HX-3016); Kokakis WDT ¶ 11 (HX-3018); Barron WDT ¶ 8 (HX-3020); Kelly WDT ¶¶ 13, 25, 38 (HX-3017); Yocum WDT ¶¶ 12, 29 (HX-3021); Sammis WDT ¶¶ 10, 19 (HX-3019))

COF-153. Music Publishers also have business and legal affairs departments as well as finance and business development departments. The business and legal affairs departments are responsible for negotiating and drafting songwriter agreements and catalog acquisition agreements, securing extended renewal term agreements with writers and their heirs, negotiating agreements with prospective licensees, and protecting the rights in the songs along with outside litigation counsel. SATV employs over █████ people in its business and legal affairs department in the United States and over █████ worldwide █████ in 2015 and █████

██████ in ██████; UMPG employs ██████ people in its business and legal affairs department in the United States and more than ██████ people worldwide at an overhead cost of ██████; Warner/Chappell employs ██████ people in its business and legal affairs department in the United States and more than ██████ worldwide at an overhead cost of ██████ in fiscal year 2015 and ██████ in fiscal year 2016. (Kelly WDT ¶¶ 14-15, 35-36, 38 (HX-3017); Sammis WDT ¶¶ 10, 29, 32 (HX-3019); Yocum WDT ¶¶ 25-27, 29 (HX-3021))

COF-154. Finance and business development departments assist in the acquisition of rights from songwriters and the determination of songwriter advances by modeling the financial structures and potential value of such transactions as well as manage publishers' overall financial and business affairs. The overhead costs for UMPG's finance department in the United States in 2015 were ██████; SATV's finance and business development department overhead costs in the United States in 2016 were more than ██████ Warner/Chappell's finance department's overhead costs in the United States were ██████ in 2015 and ██████ in 2016. (Kelly WDT ¶¶ 14-15, 57 (HX-3017); Sammis WDT ¶¶ 11, 48 (HX-3019); Yocum WDT ¶¶ 15, 52 (HX-3021))

COF-155. The overhead costs associated with SATV's global management department in 2015 were ██████ in 2016. For UMPG, the overhead costs of its global executive department were ██████ in 2015 and expected to total ██████ in 2016. The overhead costs associated with Warner/Chappell's executive department were ██████ in 2015 and ██████ in 2016. (Kelly WDT ¶ 58 (HX-3017); Sammis WDT ¶ 49 (HX-3019); Yocum WDT ¶ 53 (HX-3021))

COF-156. The costs for the search for talented songwriters is high. BMG, for example, spent over ██████ in 2015 to discover and sign new songwriters. Additionally,

many songwriters who are signed by publishers have not yet appeared on a commercially successful recording at the time of signing. Many such songwriters will never generate significant revenue in their careers, resulting in the write-off of advances paid to such writers: UMPG representative David Kokakis has estimated that [REDACTED] songwriters achieves commercial success. (Kokakis WDT ¶ 12 (HX-3018); Barron WDT ¶ 8 (HX-3020))

COF-157. Publishers use a number of tools to discover new songwriters, including attending live performances, searching the Internet, and tapping into already formed professional relationships. Those discovery tools also include proprietary technology, such as a proprietary data research program used by SATV. A publisher may sift through large numbers of prospective songwriters before finding one songwriter with whom the publisher wishes to work. (Brodsky WDT ¶¶ 15, 17, 22 (HX-3016); Brodsky WDT ¶¶ 21 (HX-3016); Kokakis WDT ¶¶ 11, 16-19 (HX-3018))

COF-158. Publishers invest substantial time and resources in developing the talents of the songwriters whom they have signed. For example, UMPG assigns its songwriters to a professional creative team that, among other things, identifies co-writing opportunities and songwriter-producer and songwriter-artist collaborations for the songwriter. BMG's creative staff similarly coordinates collaborations among songwriters (and between songwriters and producers or artists) and works with its songwriters to produce new songs. Publishers also may sponsor songwriting camps as well as arrange for their songwriters' travel to different locations to co-write and collaborate on new songs. Additionally, SATV, UMPG, and Downtown Music Publishing each provides its songwriters with professional quality recording studios. (Brodsky WDT ¶ 34-37 (HX-3016); Kokakis WDT ¶¶ 22-24, 28 (HX-3018); Kalifowitz WDT ¶¶ 9-12

(HX-3022); Barron WDT ¶¶ 15-18, 21 (HX-3020); Kelly WDT ¶ 34 (HX-3017)); (Tr. 3194:20-3195:25 (Kokakis))

COF-159. In some instances, publishers have taken on the financial support that labels once provided to singer-songwriters. Recognizing that record companies have substantially reduced their investments in artist development and record production, Downtown Music Publishing, for example, now shoulders much of the production process costs and provides tour support. (Kalifowitz WDT ¶¶ 9, 17-18 (HX-3022))

COF-160. Publishers also help their artist-songwriters obtain record deals, including by introducing them to the publishers' record industry contacts. (Kokakis WDT ¶¶ 26-27 (HX-3022); Barron WDT ¶ 19 (HX-3020))

COF-161. Publishers and songwriters attest that it takes years for a songwriter to develop his or her talents to the point where he or she may achieve commercial success. (Bogard WDT ¶¶ 20, 43 (HX-3025); L.T. Miller WDT ¶ 12 (HX-3023); Rose WDT ¶ 32 (HX-3024); Ramaprasad WDT ¶ 63 (HX-1615); Brodsky WDT ¶ 39 (HX-3016))

COF-162. Publishers are responsible for administering the rights in the musical compositions in their catalogues, including by licensing mechanical rights, synchronization rights, performance rights and print rights. Mechanical rights are licensed both directly and through The Harry Fox Agency in the United States. Public performance rights are licensed both directly as well as through performance rights organizations such as ASCAP, BMI, and SESAC. (Kelly WDT ¶¶ 50-51 (HX-3017); Sammis WDT ¶¶ 40-41 (HX-3019); Yocum WDT ¶¶ 37-39 (HX-3021))

COF-163. Rates for public performance rights in the United States are sometimes set in rate court proceedings. Since 2012, publishers have spent [REDACTED] participating in

rate court proceedings and in a United States Department of Justice inquiry into what is known as the ASCAP and BMI consent decrees seeking to protect and enhance the public performance rates for the benefit of their songwriters as well as themselves. (Kelly WDT ¶ 51 (HX-3017); Sammis WDT ¶ 41 (HX-3019); Yocum WDT ¶ 39 (HX-3021))

COF-164. Publishers also promote their songwriters' works to those who may wish to license such works, including artists, producers and A&R people at record labels, film and television companies, and advertisers. In the United States, music publishers issue, directly or through agents such as The Harry Fox Agency, mechanical licenses, which authorize the exploitation of songs on phonorecords, digital downloads and streaming services. (Brodsky WDT ¶¶ 40-43 (HX-3016); Barron WDT ¶ 23 (HX-3020); Kelly WDT ¶ 21 (HX-3017))

COF-165. Publishers also promote their songwriters' works - thereby increasing the availability of musical works - through synchronization licensing which, in addition to increasing the synchronization license revenues related to a songwriter's musical works, can raise a songwriter's profile, propel a surge of interest in a song (or a resurgence of interest in an older song), and, for artist-songwriters, may lead to a record deal. (Kokakis WDT ¶¶ 29-31 (HX-3018); Barron WDT ¶¶ 24-25 (HX-3020); Brodsky WDT ¶¶ 43-44 (HX-3016))

COF-166. SATV, for example, employs a staff of approximately [REDACTED] professionals in the United States alone, and [REDACTED] worldwide, who are dedicated to the specific task of licensing the synchronization rights in SATV's songwriters' works. SATV incurred [REDACTED] in 2015 and [REDACTED] in 2016 in overhead costs for its Film & Television/Synch Department. UMPG employs approximately [REDACTED] people in its film and television department, and [REDACTED] people worldwide, who negotiate synchronization licenses on behalf of UMPG's songwriters; its overhead costs for that department in 2015 were approximately [REDACTED]. Warner/Chappell's

synchronization department employs approximately [REDACTED] people in the United States and [REDACTED] people worldwide; its U.S. synchronization department's overhead costs were approximately [REDACTED] in 2015 and [REDACTED] in 2016. (Brodsky WDT ¶¶ 40-43 (HX-3016); Kelly WDT ¶ 39 (HX-3017); Sammis WDT ¶ 34 (HX-3019); Yocum WDT ¶ 40 (HX-3021))

COF-167. Individual songwriters, even highly successful ones, could not afford to bear the costs of engaging in the world-wide licensing, exploitation, tracking, royalty accounting and monetary collection work performed by publishers nor could they afford the costs of providing the copyright protection and value maximization services (such as with the DOJ and public performance rate court proceedings or this proceeding before the CRB) provided by music publishers, the costs of which are millions of dollars. As publisher representatives testified, the time and effort that publishers expend in exposing their new songwriters' works to the film, television, and advertising industries, for example, [REDACTED] [REDACTED] Kelly WDT ¶ 41 (HX-3017); Sammis WDT ¶ 35 (HX-3019); Yocum WDT ¶ 42 (HX-3021))

COF-168. Another vital role of publishers is to protect the copyrights in their songwriters' works. A publisher will register works with the U.S. Copyright Office and with collection societies around the world. SATV, which has over [REDACTED] songs in its catalog, employs a staff of [REDACTED] employees worldwide, [REDACTED] of whom are in the United States, whose responsibility it is to manage and monitor copyrights. UMPG employs approximately [REDACTED] employees in its copyright department and [REDACTED] who administer the copyrights within its royalty, income tracking, and copyright departments; worldwide, it employs approximately [REDACTED] employees in its royalty, income tracking and copyright departments. Warner/Chappell employs [REDACTED] employees in its copyright department and [REDACTED] employees within its administration division in

the United States, and [REDACTED] employees in its administration division worldwide. Publishers also bear costs associated with infringement lawsuits brought to protect their songwriters' works. BMG, for example, recently incurred outside counsel fees of over [REDACTED] for one such infringement action. (Brotsky WDT ¶¶ 47-48 (HX-3016); Kokakis WDT ¶ 36 (HX-3018); Barron WDT ¶ 27 (HX-3020); Sammis WDT ¶¶ 14-15 (HX-3019); Yocum WDT ¶¶ 43-45 (HX-3021); Kelly WDT ¶¶ 18, 20 (HX-3017))

COF-169. UMPG, for example, has a robust anti-piracy program to protect its songwriter's songs from infringement and unauthorized exploitation. UMPG initiates copyright infringement actions against infringers when necessary and sends DMCA takedown notices to remove infringing online content. In terms of scale, UMPG is now issuing upwards of 2,000 DMCA takedown notices a day in the U.S., after having built out an infrastructure to handle that type of volume. (Tr. 3197:2-13 (Kokakis))

COF-170. Publishers also track, collect, pay out, and audit the royalties owed to songwriters. Such royalty administration tasks can be complex. The exploitations of songs is a worldwide business and publishers receive royalty statements and payments from [REDACTED] licensees containing millions of lines of data, which the publishers must then process in order to generate royalty statements for each of the writers and co-writers of the songs the publisher owns and administers, who can number in [REDACTED]. Some statements that publishers receive are on paper and [REDACTED]. Publishers conduct audits of royalties on behalf of writers and also respond to their writers' questions about royalty statements. Some publishers, such as SATV and Downtown Music Publishing, have developed proprietary systems to facilitate their royalty administration tasks. The development of SATV's proprietary royalty accounting and copyright management system

cost ██████████, while Downtown Music Publishing invested over ██████████ between 2011 and 2016 in its royalty collection technology platform, Songtrust. (Brodsky WDT ¶ 49 (HX-3016); Kalifowitz WDT ¶ 22 (HX-3022); Kelly WDT ¶¶ 22-23, 55-56 (HX-3017); Sammis WDT ¶¶ 17, 43, 46-47 (HX-3019); Yocum WDT ¶¶ 46, 50-51 (HX-3021); Barron WDT ¶ 26 (HX-3020))

COF-171. UMPG has similarly developed a global song administration database that it uses to submit electronic song registration files to performing rights organizations around the world. Through its efforts to collect royalties on behalf of its songwriters, UMPG also maintains a database of global earnings history for every one of its songs and provides its songwriters access to their royalty and copyright information, including royalty history, income trends, and sources of revenue on a global basis. Altogether UMPG employs approximately ██████████ employees in its royalty, income tracking, and copyright departments worldwide. (Kokakis WDT ¶¶ 33-35 (HX-3018))

COF-172. Publishers' copyright administration efforts also often involve research and administration with respect to older songs, such as, for example, songs copyrighted under the 1909 Copyright Act, many of which continue to generate income for the authors' heirs. (Kelly WDT ¶ 19 (HX-3017))

COF-173. SATV employs ██████████ employees in the United States within its royalty administration department and an additional ██████████ people outside the United States. In fiscal year 2016, its overhead costs associated with its copyright and royalty administration functions exceeded ██████████. UMPG employs ██████████ employees within its royalty department in the United States and ██████████ globally; its overhead expenses for its administration departments worldwide were

approximately ██████████ in 2015. (Kelly WDT ¶¶ 53-54 (HX-3017); Sammis WDT ¶¶ 44-45 (HX-3019))

COF-174. Publishers and songwriters typically enter into contracts for the development and licensing of musical works. Those contracts confer upon the publisher various rights to license the creative output of the songwriter, including through the reproduction and distribution of the songwriter's musical works, the public performance of such works, and the synchronization of such works with visual images. The publisher has an obligation to collect the royalty revenue from such licensed uses and pay that revenue to the songwriter in accordance with an agreed-upon revenue allocation. Revenue allocation amounts vary from contract to contract, with songwriters receiving 50% to as much as 95% of the income, depending on the terms of the agreement. (Brodsky WDT ¶¶ 24-27 (HX-3016); Kokakis WDT ¶ 39 (HX-3018); Yocum WDT ¶ 14 (HX-3021))

COF-175. The average publisher's share of royalties from the licensing of musical works has been decreasing over time. While historically, a 50/50 split of the income generated by a song was the norm, co-publishing or administration deals with a songwriter are now more common with songwriters receiving at least 75% and up to 95% of the income earned. (Brodsky WDT ¶ 28 (HX-3016); Kokakis WDT ¶ 39 (HX-3018))

COF-176. One common feature of publisher's contracts with songwriters is the payment of an advance to the songwriter. Advances provide songwriters with an income so that they may concentrate on writing songs and developing their talents. Advances are typically recouped by the publisher out of the royalty streams from the songwriter's work, except for the songwriter's share of performance royalties, which are typically collected by a PRO and paid directly to the songwriter. Mechanical royalties have therefore always been a primary revenue

source for the recoupment of advances as well as other costs. (Brotsky WDT ¶¶ 29-30 (HX-3016); Barron WDT ¶ 59 (HX-3020); Kokakis WDT ¶¶ 21, 40 (HX-3018); Kalifowitz WDT ¶ 15 (HX-3022); Barron WDT ¶ 13 (HX-3020); Kelly WDT ¶¶ 27, 29 (HX-3017); Sammis WDT ¶¶ 3, 21, 24 (HX-3019); Yocum WDT ¶ 14 (HX-3021))

COF-177. Unlike in typical agreements between recording artists and record companies, which usually call for deductions against artist royalties for various costs incurred by the record company, publisher agreements do not call for significant deductions against songwriters' royalties, with the exception of the recoupment of advances. (Kokakis WDT ¶ 39 (HX-3018); Brotsky WDT ¶ 28 (HX-3016))

COF-178. The size of advances to songwriters varies and depends on a variety of factors, including [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Kelly WDT ¶¶ 27-28 (HX-3017); Sammis WDT ¶ 22 (HX-3019); Yocum WDT ¶¶ 16, 18 (HX-3021))

COF-179. [REDACTED]

[REDACTED]

Advances paid by UMPG have typically ranged from [REDACTED] for newly-discovered, not-yet-successful songwriters, to [REDACTED] for experienced songwriters with proven track records. BMG's advances in recent years have ranged from [REDACTED] for lesser-known songwriters and [REDACTED] for established writers. Advances paid

by Downtown Music Publishing, an independent music publisher, have ranged from [REDACTED] for a writer relatively unknown at the time of signing to over [REDACTED] for an established writer. (Brodsky WDT ¶ 31 (HX-3016); Kokakis WDT ¶ 20 (HX-3018); Kalifowitz WDT ¶ 14 (HX-3022); Barron WDT ¶ 14 (HX-3020); Kelly WDT ¶ 28 (HX-3017))

COF-180. SATV paid over [REDACTED] in new advances in fiscal year 2015 and [REDACTED] in fiscal year 2016. Downtown Music Publishing, an independent publisher, made cumulative advances in the amount of [REDACTED] between January 2013 and September 2016 (Brodsky WDT ¶ 32 (HX-3016); Kalifowitz WDT ¶ 26 (HX-3022))

COF-181. Advances have equaled approximately [REDACTED] of UMPG's annual revenue and more than [REDACTED] of Downtown Music Publishing's annual revenue. SATV's and EMI's advance spend on new and existing writers equaled approximately [REDACTED] (respectively) of their total revenue in fiscal year 2015, and [REDACTED] (respectively) of their total revenue in fiscal year 2016. Warner/Chappell's expenditure on advances to new and existing songwriters in recent years has equaled [REDACTED] of its yearly annual on average. (Kokakis WDT ¶ 43 (HX-3018); Kalifowitz WDT ¶ 25 (HX-3022); Kelly WDT ¶ 33 (HX-3017); Yocum WDT ¶ 23 (HX-3021); Sammis WDT ¶ 27 (HX-3019))

COF-182. The payment of advances, while critical for signing and developing songwriters, creates a business risk for publishers because many songwriters never achieve sufficient success to enable the advances to be recouped. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Brodsky WDT ¶ 33

(HX-3016); Kokakis WDT ¶¶ 41-42 (HX-3018); Barron WDT ¶ 14 (HX-3020); Kelly WDT ¶¶ 30-31 (HX-3017); Sammis WDT ¶ 26 (HX-3019); Yocum WDT ¶¶ 20-22 (HX-3021))

COF-183. Some publishers report a growing disparity between recoupment and advances even while reducing the level of advances from past years. The growing delay in recoupment of advances resulting from both diminishing mechanical income from streaming services and reporting delays not only negatively affects publishers' ability to evaluate deals and support the discovery and development of new writers but it also negatively affects new songwriters whose advances remain unrecouped and who therefore are not generating royalty income. (Kelly WDT ¶ 66 (HX-3017))

COF-184. Failure to recoup amounts advanced to songwriters is particularly problematic for independent music publishers, who cannot afford to have as many "misses" as major publishers. (Kalifowitz WDT ¶ 15 (HX-3022))

COF-185. The continuing erosion in the rate of recoupment of advances will inevitably constrain the level of advances that publishers pay to songwriters, which will reduce either or both the amount of new advances or the number of new writers that the publishers will be willing and able to sign. (Kokakis WDT ¶ 43 (HX-3018); Kalifowitz WDT ¶ 27 (HX-3022))

COF-186. Music publishers also rely on income generated by their existing catalogues of songs to make financial investments in future songwriters. As income generated by

existing catalogues diminishes, however, the financial ability of music publishers to continue to make the risky investments they have made for decades in the creation of new music will similarly diminish, reducing the availability of music. (Sammis WDT ¶ 2, 13, 31 (HX-3019); Yocum WDT ¶ 28 (HX-3021); Kelly WDT ¶ 23 (HX-3017))

COF-187. In addition to supporting songwriters who are creating new works, publishers also invest in the acquisition of existing successful songs. These acquisitions are essential to provide the necessary financial resources for the publishers to finance their continued search for new writers and the creation of new music. The costs of such acquisitions are significant; the evidences shows that purchase prices fall in the range of [REDACTED]

[REDACTED] times historical annual income. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Just since the beginning of fiscal year 2015, SATV has spent [REDACTED]

[REDACTED]

[REDACTED] The

success or failure of such acquisitions as investments for SATV and EMI - and the consequent ability of these acquisitions to help finance the creation of the songs of the future - depends on

whether these songs will generate sufficient royalty income to provide a return on the

investment. (Kelly WDT ¶¶ 42-46 (HX-3017); Sammis WDT ¶ 37 (HX-3019); Yocum WDT ¶¶ 31, 34 (HX-3021))

COF-188. Publishers take on business risks both when paying advances and also when acquiring catalogues. [REDACTED]

[REDACTED] (Kelly WDT ¶¶ 16-17, 28, 47-49 (HX-3017); Sammis WDT ¶¶ 11-12, 23, 39, 50-51 (HX-3019); Yocum WDT ¶¶ 17, 19, 34-35 (HX-3021))

2. The Publishing Industry's Mechanical Revenues Are Declining

COF-189. In 2013, mechanical revenues accounted for [REDACTED] of music publisher income, [REDACTED] in 2014 and [REDACTED] in 2015. (Israelite WDT ¶ 69 (HX-3014); EX-1.1-1.4 (HX-2500, HX-2501, HX-2502, 306))

COF-190. Interactive streaming (measured by total number of streams) increased by 54% from 2013 to 2014, and by an additional 92.8% from 2014 to 2015. (Israelite WDT ¶ 70 (HX-3014); n.27 (HX-281; HX-2938))

COF-191. The Copyright Owners' share of revenue derived from mechanical royalties no longer matches the effort required to earn mechanical royalties. (Israelite WDT ¶ 78 (HX-3014))

COF-192. Based on information compiled by NMPA from its publisher members, the industry saw a drop in mechanical income from 2013 to 2014 and from 2014 to 2015 in absolute dollars and relative to other sources of income. (Tr. 3562:23-3563:15 (Israelite); HX-306))

COF-193. Spotify, in particular, pays relatively little on a song-by-song basis, even for hit songs. For example, "I Bet My Life," written and performed by Imagine Dragons, was streamed on Spotify [REDACTED] times in 2015, resulting in total mechanical royalties from Spotify of just \$12,224 and total musical work royalties from Spotify (mechanical and performance) of just \$27,288. (Kokakis WDT ¶ 51 (HX-3018))

COF-194. Mechanical income from physical phonorecords and permanent digital downloads has [REDACTED]  
[REDACTED] (HX-306; Tr. 3565:22-3566:25 (Israelite))

COF-195. [REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 3567:2-3568:1 (Israelite); HX-306; Israelite WDT ¶ 70 (HX-3014))

COF-196. [REDACTED]  
[REDACTED]  
[REDACTED]



Platten, which peaked at number 6 on the Billboard 100 chart. Although streamed over [REDACTED] [REDACTED] in 2015 on interactive streaming services, payments by the interactive streaming services for such use was [REDACTED] for mechanical and performance royalties combined. By contrast, in 2011, interactive services paid total musical works royalties of roughly one-third of that amount [REDACTED] for less than one-ninth as many streams [REDACTED] of the hit song "Give Me Everything" by Pitbull. Moreover, "Give Me Everything" received [REDACTED] in mechanical revenues from physical copies and digital downloads as "Fight Song." (Brodsky WDT ¶¶ 77-79 (HX-3016))

COF-200. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] Exhibit 1 to Hubbard WRT (HX-133); Hubbard WRT ¶ 2.22 (HX-129); Tr. 5971:1-5972:8 (Hubbard))

COF-201. [REDACTED]

[REDACTED]  
[REDACTED] (Hubbard WRT ¶ 3.9; Tr. 5971:1-5973:21 (Hubbard))

COF-202. [REDACTED]

[REDACTED]  
[REDACTED] (Tr. 5972:11-5973:21 (Hubbard))

3. Despite Declining Mechanical Revenues, Interactive Streaming Has Grown Dramatically

COF-203.

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Eisenach WDT ¶ 172 (HX-3027))

COF-204. An internal Google document also predicts that during the period 2016-2020, [REDACTED] [REDACTED] (HX-546, at 15)

COF-205. The number of streaming services, the volume of music available for interactive streaming, interactive streaming services' revenues, and the number of paid subscribers have all increased in recent years. (Ramaprasad WDT ¶ 43 (HX-1615); Timmins WRT ¶¶ 18-28 (HX-3036))

COF-206. [REDACTED]  
[REDACTED]  
[REDACTED] (HX-3209, at GOOG-PHONOIII-00003892)

COF-207. The number of musical streams has grown from 49 billion in 2013 to 145 billion in 2015 which is equal to a CAGR of approximately 72% (Rysman WDT ¶ 103 (HX-3026), n.88 (HX-2773, HX-2938); Israelite WDT ¶ 70 (HX-3014), n.27 (HX-281; HX-2938); Eisenach WDT ¶¶ 61-62 (HX-3027), n.50 (HX-2780), n.51 (HX-918), n.52 (HX-918); Tr. 2198:4-20 (Hubbard))

COF-208. Total revenue from interactive streaming ranged between approximately \$150 million in 2005 to \$212 million in 2010, and annual revenues growth has exploded since then, reaching approximately \$1.6 billion by 2015. Paid subscriptions have doubled from 9.1 million in the first half of 2015 to 18.3 million in the first half of 2016, driving subscription revenues up from \$480 million to over \$1 billion. (Ramaprasad WDT ¶ 50 (HX-1615); (HX-1566); Mirchandani WDT ¶ 53 (HX-1))

COF-209. Apple's consumer usage has [REDACTED]  
[REDACTED]  
[REDACTED] (Dorn WDT ¶ 25 (HX-1611); HX-1436)

COF-210. Amazon Prime Music streaming users [REDACTED]  
[REDACTED] The number of streams on the service have [REDACTED]  
[REDACTED]. (Hubbard WRT ¶ 2.22 (HX-132))

COF-211. Dr. Hubbard admitted that he expects that the number of streams will continue to increase during the period for which CRB is setting the mechanical rate. (Tr. 5992:18-5993:15 (Hubbard))

**A. Shapley Value Analysis Supports The COR**

1. Shapley Is An Excellent Economic Model To Evaluate And Fulfill The 801(b)(1)(B) and (C) Policy Objectives

COF-212. The Shapley value approach, developed by Lloyd Shapley in 1953, models bargaining processes in a free market by considering all the ways each party to a bargain would add value by agreeing to the bargain and then assigns to each party their average contribution to the cooperative bargain. (Gans WDT ¶ 64 (HX-3028))

COF-213. It is an axiomatic feature of the fairness constructs of the Shapley value approach that market participants that make equivalent contributions to the cooperative enterprise earn the same profits. (Gans WDT ¶ 64 (HX-3028))

COF-214. The Shapley value approach is well-suited to model negotiations of the terms of participation in a joint enterprise among interactive streaming services and multiple music rightsholders. (Gans WDT ¶ 65 (HX-3028); Gans WRT ¶ 10 (HX-3035))

COF-215. Shapley values are meant to incorporate market power asymmetries, and the allocations that result from those asymmetries are one of the central ingredients in the fair result according to Shapley. (Gans WRT ¶ 31 (HX-3035))

COF-216. Dr. Watt testifies that an appropriate Shapley analysis models hypothetical negotiations among parties without attempting to alter the market power that those parties enjoy in the real world. (Tr. 3073:4-3074:4 (Watt))

COF-217. While the Shapley analysis recognizes that SR rights and MW rights are each an essential input and therefore appropriately accords them substantial market power, it also removes the possibility of abuse of that market power. As Dr. Watt explains, it does this by eliminating the possibility that a party in control of either of these essential inputs could choose to act as a hold out, because under the Shapley Analysis, each party arrives randomly to the coalition. (Tr. 3069:11-3071:5, 3149:3-24 (Watt))

COF-218. The Copyright Owners' experts Dr. Gans and Dr. Watt and the interactive services' expert Dr. Marx each testified in favor of using the Shapley value approach to determine royalty rates which are consistent with the policy objective of providing a fair return to rightsholders. (Gans WRT ¶ 10 (HX-3035); Tr. 3056:2-16 (Watt); Marx WDT ¶ 137 (HX-1065))

COF-219. The Shapley approach is consistent with the principle of business model neutrality, because the determination of each market participant's Shapley value is based on economic contribution irrespective of the form of distribution, market segment, or other differences in their business practices. Both the Copyright Owners' expert Dr. Gans and Spotify's expert Dr. Marx agree that not artificially favoring or disfavoring certain forms of distribution over others is important for fairness and efficiency. (Gans WRT ¶ 10 (HX-3035); Marx WDT ¶ 99 (HX-1065))

COF-220. In a market in which interactive streaming service businesses depend on obtaining licenses for the use of musical works and sound recordings, the parties could collectively benefit from entering into licensing agreements for the distribution of music. A collaborative process of mutually agreeing to royalty rates that are objectively fair provides a possible efficient solution to the bargaining problem facing participants in a hypothetical market without compulsory licensing. The term Shapley value is given to a solution to a cooperative game of this type and represents the share of the economic value (producer surplus, *i.e.* profits) from the joint endeavor received by each participant. (Gans WDT ¶¶ 66-67 (HX-3028))

COF-221. The Shapley value approach involves considering all the possible permutations of agreements to participate (coalitions) that could result between the parties and studying how the addition of a particular participant, in each particular sequence, adds to the combined surplus in each case. These additions to the combined surplus represent the contributions made by each party in each permutation of the coalitions between the parties. The Shapley value for a particular party in the game is the average contribution made across all of the possible coalition permutations. This framework can be used to determine royalty rates that

would result from negotiations between rightsholders and interactive music services in a hypothetical non-compulsory market. (Gans WDT ¶¶ 67-68 (HX-3028))

COF-222. Costs do not change the Shapley values, which represent the fair share of profits that rightsholders and services should receive from the endeavor, but they affect the amount of royalties that would have to be paid to deliver these profits to publishers and labels. The profits equal to the Shapley values would be delivered to labels by paying royalties equal to the Shapley values plus their incremental costs. The Shapley value is an equitable distribution of surplus, not revenue—costs must be deducted from royalty revenue to yield profits. Any difference in incremental costs associated with cultivating and licensing their respective repertoires would lead to different royalty rates. Since the Shapley values for publishers and labels are equal, differences in costs would lead to less than proportional differences in royalties. (Gans WDT ¶ 73 (HX-3028))

COF-223. The application of the Shapley value approach to the interactive services market can in fact be expected to underestimate the fair share of profits that rights holders should receive if service revenue alone is used in the analysis. This is because the Shapley analysis is meant to capture all surplus attributable to the use of the goods at issue, in this case musical works. Such surplus includes all value generated for the services, whether through subscription payments, associated sales of goods (such as phones, etc.) or services (such as Amazon Prime), ecosystem value or any other contributor of value, none of which is captured in the services' calculations of their service revenue. (Gans WRT ¶ 74 (HX-3035))

2. Marx, Gans, And Watt Shapley Analyses All Support COR

COF-224. Sound recording rights and mechanical rights are perfect complements. Interactive services cannot stream music without both rights. (Gans WDT ¶ 23 (HX-3028); Tr. 1874:25-1875:4 (Marx); Watt WRT ¶ 25 (HX-3034))

COF-225. Licenses obtained by interactive streaming services from labels for rights to use sound recordings are not compulsory. Consequently, the royalty rates paid to labels are freely-negotiated market rates. (Gans WDT ¶ 61 (HX-3028))

COF-226. Dr. Gans uses a Shapley value approach to determine the ratio of sound recording royalties to musical works royalties that would prevail in an unconstrained market. After obtaining that ratio, he estimates what publisher mechanical royalty rates would be in a market without compulsory licensing by multiplying the benchmark sound recording rates by this ratio. (Gans WDT ¶ 63 (HX-3028))

COF-227. Publishers and labels have equal Shapley values because musical compositions and musical performances of them are perfect complements. Their equal Shapley values would result in negotiated royalty rates that deliver equal profits to each, although the corresponding royalties that would achieve this outcome must be higher than the Shapley values in order to recover the publisher's and label's respective costs. Differences in these costs, as well as the overall level of profits in the market, determine the level of royalties. (Gans WDT ¶¶ 23, 71, 74, 76 (HX-3028); Gans WRT ¶¶ 15-17 (HX-3035), 15 n.18)

COF-228. Because under the Shapley value approach to modeling competition for the interactive streaming business, publishers would be expected to make the same profit in aggregate from interactive streaming as the labels in the absence of compulsory licensing, it follows that record label profits from their licenses with interactive streaming services, which are freely negotiated, can be used to estimate what the mechanical rate for publishers would be if they were also able to freely negotiate the rates for the licensing of their works. (Gans WDT ¶ 75 (HX-3028))

COF-229. According to Dr. Gans' "top down" analysis, the Shapley value-based ratio of sound recording to musical works royalties is [REDACTED]. (Gans WDT ¶ 77 (HX-3028))

COF-230. Using an effective per-play royalty rate for sound recordings as calculated by Dr. Eisenach, of [REDACTED], the Shapley value-based ratio of sound recording royalties to musical works royalties of [REDACTED], and a Shapley value-based percent of publisher revenues attributable to mechanical royalties of [REDACTED], Dr. Gans obtains a corresponding mechanical per-play rate of [REDACTED]. (Gans WDT ¶¶ 77-78 (HX-3028))

COF-231. Dr. Gans compares historical rates of label and publisher royalties paid by interactive services and finds that the ratio of such label royalties to such publisher royalties has been higher historically than the [REDACTED] ratio he derives from his Shapley analysis, which, in his opinion, provides evidence that royalties for musical work have been depressed by compulsory licensing. (Gans WDT ¶ 79 (HX-3028))

COF-232. Dr. Gans' Shapley value analysis supports the Copyright Owners' per-user rate proposal. Applying the Shapley value based ratio of [REDACTED] to the benchmark per-user rate negotiated by the labels of [REDACTED] per user per month, Dr. Gans obtains an equivalent publisher mechanical rate of [REDACTED] per user per month. (Gans WDT ¶ 85 (HX-3028))

COF-233. Dr. Marx conducts two different Shapley Analyses. Under her "alternative" analysis, she models two entities in the upstream market: a SR owner and a MW owner, and concludes that MW owners' total royalty income is [REDACTED] of upstream revenue and SR owners' total royalty income is [REDACTED] of upstream revenue, implying a ratio of [REDACTED]. (Marx WDT ¶ 163 (HX-1065))

COF-234. Dr. Watt performs his own Shapley Analysis wherein he postulates three independent streaming companies and, in the first instance, groups SR and MW owners together.

From this analysis, he concludes that a conservative estimate of the fair and reasonable royalty payment from downstream interactive streaming firms to upstream copyright holders is around 67% of downstream revenue. He then conducts a separate analysis of how these royalties would be divided between SR and MW owners, noting that SR and MW owners each have veto rights over the business and thus will receive equal net surplus; after factoring in each side's respective non-content costs, he concludes that 43.5% of royalty payments should be paid to MW owners. (Watt WRT ¶¶ 28-35 (HX-3034); Watt Appendix 3, at 1-9 (HX-2619))

COF-235. Dr. Watt's Shapley analysis predicts a lower fraction of revenues for sound recording royalties than what occurs in the market. Dr. Watt explains this result by noting that statutory rates for mechanical royalties are significantly below the fair rate that his Shapley analysis predicts, and sound recording owners, who (unlike musical work owners) are able to set their royalty rates through bargaining with streaming service and who are the only remaining essential input, obtain most of the available surplus. Dr. Watt provides a bargaining model that shows that [REDACTED]

[REDACTED] (Watt WRT ¶ 36 (HX-3034); Watt WRT Appendix 3 at 9-12 (HX-2619))

COF-236. From the analysis presented in his rebuttal report, Dr. Gans concludes that even in the situation where sound recording royalties change in response to a change in musical works royalties, the Shapley model predicts musical works royalties that well exceed the rate proposed by the Copyright Owners. (Gans WRT ¶ 32 ((HX-3035))

COF-237. Pandora's expert Dr. Katz admits that, [REDACTED]  
[REDACTED] Dr. Ghose [REDACTED]  
[REDACTED]

[REDACTED] (Tr. 4941:7-21 (Katz); Tr. 5704:13-5705:12

(Ghose))

**B. The Copyright Owners' Benchmark Analysis Supports The Proposed Rate**

1. The Benchmark Of Interactive Service Label Deals Is An Excellent Comparable

COF-238. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Tr. 1082:11-

1083:16 (Leonard))

COF-239. A benchmarking analysis of agreements between interactive streaming services and record labels for sound recording rights, which are perfect complements to the rights at issue in this proceeding, provides evidence of the relative value of musical works rights. (Eisenach WDT ¶ 37 (HX-3027))

COF-240. Unlike musical works copyrights, sound recording rights are not subject to compulsory licenses, and licenses between sound recording rights holders and interactive streaming services can therefore, with appropriate adjustments, be used as a benchmark for assessing the market value (absent a compulsory licensing regime) for musical works rights. (Gans WDT ¶ 27 (HX-3028))

2. Relative Value Benchmark Analysis Is A Robust Approach To Establishing A Reasonable Rate

a. The Eisenach Benchmark Survey Shows A Reasonable Range Of Rates Based On The Ratio Between Sound Recording Right And Musical Work Rights

COF-241. Dr. Eisenach examined the range of rates paid for sound recording and musical work rights in a variety of settings. Table 9 of his written direct testimony shows the ratios as well as upper and lower bounds of the comparable benchmarks as follows:

SUMMARY OF RELATIVE VALUATION BENCHMARKS

Service	Ratio of Rates Paid for Sound Recordings to Musical Works
[REDACTED]	[REDACTED]

(Eisenach WDT ¶ 130 (HX-3027)) Dr. Eisenach adjusted the YouTube ratio slightly based on discovery provided shortly before the hearing (Eisenach WST ¶ 5 (HX-3393))

COF-242. Based on a review of current Section 115 licenses and related negotiations under the shadow of the Section 115 license, the relative valuation ratio implied between sound recording rights and musical works rights ranges from [REDACTED]. (Eisenach WDT ¶ 84-92 (HX-3027), n.71 (HX-539), n.75 (HX-2588, HX-2791, HX-2790, HX-2786), n.76 (HX-2505), n.85)

COF-243. Synchronization licenses are useful for assessing the relative value of mechanical works rights and sound recording rights because, in the synchronization licensing market, both rights are freely negotiated and, as with interactive streaming, the synchronization

licensee must obtain both licenses for either one to provide value. As a result, each rights holder therefore has the same bargaining power relative to the licensee. (Gans WDT ¶ 28 (HX-3028))

COF-244. [REDACTED]

[REDACTED] (See, e.g., Kokakis WDT ¶¶ 87-91 (HX-3018); Brodsky WDT ¶¶ 97-98 (HX-3016); Barron WDT ¶¶ 45-49 (HX-3020); Kalifowitz WDT ¶¶ 41-42 (HX-3022))

COF-245. These agreements include “microsynch” deals by which the publisher grants the licensee the right to grant synchronization licenses for the publisher’s entire catalog, including to smaller, web-based and digital applications. (Kokakis WDT ¶ 91 (HX-3018); Brodsky WDT ¶¶ 98-104 (HX-3016); Barron WDT ¶¶ 45-49 (HX-3020); Kalifowitz WDT ¶¶ 41-42 (HX-3022))

[REDACTED]	HX-807	¶ 5(b), at UMPG00002228
[REDACTED]	HX-804	¶ 6, at UMPG00000155
[REDACTED]	HX-2514	¶ 2, at UMPG00000510
[REDACTED]	HX-2536	¶ 4(a), at BMG00000167

COF-246. Music publishers also enter into direct synchronization licenses with mobile applications that permit users to add music embodied in sound recordings to a sequence of photos or a short video and then to share the resulting product with friends via text messaging

or social media, or the licensee’s website. [REDACTED]

[REDACTED]

[REDACTED] (Kokakis WDT ¶ 88 (HX-3018); Brodsky WDT ¶ 98 (HX-3016); Barron WDT ¶¶ 47-49 (HX-3020); Kalifowitz WDT ¶¶ 41-42 (HX-3022))

[REDACTED]	HX-806	¶ 6, at UMPG00000414
[REDACTED]	HX-2554	¶ 6(b), at DR00000129
[REDACTED]	HX-2573	¶ 6(b), at SONY-ATV00001074
[REDACTED]	HX-2572	¶ 6(b), at SONY-ATV00000984
[REDACTED]	HX-978	¶ 7(c), at SONY-ATV00001493
[REDACTED]	HX-2571	¶ 7(c), at SONY-ATV00000477

COF-247. [REDACTED]

[REDACTED]

[REDACTED]

(Kokakis WDT ¶¶ 89-90 (HX-3018); Brodsky WDT ¶ 98 (HX-3016))

[REDACTED]	HX-805	at UMPG0000233
[REDACTED]	HX-2509	p. 2, at UMPG00000303

[REDACTED]	HX-2512	¶ 7, at UMPG00000497
[REDACTED]	HX-2575	¶ 7(f), at SONY-ATV00001035
[REDACTED]	HX-2574	¶ 7(f), at SONY-ATV00001154

COF-248. In the case of synchronization and micro-synchronization licenses, which are negotiated entirely outside of the shadow of the compulsory license, the relative valuation ratio implied between sound recording rights and musical works rights is [REDACTED]. (Eisenach WDT ¶¶ 95-98 (HX-3027), n.89 (HX-806, HX-805), n.90 (HX-807), n.91 (HX-806, HX-978) n.92 (HX-805))

b. The YouTube Benchmark Is An Excellent Comparable

COF-249. The YouTube licenses are a highly persuasive benchmark. Without the ability to get free-market benchmarks from within the Section 115 context, benchmarking using YouTube licenses is an almost perfect substitute. (Eisenach WRT ¶¶ 56-66 (HX-3033))

COF-250. YouTube offers streaming of music and is a significant competitor of the interactive services. YouTube publisher agreements provide [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Page WDT ¶ 47 (HX-1061), Tr. 4964:12-4965:13, 4966:15-4966:18 (Katz))

COF-251. [REDACTED]

[REDACTED] Such uses are treated as being subject to the Section 115 statutory rate. (Kokakis WDT ¶ 100, HX-3018; (Eisenach WDT ¶ 101, n.93)

COF-252. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

COF-253. [REDACTED]

[REDACTED]. (Kokakis WDT ¶ 100, HX-3018)

COF-254. The use of an audio track with a user supplied video removes such use from the requirement of Section 115 and permits the copyright owner of the musical work to negotiate with YouTube for its use outside the shadow of the statute. (Tr. 4620:3-4620:17 (Eisenach))

COF-255. The use of the sound recording in either the [REDACTED] [REDACTED] is not subject to Section 115 or any other statute and is subject to bargaining between the labels and YouTube. (Tr. 4619:18-4619-21 (Eisenach))

COF-256. [REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]

COF-257. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	HX-648	Para 6(c), p. 22 (at GOOG-PHONOIII-00004679)
[REDACTED]	HX-592	Exhibit C, p. 16 (at GOOG-PHONOIII-00004148)

[REDACTED]	HX-613	Exhibit C, p. 1 (at GOOG-PHONOIII-00004313)
[REDACTED]	HX-626	p. 16 (at GOOG-PHONOIII-00004377)
[REDACTED]	HX-595	p. 12 (at GOOG-PHONOIII-00004170)

COF-258. The unregulated use of the musical work [REDACTED] provides an excellent benchmark for both the relative values of sound recordings to musical works rights and demonstrates the effect of the statute. (Kokakis WDT ¶ 100 (HX-3018); Eisenach WDT ¶ 100 (HX-3027))

COF-259. In the [REDACTED]  
[REDACTED]  
[REDACTED]. Of the agreements between YouTube and both major and independent labels for sound recording rights for [REDACTED]  
[REDACTED]  
[REDACTED]. (Tr. 4621:19-4621:21)

COF-260. [REDACTED]  
[REDACTED],  
[REDACTED]. (Eisenach WST ¶ 7  
(HX-3393))

COF-261. [REDACTED]

[REDACTED]

[REDACTED]. (Tr. 4621:22-4621-25 (Eisenach))

COF-262. The use of [REDACTED] is very comparable to the use of musical works by the interactive services. (Eisenach WDT ¶ 102 (HX-3027))

COF-263. The consumer overlap between Section 115 services and YouTube is admitted by the services. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Eisenach WRT ¶ 59 (HX-3033), Page WDT ¶¶ 47, 53, 55 (HX-1061))

COF-264. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Marx WDT ¶ 19 (HX-1065), n.99 (HX-3121))

COF-265. While YouTube may have audio-visual content, it is considered throughout the industry as a participant in the on-demand music streaming industry. Google does not separate its subscriptions to its Section 115 service, Google Play Music, and YouTube RED, offering them together as a single subscription. (Eisenach WRT ¶ 62 (HX-3033))

COF-266. Google’s Paul Joyce describes YouTube as one of Google’s music-related services. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED] (Joyce WDT ¶¶ 4, 13-14 (HX-693); Tr. 200:14-201:4, 201:31-202:12 (Levine))

COF-267. Without the ability to get free market benchmarks from the Section 115 context, benchmarking using YouTube licenses is an almost perfect substitute. The unique and arbitrary definitional carve-out of audiovisual works from the statutory scope makes YouTube an almost scientifically-designed case for benchmarking the relative royalty rates for sound recordings and musical works. (Eisenach WRT ¶ 64 (HX-3033))

COF-268. Although YouTube is an excellent benchmark for establishing a free market ratio between sound recordings and musical works rights, it is not a good benchmark for determining absolute royalty rates for Section 115. [REDACTED]

[REDACTED]  
[REDACTED] Cary Sherman, the head of the RIAA, has stated that a label’s ability to negotiate with YouTube is constrained by its reliance on the safe harbor of the DMCA. Since the DMCA/Safe Harbour applies equally to sound recording and musical work copyrights, [REDACTED]

[REDACTED] (Eisenach WRT ¶¶ 65-66 (HX-3033); Tr. 4622:1-19 (Eisenach); Brodsky WDT ¶ 108 (HX-3016); Kokakis WDT ¶ 102 (HX-3018))

c. Pandora Opt-Out Agreements

COF-269. From 2012 to 2018 and, as a result of being freed from the “overhanging control of the rate courts,” the ratio implied for the relative value of label and publisher



the observed range of ratios of sound recording rights to musical works rights of [REDACTED] and subtracting average musical works performance royalties paid in 2015 (excluding Spotify) of [REDACTED] per 100 plays. The resulting range for the value of the mechanical rights for musical works using Dr. Eisenach's Method 2 is [REDACTED] per 100 plays to [REDACTED] per 100 plays. (Eisenach WDT ¶¶ 155-158, Table 14 (HX-3027))

COF-276. In 2015, the weighted average of sound recording payments per user was [REDACTED]. (Eisenach WDT ¶ 161 (HX-3027))

COF-277. Applying the observed range of ratios of the value sound recording rights to musical works rights of [REDACTED] to the [REDACTED] weighted average figure, the resulting all-in musical works rights per user ranges from [REDACTED]. (Eisenach WDT ¶ 163 (HX-3027))

COF-278. In 2015, the average musical works performance royalty (excluding Spotify) was approximately [REDACTED] per user. Including Spotify, it was approximately [REDACTED] per user. (Eisenach WDT ¶ 164, Table 17 (HX-3027))

COF-279. Subtracting the average musical works performance royalty from the range of all-in per-user musical works royalties implied by Dr. Eisenach's analysis, the resulting musical works mechanical royalty per user ranges from [REDACTED] to [REDACTED] per user. (Eisenach WDT ¶ 165 (HX-3027))

COF-280. Applying the midpoint of the YouTube and Pandora ratios of sound recording rights to musical works rights to the range of calculated per-user musical works mechanical royalties, the resulting mechanical-only rate would be [REDACTED] per user. (Eisenach WDT ¶ 165 (HX-3027))



[REDACTED]	HX-2740	Exhibit B ¶ 6 (at AMZN00004801)
[REDACTED]	HX-2739	Exhibit C, p. 35 (at AMZN00004949)
[REDACTED]	HX-1589	¶ 1(mm), p. 5 (at APL-PHONO_00008932)
[REDACTED]	HX-1590	¶ 1(mm), p. 6 (at APL-PHONO_00008981)
[REDACTED]	HX-776	¶ 1(nn), p. 7 (at APL-PHONO_00009027)
[REDACTED]	HX-3220	Exhibit G ¶ (a), p. 10 (at GOOG-PHONOIII-00003495)
[REDACTED]	HX-3219	Exhibit G ¶ (a), p. 5 (at GOOG-PHONOIII-00003440)
[REDACTED]	HX-3221	Exhibit G ¶ (a), p. 5 (at GOOG-PHONOIII-00003523)
[REDACTED]	HX-3224	Exhibit G ¶ (a), p. 5 (at GOOG-PHONOIII-00003999)
[REDACTED]	HX-3223	Exhibit G ¶ (a), p. 5 (at GOOG-PHONOIII-00003607)
[REDACTED]	HX-3222	Exhibit G ¶ (a), p. 6 (at GOOG-PHONOIII-00003541)
[REDACTED]	HX-388	Exhibit A, p. 8 (at GOOG-PHONOIII-00000353)
[REDACTED]	HX-974-40	¶ 3(c) (at PAN_CRB115_00097974)
[REDACTED]	HX974-45	¶ 3(c), p. 7 (at PAN_CRB115_0097479)

[REDACTED]	HX-0974-69	¶ 3(c) , p. 10 (at PAN_CRB115_00098027)
[REDACTED]	HX-0974-58	¶ 3(c), p. 11 (at PAN_CRB115_00094059)
[REDACTED]	HX-0974-70	¶ 11, p. 11 (at PAN_CRB115_00094108)
[REDACTED]	HX-0974-85	¶ 3(c), p. 7 (at PAN_CRB115_00097455)
[REDACTED]	HX-2762	Schedule 1 ¶ 3.1 (at PAN_CRB115_000093983)
[REDACTED]	HX-2770	¶ 1, p. 10 (at PAN_CRB115_00094172)
[REDACTED]	HX-2765	¶ 10, p. 27 (at SPOTCRB0005574)
[REDACTED]	HX-2760	Schedule B (at SPOTCRB0005285)
[REDACTED]	HX-925	¶ 6(b), p. 28 (at SPOTCRB0006245)

COF-286. Available royalty payment data confirms that interactive streaming services (excluding Spotify) in fact pay about [REDACTED] percent of service revenue for sound recording rights. (Eisenach WDT ¶ 169 (HX-3027))

COF-287. Spotify admits that the payment of 70% of revenues in royalties are “as it should be” despite argument here otherwise. (Eisenach WRT ¶ 79 (HX-3033), n.100 (HX-920))

COF-288. The 70/30 split in favor of copyright owners is found in other markets in which digital content is distributed to users, including, for example, with Netflix and digital video distribution. (Eisenach WRT ¶ 79 (HX-3033), n.98, n.99 (HX-2820))

5. Spotify Data Is Not Appropriate For Inclusion In The Benchmark Analysis

COF-289. [REDACTED]

[REDACTED]

[REDACTED] (Eisenach WST ¶ 10 (HX-3393), n.12 (HX-3277, HX-3276, HX-3280, HX-3281))

COF-290. [REDACTED]

[REDACTED] (Eisenach WST ¶ 11 (HX-3393), n.15 (HX-3278), n.16 (HX-3283))

COF-291. [REDACTED]

[REDACTED] (Eisenach WST ¶ 12 (HX-3393), Table 2 (HX-3278, HX-3283), n.18 (HX-2947))

COF-292. [REDACTED]

[REDACTED] (Eisenach WST ¶¶ 13-14 (HX-3393), Table 3 (HX-778))

COF-293. The United States is Spotify's largest market. (Tr. 2049:23-2050:1 (McCarthy))

COF-294. [REDACTED]

[REDACTED] (Eisenach WST ¶ 10 (HX-3393), n.12 (HX-3276 at SPOTCRB0013775; HX-3277 at SPOTCRB0013790; HX-3280 at SPOTCRB0013853; HX-3281 at SPOTCRB0013881))

COF-295.

[REDACTED]

(Eisenach WST ¶ 14 (HX-3393), n.19 (Eisenach WRT ¶¶ 101-103 (HX-3027))

COF-296. None of Spotify’s competitors feature a comparable ad-supported tier and, as Dr. Watt explains, this lack of ad-supported tiers on the market is the result of two possible factors: either Spotify’s competitors find that the value of such a tier is not worth the costs, or they are prevented from having such a tier by a barrier to entry. Dr. Watt testifies that the statutory rate should not accommodate Spotify’s ad-supported service, given such barriers to entry or the lack of net value inherent in such an offering. (Tr. 3048:6-3050:3 (Watt))

COF-297.

[REDACTED]

(Eisenach WDT (HX-3027), Tables 11, 15 (HX-778))

COF-298.

[REDACTED]

[REDACTED]  
[REDACTED] the 2016 sound recording rates set in the Web IV proceeding for Section 114 non-subscription, ad-supported services was \$0.0017 per play. [REDACTED] (HX-1741, at 6)

COF-299. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (HX-1741, at 5-6)

COF-300. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (HX-1741 at 6-7, 23-26;

HX-778)

COF-301. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 5982:14-5987:17

(Hubbard); Hubbard WRT ¶¶ 4.10-4.11, Table 1 (HX-132))

**C. The Copyright Owner’s Proposed Rate Should Not Be Adjusted Downwards**

1. There Are No Grounds For An Adjustment For Disruption Under 801(b)(1)(D)

a. The Range Of Historical Royalties Is Consistent With The Copyright Owners’ Rate

COF-302. Historically, the average effective mechanical per stream rates paid by certain major interactive services to UMPG have been consistent with the Copyright Owners’ proposed rates. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Kokakis WDT ¶ 105 (HX-3018))

COF-303. In the fourth quarter of 2015, Apple paid SATV an effective per play mechanical rate for individual users of approximately [REDACTED]. (Brodsky WRS ¶ 67 (HX-3016))

COF-304. Dr. Gans also demonstrates that the Copyright Owners' proposed royalty of \$0.0015 per play falls within the range of historical effective per-play rates paid by interactive streaming services, including [REDACTED]

[REDACTED]). Dr. Hubbard's own analysis of Amazon Prime Music's per stream rate confirms Dr. Gans' analysis. (Gans WDT ¶ 84 (HX-3028), Table 6; (Tr. 5972:11-5973:21 (Hubbard))

b. The Copyright Owners Rate Will Not Disrupt The Viability Of The Interactive Service Industry

COF-305. Mechanical royalties make up a small portion of a service's fees and expenses per user-month compared to sound recording payments. For example as of December 2015, mechanical royalties were equal to approximately [REDACTED] of monthly service content costs. Sound recording royalties averaged [REDACTED] for the same period. (Rysman WRT ¶ 80 (HX-3032))

COF-306. Spotify's CFO Barry McCarthy admitted that [REDACTED]

[REDACTED] (Tr. 2076:1-10 (McCarthy))

COF-307. Services have strategic options to offset the impact of changes to rates. (Rysman WDT ¶ 93 (HX-3026))

COF-308. The industry as a whole could increase the rates charged to consumers in order to generate more revenue per subscriber. (Rysman WDT ¶ 94 (HX-3026))

COF-309. Services could raise revenue by introducing price discrimination through a tiered subscription pricing system where consumers pay a price more closely related to their level of consumption and willingness to pay. (Rysman WDT ¶ 95 (HX-3026))

COF-310. With respect to ad-supported platforms, services could choose to increase the number of ads per hour. Pandora produces far more advertisements per hour than Spotify, which suggests that Spotify could sustain more. (Rysman WDT ¶ 96 (HX-3026))

COF-311. As Dr. Ghose testified, because of their experience with their users over time, and the data they collect, it is not difficult for the Services to forecast the level of streaming on their services, and so a per-play rate would not “cause any disruptive surprises for streaming services.” (Tr. 2877:4-2879:20 (Ghose))

COF-312.

[REDACTED]

COF-313

[REDACTED]

COF-314

[REDACTED]

COF-315.

[REDACTED]

(Joyce))

COF-316. Google incurred less than [REDACTED] in total mechanical royalty costs for compositions licensed by Google under the statutory license for the Google Play Music during the three-year period from the inception of the service in May 2013 through June 2016 ([REDACTED]). (HX-553)

COF-317. [REDACTED]  
[REDACTED]  
[REDACTED] (HX-3212, at 5576, 5592-93)

COF-318. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 790:13-791:12 (Joyce))

c. The Interactive Streaming Industry Is Thriving

COF-319. The streaming industry is not a struggling market fraught with economic uncertainty. Instead, there has been large growth in both individual service providers and the broad market. (Rysman WDT ¶ 102 (HX-3026); Dorn WDT ¶ 31 (HX-1611); Eisenach WDT ¶ 53 (HX-3027); Eisenach WRT ¶ 83 (HX-3033); Timmins WRT ¶¶ 18-28 (HX-3036))

COF-320. Both Dr. Marx and Dr. Katz, in their publications, have noted that market entrants are lured to a product market by the possibility of earning above-normal and/or positive profits. (Eisenach WRT ¶ 83 (HX-3033))

COF-321. Some former interactive services are no longer operating for reasons unrelated to their royalty burdens, but because they were found to be copyright infringers or were acquired. (Tr. 179:21-184:7 (Levine); Tr. 5192:1-5195:4 (Leonard))

COF-322. Interactive streaming services that exited the market prior to 2008 could not have done so as a result of mechanical royalty burdens, as such services did not pay mechanical royalties prior to the 2008 settlement which set rates for interactive streaming (they were subject to rateless agreements). (Tr. 3620:15-3621:10 (Israelite))

COF-323. At the end of 2016, the number of streaming music subscribers worldwide recently passed the 100 million mark. Within the United States, the number of paying subscribers more than doubled between the first half of 2014 and the first half of 2016. (Timmins WRT ¶¶ 18-19 (HX-3036))

COF-324. During the same period that so many new companies were entering the streaming music market, a large amount of capital was invested, partnerships were structured, and acquisitions took place. More than \$2 billion has been invested in the most visible companies in this industry, including Deezer's \$200 million equity offering, Twitter's \$70 million investment in SoundCloud in June 2016, and Spotify's EUR 1.7 billion offering. (Timmins WRT ¶¶ 28-31 (HX-3036), n.20 (HX-2640), n.21 (HX-2641), n.22 (HX-1060), n.26 (HX-2752), n.27 (HX-2671))

COF-325. The companies that operate interactive streaming services were able to anticipate many of their costs in advance of launching those services, including one of their most significant costs, sound recording royalties – because, with respect to sound recording royalties, those companies entered into licensing agreements before launching their interactive services. (Tr. 788:22-790:12 (Joyce))

COF-326. The large new market entrants have already shown, for their other business units if not for music streaming, willingness to make substantial up-front investments and even operate those units at a loss for long periods of time. Google (now Alphabet) has been developing self-driving cars since 2009 without having received any material revenue from that project to date or any indication that the project will be profitable in the near future. Similarly, Google paid \$1.65 billion to acquire YouTube more than ten years ago, and according to YouTube’s CEO, the video streaming service is “still in investment mode.” (Timmins WRT ¶¶ 81 (HX-3036), n.95 (HX-2660), n.96 (HX-2661), n.97 (HX-2974), n.98 (HX-2662), n.99 (HX-2663), n.100 (HX-2664, HX-2665))

COF-327. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] HX-129; HX-1373, at AMZN00076220, lines 17 and 27)

COF-328. The interactive music streaming industry is “on a trajectory that’s sustainable” and “healthy enough.” (Tr. 643:13-17 (Katz))

COF-329. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (HX-2759 at SPOTCRB0001483)

COF-330. Major tech firms are entering the market, and investors are eager to invest their money. (Rysman WDT ¶ 102 (HX-3026))

COF-331. The number of paid subscribers has grown from 3 million in 2011 to 39 million in August 2016, which is equal to a compound annual growth rate (CAGR) of over 73%. (Rysman WDT ¶ 103 (HX-3026), n 87 (HX-2727))

COF-332. United States subscriber numbers are expected to increase from 12.5 million in 2015 to 220 million in 2021. (Ramaprasad WDT ¶ 52 (HX-1615); HX-1531; Tr. 2198:4-20 (Hubbard))

COF-333. Despite decline in retail sales, the demand for and consumption of music remains robust. (Eisenach WDT ¶¶ 54, 55, 56, 57 (HX-3027), n.45 (HX-2832), n.46 (HX-2849), n.47 (HX-2848), n.48 (HX-2799))

COF-334. Spotify has generated a significant amount of investor interest, demonstrated by its ability to raise more than \$2 billion through several rounds of debt and equity financing. In March 2016, Spotify raised \$1 billion in convertible debt from investors with a feature that was designed to encourage the company to sell itself (via IPO or privately). This type of interest is representative of a strong and robust industry. (Rysman WDT ¶ 105 (HX-3026), n 91 (HX-302); Rysman WDT ¶ 106 (HX-3026))

COF-335. INTENTIONALLY OMITTED

COF-336. [REDACTED]

[REDACTED] (Tr. 2103:3-7 (McCarthy))

COF-337. [REDACTED]

[REDACTED] (Tr. 2076:11-19 (McCarthy))

COF-338. Since May 2014, some of the largest companies in the world have been eager to enter and/or invest in the interactive streaming market. (Israelite WDT ¶ 105 (HX-3014))

COF-339. Three of the most successful and high profile companies in the world - Google, Amazon and Apple -- have entered the streaming industry within the last four years, which also indicates the strong prospects for the future of streaming industry. (Rysman WDT ¶ 107 (HX-3026))

COF-340. Amazon, Apple, and Google each earn revenues of tens or hundreds of billions of dollars annually and have tens of billions of dollars in cash on hand. Each company's all-in MW royalty payments in recent years have been equivalent to just [REDACTED] or less of annual company revenues and less than [REDACTED] of its cash on hand. (Timmins WRT ¶¶ 76-79 (HX-3036))

COF-341. In recent years, there has been a steady stream of new entrants in the interactive music streaming industry in the United States. Spotify entered in 2011. Google Play's interactive streaming service launched in 2013. In 2014, Amazon's introduced an interactive streaming service for its Prime program and the streaming service Tidal also entered the market. Apple launched its interactive Apple Music streaming service in mid-2015. Soundcloud (Go), Deezer, and Amazon (Unlimited) entered the market in 2016. (Gans WDT ¶ 13 Table 1 (HX-3028); Rysman WDT ¶ 108 (HX-3026), Rysman WRT ¶ 56 (HX-3032); Eisenach WDT ¶ 51 (HX-3027), n.41 (HX-2621, HX-2622, HX-2800, HX-2818, HX-2625, HX-2847, HX-1548, HX-1431, HX-2817, HX-2814, HX-2630, HX-93, HX-2793, HX-2795))

COF-342. Two music streaming platforms that have over 150 million subscribers combined, Pandora and iHeart Radio, have recently entered the interactive streaming market. (Rysman WDT ¶ 70 (HX-3026))

COF-343. Apple Music's subscribership [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Dorn WDT ¶ 24 (HX-1611), (HX-777))

COF-344. Pandora, a participant in these proceedings, announced the launch of its interactive streaming service for 2017. (Eisenach WDT ¶ 52 (HX-3027), n.42 (HX-2816, HX-2833))

COF-345. The continued entry of new services into the interactive streaming business demonstrates that investors and entrepreneurs expect to each economic profits from their investments. (Eisenach WDT ¶ 53 (HX-3027))

COF-346. Dr. Hubbard admitted that when companies are investing tens or hundreds of millions of dollars to differentiate themselves from their competitors, it suggests a highly competitive industry. (Tr. 2235:20-2236:6; (Hubbard))

COF-347. Pandora said, [REDACTED]

[REDACTED]

[REDACTED] In December 2016, Pandora publicly announced that it would enter the interactive streaming market in Q1 2017 with its "Pandora Premium" product.

(Eisenach WRT ¶ 86 (HX-3033), n.109 (HX-2746), n.110 (HX-2748))

COF-348. In a [REDACTED], Spotify admitted that t [REDACTED]

[REDACTED]

[REDACTED] (HX-2749 at SPOTCRB0005702; Eisenach WRT ¶ 86 (HX-3033), n.111 (HX-2748))

COF-349. On January 23, 2017, Sprint and Tidal announced that Sprint is purchasing a 33 percent ownership interest in Tidal for \$200 million, in addition to a \$75 million annual artist marketing fund, and will make Tidal and its exclusive content available to 45 million Sprint mobile customers. The \$200 million valuation for one-third of Tidal represents an enterprise valuation of \$600 million, a ten-fold increase since early 2015 when Jay Z acquired Tidal for \$56 million. (Eisenach WRT ¶ 87 (HX-3033), n.113 (HX-2750), n.114 (HX-2751), n.115 (HX-2752); (HX-920))

COF-350.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-1373, lines 5, 8 and 13; AMZN00076220)

COF-351.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-3056)

COF-352. Brand awareness for interactive music streaming services is high. (Eisenach WDT ¶ 60 (HX-3027))

d. Services Have Presented No Evidence That The CORS Or COR Would Cause Industry Disruption

COF-353.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1803:7-1804:5 (Page),

2145:11-25 (McCarthy))

COF-354.

[REDACTED]

[REDACTED]

[REDACTED] (HX-802 [REDACTED]

[REDACTED]

[REDACTED])

COF-355.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Compare HX-1065,

Figure 8, with HX-1037 at 26)

COF-356.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1732:18-1733:5,  
1806:6-18 (Page); Tr. 5345:24-5346:9 (Vogel); Tr. 5620:18-25 (Marx))

COF-357. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 5621:18-22 (Marx))

COF-358. [REDACTED]

[REDACTED]

(Rysman WRT Figure 1, Table 1 (HX-3032))

COF-359. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 5623:21-  
5624:20 (Marx))

COF-360. When asked to identify an ad-supported service that is similar to Spotify's ad-supported tier, Spotify's CFO Barry McCarthy identified only Pandora's ad-supported product, which is classified as a non-interactive streaming service. Mr. McCarthy, who was previously on the board of directors of Pandora, admits that Spotify's ad-supported tier and Pandora's ad-supported product may both be characterized as partially interactive services. (Tr. 2143:23-2145:9 (McCarthy))

COF-361. When Paul Vogel, Spotify’s Head of Global Financial Planning and Analysis and Investor Relations, was asked whether Spotify’s ad-supported mobile service was similar to Pandora’s ad-supported service in terms of functionality, he responded only that both services “probably have certain restrictions.” Spotify’s expert Dr. Marx also admitted that Spotify’s ad-supported mobile service is similar to Pandora’s ad-supported service in functionality. (Tr. 5346:15-5347:2 (Vogel); Tr. 5620:18-5621:8 (Marx))

COF-362. Dr. Marx admitted that she has not undertaken a market definition analysis for this proceeding and could not identify material differences in functionality between Spotify’s ad-supported service and non-interactive streaming services. (Tr. 5619:5-5623:10 (Marx))

COF-363. Mr. McCarthy admitted that he does now know why Spotify’s competitors do not use a Freemium model, and he claimed that while he “imagine[s]” that there have been internal discussions at Spotify regarding why this is the case, he has never contemplated it himself. (Tr. 2115:8-25 (McCarthy))

COF-364. [REDACTED]

[REDACTED] (HX-924, at SPOTCRB0006044,  
SPOTCRB0006112-0006114; HX-2765, at SPOTCRB0005596)

COF-365. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 2143:6-22 (McCarthy))

COF-366. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr.

2111:21-2112:14, 2116:1-2117:15 (McCarthy))

COF-367. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 2108:21-2109:12

(McCarthy))

COF-368. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-2696 at SPOTCRB0007869-0007872)

COF-369. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 2113:17-2115:5

(McCarthy))

COF-370. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 2168:11-2169:11 (McCarthy))

COF-371. [REDACTED]

[REDACTED] (Tr. 5343:25-5344:19, 5345:18-23 (Vogel);  
Tr. 2167:4-11 (McCarthy))

COF-372. Spotify could avoid having the Copyright Owners' per-user proposal apply to inactive accounts on the ad-supported simply by blocking access to such accounts until the user clicks through a notification on his or her device, [REDACTED]

[REDACTED] (Tr. 5338:1-14, 5339:16-23, 5340:13-15 (Vogel))

- e. Service Viability Is Driven By Massive Competition For Valuable Market Share And Growth, Not By Mechanical Royalty Rates
  - i. There Is No Evidence That The Mechanical Royalty Rate Has Ever Been A Material Factor In Service Viability Or Pricing

COF-373. Prior to 2008, no interactive streaming service paid mechanical income to publishers and songwriters so if any of those services failed, it was not because they were paying mechanical royalties. (Tr. 3618:15-3620:15-3621:10 (Israelite))

COF-374. Spotify's head of financial planning and analysis and investor relations, Paul Vogel, testified that [REDACTED]

[REDACTED] (Tr. 5335:15-18 (Vogel))

COF-375. Spotify increased its subscription service pricing by \$3.00 to users who purchase the app through Apple's iTunes store, and by over \$1.00 in New Zealand to cover a new government tax. (Marx WDT ¶ 78 n.99 (HX-1065); Gans WRT ¶ 73 n.68 (HX-3035); HX-2666)

COF-376. Google claims that it relied on the current statutory rate and rate structure in entering the market. However, Google produced no document or analysis supporting such a claim of "reliance," and, in fact, Google's interrogatory responses confirm that Google does not have any such analysis to support the claim. (Levine WDT ¶¶ 40-41 (HX-692); HX-3372, Response to Interrogatory No. 12)

COF-377. [REDACTED]

[REDACTED]  
[REDACTED] It offers a discount equivalent to \$3.42 per user-month, [REDACTED]

[REDACTED] This discount is more than three times the entire proposed mechanical per-user prong of \$1.06. (Rysman WRT ¶ 79 (HX-3032))

COF-378. Prime members receive a \$2 per month discount on Amazon Music Unlimited, from \$9.99 to \$7.99. [REDACTED]

[REDACTED]  
[REDACTED] (Tr. 1533:9-1534:16 (Mirchandani); HX-3225, pp. 1-2)

COF-379. [REDACTED]

[REDACTED] (Tr. 1606:24-1609:23 (Mirchandani); HX-20; HX-3225, p.1)

COF-380. Amazon's own rate proposal seeks to deduct up to 15% of costs from its revenue earned from its annual plan, from its family plan and from its student plan discounts so that it proposes discounts on top of discounts. It also proposes a 16 2/3% discount for all of the Amazon Music Unlimited services (\$9.99, \$7.99 and \$3.99) for an annual subscription, which will reduce revenue by \$1.67 a month. (Tr. 1321:5-1326:1, 1448:9-1448:22, 1452:1-7

(Mirchandani))

COF-381. [REDACTED]

[REDACTED] (Tr. 1561:5-1563:15, 1564:22-1568:2, 1568:25-1570:1 (Mirchandani); HX-2618; HX-1146; HX-975; HX-3006)

COF-382. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 224:1-225:15 (Levine))

- ii. The Services Are Competitive, Growing Companies With Many Ways To Generate Income

COF-383. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 2069:16-2070:14

(McCarthy))

COF-384. Paul Joyce, Google's Director of Product Management of Google Play

Music stated that Google Play Music [REDACTED]

[REDACTED]

[REDACTED] (Tr. 788:5-21 (Joyce))

COF-385. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(Tr. 789:7-790:12 (Joyce))

COF-386. While [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 791:14-792:10 (Joyce))

COF-387. Google also bundles Google Play Music with its separate YouTube Red offering. A subscriber to either offering will get the other product for free. [REDACTED]

[REDACTED]

[REDACTED] (Joyce WDT ¶ 17 (HX-693); HX-3209, at 10; HX-3212, at 5581 [REDACTED]

[REDACTED])

COF-388. [REDACTED]

[REDACTED]

[REDACTED] (HX-3209, at GOOG-PHONOIII-00003892)

COF-389. [REDACTED]

[REDACTED]

[REDACTED] (Rysman WDT ¶ 30 (HX-3026), n.36 (GOOG-PHONOII-00002858); HX-546)

COF-390. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 793:3-7 (Joyce))

COF-391. Pandora uses its music service and all of the billions of data points it has collected on user behavior to sell concert tickets. Specifically, Pandora serves notifications of upcoming concerts to users based on preferences and location. Users who receive notifications can click on a link which takes them to a different site to purchase concert tickets, including the site of Ticketfly, a ticketing service owned by Pandora. (Tr. 408-410 (Phillips))

COF-392. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 2138:3-2139:11 (McCarthy))

COF-393. Lowering royalty costs would improve the competitive position of standalone services only if such services lower prices while the integrated services do not. Because the integrated firms likely would also lower their prices, lowering rates would lead to a situation where everyone has lower prices, and standalone firms still can't compete. (Rysman WRT ¶ 66 (HX-3032))

COF-394. [REDACTED]

[REDACTED]

[REDACTED]

(HX-799, at SPOTCRB0001534, 0001540)

COF-395. The Services incur costs that relate to competing with each other. Lowering costs will likely result in them just spending more on marketing and other methods to compete and gain market share. (Tr. 790:13-24 (Joyce))

COF-396. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 2095:1-15 (McCarthy))

COF-397. Hubbard admits that labels' production, marketing, manufacturing and distribution costs have been sharply reduced in the digital world. (Tr. 5998:7-18)

COF-398. The costs of record labels to produce hit songs is declining, as they no longer incur costs for physical distribution where the Digital Services are the distributors.

(Israelite WDT ¶ 79 (HX-3014))

COF-399. [REDACTED]

[REDACTED] (Tr. 2117:17-23 (McCarthy))

COF-400. On the consumer side, while fans have long enjoyed the ability to search by artist, a search by songwriter has yet to appear on any interactive service. (Kalifowitz WDT ¶ 34 (HX-3022))

COF-401. Spotify's Fan Insights feature, which provides information to artists and their managers regarding streaming activities of the artists' sound recordings, was not set up by Spotify to be usable by songwriters. (Tr. 2274:15-2275:1 (Lucchese))

COF-402. The features Spotify has created on its platform for artists such as Spotify Fan Insights are of benefit to songwriters solely through the distribution of a songwriter's catalogue more broadly, a benefit that is incidental. (Tr. 2275:10-24 (Lucchese))

COF-403. [REDACTED]

[REDACTED] (HX-1017, at 6-9)

COF-404. [REDACTED]

[REDACTED] (HX-1017, at 31)

COF-405. While labels receive real-time data feeds regarding the use of their master recordings, publishers are given convoluted royalty statements after the fact. (Kalifowitz WDT ¶ 34 (HX-3022))

2. There Is No Evidence Supporting An Adjustment For “Market Power”
  - a. The Record Contains No Evidence Of Abuse Of Market Power

COF-406. While the workable competition framework can provide useful insights in markets where sellers have market power and buyers are price takers, the more appropriate framework for assessing outcomes in markets – like the markets for many of the potential benchmarks put forward in this proceeding – in which both buyers and sellers have a degree of market power, and where prices are determined through negotiations, is a game-theoretic “bargaining power” model. (Eisenach WRT ¶ 76 (HX-3033))

COF-407. The current deals for sound recording rights negotiated outside the shadow of compulsory licensing are the fruits of private negotiations that reflect the growing importance of interactive services to the record labels and the increasing equality of bargaining positions that entails. (Eisenach WRT ¶ 77 (HX-3033))

COF-408. Given the rapid growth in the importance of interactive streaming services within the music ecosystem, the increasing diversity of business models in which interactive services are employed and the bargaining power advantages possessed by firms like [REDACTED] [REDACTED] it would be inappropriate to conclude that recent deals between record labels and the Services [REDACTED] [REDACTED] (Eisenach WRT ¶ 77 (HX-3033))

COF-409. [REDACTED]  
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Eisenach WRT ¶ 78 (HX-3033), n.95 (HX-2845, HX-2844, HX-2802, HX-2810), n.96 (HX-920))

COF-410. Dr. Hubbard’s view is that by virtue of its size and power in the industry – a size and power shared by Amazon and Apple – Google’s Youtube “has market power in its negotiation with record labels, which likely resulted in lower sound recording royalty payments compared with other streaming services.” (Hubbard WRT ¶ 6.36 (HX-132); Tr. 5998:19-5999:23 (Hubbard))

COF-411. An internal Pandora strategic document outlining its entry into the interactive streaming space discusses [REDACTED]. (HX-2634, PAN\_CRB115\_24185 at 24204-05)

COF-412. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-2731, SPOTCRB0007512 at 7543)

COF-413. [REDACTED]

[REDACTED]

[REDACTED] (HX2696, SPOTCRB0007869 at 7869-70)

COF-414. The Cournot Complements problem is not applicable to this proceeding. It does not arise because the interactive services and the record labels negotiate. (Tr. 4000:11-14 (Gans))

COF-415. The Cournot Complements problem does not arise in bargaining games but in pure market behavior. (Tr. 4001:18-24 (Gans))

COF-416. The Cournot Complements problem is a coordination problem. (Tr. 4001:25-4002:1 (Gans))

COF-417. A Shapley analysis assumes that the parties will negotiate and reach an agreement that maximizes total surplus. (Tr. 4005: 18-24 (Gans))

b. The Record Contains No Evidence To Indicate Sound Recording Licenses Are Unfair Or Reflect Undue Market Power

COF-418. [REDACTED]

[REDACTED] (Tr. 204:11-17; 205:7-12; 206:1-20; Tr. 240:17-21, Tr. 243:22-244:3 (Levine))

[REDACTED]	HX-3220	Exhibit G ¶ (a) , p. 10 (at GOOG-PHONOIII-00003495)
------------	---------	--

[REDACTED]	HX-3219	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003440)
[REDACTED]	HX-3221	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003523)
[REDACTED]	HX-3224	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003999)
[REDACTED]	HX-3223	Exhibit G ¶ (a) , p. 5 (at GOOG-PHONOIII-00003607)
[REDACTED]	HX-3222	Exhibit G ¶ (a) , p. 6 (at GOOG-PHONOIII-00003541)
[REDACTED]	HX-643	¶ 10, p. 11 (at GOOG-PHONOIII-00004520)

COF-419. [REDACTED]

[REDACTED]	HX-0974-40	¶ 3(c) PAN_CRB115_00097974
[REDACTED]	HX-0974-45	¶ 3(cg) , p. 7 PAN_CRB115_0097479
[REDACTED]	HX-0974-69	¶ 3(c) , p. 10 PAN_CRB115_00098027
[REDACTED]	HX-0974-58	¶ 3(c) , p. 11 PAN_CRB115_00094059
[REDACTED]	HX-0974-70	¶ 11, p. 11 PAN_CRB115_00094108
[REDACTED]	HX-0974-85	¶ 3(c), p. 7 PAN_CRB115_00097455

COF-420. It is useful to add the definition of “play” to make clear that a royalty is payable for each play of a limited download; this fact is not in dispute as the Services have been accounting in such manner. [REDACTED]

**IV. THE SERVICES' PROPOSED RATE STRUCTURES FAIL TO SATISFY THE STATUTORY POLICY OBJECTIVES**

**A. The Percentage Of Revenue Based Models (RMs) That The Services, Other Than Apple, Propose To "Roll Forward" - Even As They Propose To Materially Modify Them Downward - Are Unreasonable And Inconsistent With The Policy Objectives**

1. The 2008 and 2012 Settlements Were Experimental And Were Not To Be "Rolled Forward" But Determined De Novo In Future Proceedings

COF-421. The current statutory rate and rate structure were negotiated as settlements when the business models for delivering interactive streams and limited downloads were in flux and undeveloped and no one knew how they might develop or through what business models the streaming services would operate. (Israelite WDT ¶¶ 33, 81, 95 (HX-3014); Israelite WRT ¶¶ 4, 17, 18, 19, 29 (HX-3030); Tr. 3631:22-3632:17, 3754:7-23, 3764:25-3765:12 (Israelite); (HX-321 ¶¶ 6, 48; HX-322, ¶ 28; HX-323; Dorn WDT ¶ 30 (HX-1611); Ramaprasad WDT ¶ 5 (HX-1615); Brodsky WDT ¶ 59 (HX-3016); Gans WDT ¶ 55 (HX-3028))

COF-422. [REDACTED]

COF-423. Entry of firms is used as a measure of industry or enterprise success and value, and Dr. Hubbard has admitted that, since 2008 and 2012, the streaming industry has materially changed in terms of the number of consumers, the number of streams, the entry of a number of companies and the identity of the companies, as well as revenue and subscriber growth. (Rysman WRT ¶ 12 (HX-3032); Tr. 2198:4-20 (Hubbard))

COF-424. None of the market intelligence, information and data about the functionality of the interactive streaming market or the business models of the Digital Services

currently available to the participants in this proceeding was available to the parties in Phonorecords I. (Israelite WDT ¶ 93 (HX-3014); Israelite WRT ¶ 28, 29 (HX-3030); Levine WDT ¶ 9 (HX-692); Brodsky WDT ¶ 59 (HX-3016))

COF-425. Dr. Hubbard admitted that he does not know how the rates and terms were negotiated in Phono II, although he agrees that the Subpart B rates and terms come from the Phono I settlement (Tr. 2197:13-2198:3 (Hubbard))

COF-426. At the time of Phonorecords II, the parties had little data to rely on regarding the market for interactive streaming. (Israelite WDT ¶ 99 (HX-3014); Israelite WRT ¶ 29 (HX-3030))

COF-427.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Tr. 3631:22-3632:17, 3754:7-23, 3764:25-3765:12

(Israelite))

COF-428. The current rate structure was experimental – meaning it had not been adopted by consumers and there was no data to evaluate the business – and the NMPA had no insight into how the interactive streaming business might develop or what business model or models might be used. Thus, it sought the protection of alternative prongs and floor payments in an effort to ensure the Copyright Owners were protected against price cuts or business models that ineffectively monetized a service because they did not know what prong might bind. In fact, the Copyright Owners’ rate proposal in 2008 included a three tier greatest of a percent of revenue, a percent of total content costs (TCC) and a penny rate structure. The settlement

adopted the tiered structure proposed by the Copyright Owners but the specific elements, percentages and rates were the subject of negotiation. The Copyright Owners negotiated mechanical-only minima in 2008 in part to avoid the negative impact on publishers' ability to recoup advances that would occur as a result of all-in payments. (Israelite WRT ¶¶ 19-22, 29, 81 (HX-3030); Tr. 3636:16-3638:2, 3632:18-3634:25, 3635:25-3636:15, 3754:7-23, 3764:25-3765:12 (Israelite); Tr. 259:7-11 (Levine); HX-322, at 13)

COF-429. The interactive streaming market had not materially developed in the five years between the commencement of Phonorecords I and Phonorecords II. In fact, by the time that the settlement of Phonorecords I regulations were published in early 2009, the call for Phonorecords II was only two years later. The cost of Phonorecords I had been enormous, and the NMPA was in no position to finance another litigation. (Israelite WRT ¶ 28 (HX-3030); Tr. 3649:11-3650:18, 3651:17-3652:16 (Israelite); Tr. 158:22-159:8 (Levine))

COF-430. NMPA did not view the minima in the structure as minima, but as alternative rates in prongs with the intention that Copyright Owners would be paid the greatest of the rates calculated under each alternative prong. Because there was so little activity in the interactive streaming market, Copyright Owners had no idea which prong would bind. Because Copyright Owners had no control over factors such as the Services' pricing models or the public performance rates, their assumption was that any of the three tiers could kick in depending on how the business developed. (Tr. 3636:16-3638:2 (Israelite))

COF-431. The proposed regulations annexed to the 2008 *Phonorecords I* settlement agreement submitted by the parties establish, under the heading "Effect of Rates," that in future proceedings, "the royalty rates payable for a compulsory license shall be established *de novo*,

and no precedential effect shall be given to the royalty rate payable under this part.” (HX-6013, at Ex. B p. 16 (emphasis added))

COF-432. The current regulations, as adopted, state (under the heading “Effect of rates”) that in proceedings such as this, “the royalty rates payable for a compulsory license shall be established de novo.” 37 C.F.R. § 385.17

COF-433. There is a strong public policy interest in encouraging settlements, and the Copyright Act itself encourages those settlements. If settlements are used in rate setting proceedings as benchmarks or weapons against the parties who settle, that will discourage settlements, which is a bad outcome. (Tr. 3585:6-16 (Israelite))

2. The Services Have Provided No Economic Basis Or Evidence To Support Rolling Forward The Current Rate Structure, With Or Without The Changes They Propose

COF-434. The focus of the discussions for Phonorecords II was what ultimately became Subpart C. NMPA and DiMA had little discussion about Subpart B of the Phonorecords I settlement and the discussion they did have revolved around tightening the TCC prong. NMPA and its constituent publishers believed that tying the mechanical rate to the free market rates negotiated by the labels could provide some protection for the copyright owners. The Subpart B rates agreed in 2008 were rolled forward in the Phonorecords II settlement because the uncertainties present in 2008 about how the interactive streaming industry would develop, and what business models would be used, were still present in 2012. (Israelite WRT ¶¶ 28-30 (HX-3030); HX-337; Tr. 3654:20-3655:13, 3878:3-24 (Israelite); Levine WDT ¶ 38 (HX-692); Tr. 158:22-161:16 (Levine))

a. TCC Prong Has Definitional And Enforcement Problems

COF-435. The TCC prong, even without consideration of its “cap,” has failed to provide the intended protection to publishers and songwriters because in operation, there is very

little transparency and labels have been provided with numerous benefits that have not been included in computing the TCC. For example, the content costs paid by the services to the labels have not included the value of all benefits the services provided to the labels, including marketing and equity interests and advertising credits. In addition, the TCC prong's lesser of component creates an effective ceiling of 80 cents so that, even if all consideration paid by the service to the labels were captured, the copyright owners would still likely be constrained by the ceiling. (Tr. 3202:2-19 (Kokakis); Tr. 2121:6-2124:2, 2154:3-2156:14 (McCarthy))

COF-436. Equity deals impact publisher and songwriter royalties, since the benefits of equity may not be fully or fairly accounted for - or accounted for at all - in monthly income reporting by services, which means that the total content cost ("TCC") royalty test for mechanical royalties may be insufficiently calculated. As a result of their equity interest in Spotify, the label licensing agreements with Spotify may not be reflective of the full and fair value of the sound recording rights licensed. (Rysman WDT ¶ 45 (HX-3026); Eisenach WDT ¶ 148, FN127 ((HX-3027))

COF-437. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 2153:23-2156:14 (McCarthy))

- b. The Services Provided No Evidence Nor Explanation For How Different Per-User Minima Were Determined, Or Whether They Are Still Valid, Assuming They Ever Had An Economic Basis To Begin With

COF-438. As a general matter, tying a rate structure to current service offerings can adversely affect competition in the downstream market by favoring one business model over

another. The current rate structure underscores this flaw in the minimum provided for subscriptions which include a music streaming service as part of a bundle with a product, such as a phone or as part of Amazon Prime. The minimum for such bundled services are at 50% of the minimum for standalone non-bundled portable subscription services. In both cases, the end-user usage is precisely the same, but a bundled service could - and in the case of Amazon Prime Music does - pay publishers and songwriters half as much based on how the service is packaged. No evidence was presented by the services to support this disparity, just as no evidence was presented by the service to explain or justify any other element in the current rate structure. (Gans WDT ¶¶ 58-59 (HX-3028))

COF-439. Dr. Hubbard could not provide any economic explanation for why there was a difference between the bundled minimum and the higher non-bundled portable service minimum. (Tr. 5990:23-5991:24 (Hubbard))

c. The Services' Proposed Definition of "Service Revenue" Allows For Royalty Avoidance

COF-440. The determination of service revenue for streaming is "impractical" when the service provider offers a streaming service as part of a larger bundle of services. Under the current statutory rate structure, four of the Services propose to "roll forward" (albeit, with material changes), the "service revenue" for bundles (such as Amazon Prime). The definition of "service revenue" can be interpreted differently by different service providers. Dr. Hubbard admitted that Amazon Prime Music is a bundled service where it is "impractical" to calculate revenue because it is difficult to determine an attribution of the revenue to the part of the bundle in which you have an interest and that any service that involves bundling presents this problem. Dr. Ghose similarly testified. (Tr. 5957:12-5958:26 (Hubbard); Ghose WDT ¶ 78 (HX-1617); Rysman WDT ¶ 44 (HX-3026), FN47 (HX-790, at Kobalt00000305))

COF-441. Dr. Hubbard states in his Written Rebuttal Testimony, “A revenue-based mechanical royalty rate structure can provide appropriate value to rights holders as long as that structure includes alternative minimum royalty calculations when revenue is low or impracticable to calculate,” which, as evidenced by how Amazon Prime Music calculates “service revenue” effectively means that a revenue-based mechanical royalty rate structure is really not a revenue-based rate structure but an alternative minimum rate structure because the payment defaults to the floor. (Hubbard WRT ¶ 1.3, p.3 (HX-132); Tr. 5955:8-5956:23 (Hubbard))

3. RM's Do Not Fairly Compensate The Rightsholders Because Services Have Adopted Business Models That Defer And/Or Displace Revenue

COF-442. Apple’s Dr. Ramprasad testified that, “as the use of interactive streaming increases, songwriters are increasingly disenchanted with their royalty payments,” and that this, coupled with the increase in recent years in the “number of streaming services, the volume of music available for interactive streaming, interactive streaming services’ revenues, and the number of paid subscribers,” “necessitate[s] a reassessment of how royalties for publishers/songwriters are determined.” (Ramaprasad WDT ¶ 47 (HX-1615))

COF-443. The current revenue-based structure has resulted in inadequate payments to songwriters and music publishers, and these low payments threaten the very viability of the American songwriting industry. (*See, e.g.*, Bogard WDT ¶¶ 33-49 (HX-3025); L.T. Miller WDT ¶¶ 11-12 (HX-3023); Herbison WDT ¶ 5-6, 31-36 (HX-310); Rose WDT ¶¶ 1-3, 22, 35 (HX-3024); Israelite WDT ¶¶ 71-78 (HX-3030); Kokakis WDT ¶¶ 48-54 (HX-3018); Brodsky WDT ¶¶ 77-81 (HX-3016); Kalifowitz ¶ 30 (HX-3022))

a. Some Services Engage In Revenue Deferral, To The Detriment of Copyright Owners

COF-444. In a free market where publishers, labels and music services could bargain for the contribution to overall revenue, if streaming services used more streams, publishers would be able to increase income, which would appropriately signal to services the cost of increased streaming of copyrighted music. However, a revenue-based royalty structure sends the opposite signal. Lower prices, resulting in foregone current revenue, results in lower payments to publishers and songwriters, even though lower prices will result in increased streaming either by increasing the number of users and/or by increasing the number of streams. Such a structure may build enterprise value through the discounted present value of future income but does not appropriately reward publishers and songwriters in the present. (Rysman WDT ¶ 37 (HX-3026))

COF-445. Dr. Rysman testified that there are numerous reasons why a firm may conclude that it is rational to charge prices that do not maximize current direct profits, but instead charge lower prices today in order to build a customer base that leads to greater long-run profitability (or greater long-run value) in the music service itself, or greater profitability from selling other products or services to its customers. These features are: (a) network effects, (b) economies of scale, (c) learning about consumers, and (d) switching costs. (Rysman WDT ¶¶ 13 (HX-3026))

COF-446. The four network industry features create a benefit to gaining additional customers that is not tied to current revenue, and explains why services may find it attractive to forgo current revenue and profits in order to grow users and market share faster than they otherwise would. (Rysman WDT ¶¶ 28- 29 (HX-3026))

COF-447. When these features are present, rational firms will choose to set artificially low prices now in the hopes of being able to realize higher returns at some point in the future, either on the service or on related products. (Rysman WDT ¶¶ 28- 29 (HX-3026))

COF-448. Spotify management invested heavily in gaining market share at the expense of maximizing current revenues. (Tr. 2458:10-2459:11 (Dorn))

COF-449. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 2081:13-2083:14 (McCarthy))

COF-450. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 2081:13- 2084:15 (McCarthy))

COF-451. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 2087:1-18 (McCarthy))

COF-452. [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] (Tr. 2168:11-2169:11 (McCarthy))

COF-453. If royalty payments are calculated as a share of revenues, there is no guarantee that royalty payments would increase commensurately with music consumption. For example, if the growth of streaming music consumption, as measured by number of streams, outpaces revenues (and royalties calculated as a percentage of those revenues), there will be a divergence between the growth in music consumption on the one hand, and royalty payments to publishers and songwriters on the other. (Ghose WDT ¶ 74 (HX-1617); Rysman WDT ¶ 40, (HX-3026))

COF-454. Although the number of streams via ad-supported services increased 63% between 2013 and 2014, and 101% between 2014 and 2015, revenues over the same time period only increased by 34% and 31%, respectively. (Ghose WDT ¶ 74 (HX-1617); HX-1576; HX-7)

COF-455. A music streaming service's decision to focus on user growth as opposed to current revenues diminishes current mechanical royalties in a revenue based model in which songwriters and publishers, who are hostage to the independent business decisions of the services, have no say in the decisions resulting in lower current royalties. (Tr. 2848:22-25 (Ghose); Rysman WDT ¶ 33, 48-50 (HX-3026))

COF-456. A 2016 Google analysis notes that [REDACTED] [REDACTED] (HX 3212, at 5592)

COF-457. Because the services realize revenue that music streaming helps produce but which may not be directly linked to consumer streaming, the monetization of current investments may not create increased revenues specifically identified to music streaming and

hence may not be counted in a revenue based rate structure, thereby not fairly paying the Copyright Owners for their contribution to the revenues realized by such services. (Rysman WDT ¶ 47 (HX-3026))

COF-458. Even if the services do realize increased revenue in the future, today's songwriters are unlikely to be the same songwriters in the future and there will be a disconnect between the songwriters who suffered from the short run revenue suppression and the songwriters who will supposedly benefit in the future if the revenue deferment today results in revenue growth tomorrow. (Rysman WDT ¶ 50 (HX-3026))

b. Some Services Engage in Displacing Revenue To Other Parts Of Their Ecosystems To The Detriment of Copyright Owners

COF-459. Several interactive streaming music services realize significant cross-selling benefits to their other business lines ("Indirect Revenues"), producing revenue which is excluded from the current definition of "Service Revenue" under Section 115. (Barry WRT ¶ 7 (HX-3037))

COF-460. The services receive a wealth of data from their subscribers, which they can monetize or otherwise use to their advantage to help sell other goods or services within their ecosystems. (Israelite WRT ¶ 46 (HX-3030))

COF-461. Services manipulate revenue calculations in their favor. Revenue is more opaque to publishers than the number of consumers or the number of streams. (Rysman WDT ¶ 43 (HX-3026); Rysman WRT ¶ 15 (HX-3032); Ghose WDT ¶¶ 80-81 (HX-1618))

COF-462. Services define revenue in opportunistic ways. (Rysman WDT ¶ 44 (HX-3026); Rysman WRT ¶ 15 (HX-3032); Ghose WDT ¶¶ 62-81 (HX-1618))

i. Amazon

COF-463. While bundled services were contemplated at the time of the 2008 settlement, which was largely carried forward into the 2012 settlement to produce the current Subpart B structure, as reflected in 2008 written rebuttal statement of Dan Sheeran of RealNetworks, the type of bundled services then being contemplated were those where a music service was bundled into the price of cell phone subscription or a music player. (HX-322 ¶17)

COF-464. Dr. Hubbard admitted that with a bundled service where the attributed revenue is zero, you end up defaulting to the floor in the rate structure. Thus, there is no alignment of interest supposedly provided by a percentage of revenue rate structure. There is no benefit sharing because the Copyright Owners do not share in the growth in the number of subscribers or their increased utilization of the service. (Tr. 5955:8-5956:23 (Hubbard); Ghose WDT ¶ 78 (HX-1617))

COF-465. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Exhibit 1 to Hubbard WRT (HX-133); Hubbard WRT ¶ 2.22 (HX-129); Tr. 5971:1-5972:8 (Hubbard))

COF-466. Amazon paid the Copyright Owners [REDACTED] and paid them [REDACTED] only [REDACTED] in mechanical royalties [REDACTED]. (Hubbard WRT ¶ 3.9; Tr. 5971:1-5973:21 (Hubbard))

COF-467. [REDACTED]  
[REDACTED]

[REDACTED] (Tr. 5972:11-5973:21 (Hubbard))

COF-468. Prior to the release of its full catalogue interactive streaming plan called Unlimited, Amazon undertook an analysis of potential pricing options “[t]o identify how discounted [interactive streaming] pricing could be leveraged to increase Prime membership and Echo ownership.” (Rysman WRT ¶ 20 (HX-3032); HX-113, p. 2; Tr. 1538:20-1540:20 (Mirchandani))

COF-469. Amazon uses the term [REDACTED] to refer to [REDACTED] [REDACTED] (Rysman WDT ¶ 22 (HX-3026); HX-117)

COF-470. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (HX-3225, pp. 1-2; Tr. 1474:13-1475:10 (Mirchandani))

COF-471. According to internal strategy documents with respect to its Amazon Unlimited Music service, [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Rysman ¶ WRT 22 (HX-

3032); HX-117; HX-3225, Table 1; Tr. 1543:22-1546:19, 1550:13-24, 1551:5-1553:23

Mirchandani))

COF-472.

[REDACTED]

(Rysman WRT ¶ 22 (HX-3032); HX-117; HX-3225)

COF-473.

[REDACTED]

(Rysman WRT ¶ 23 (HX-3032); HX-117; HX-3225, page 1)

COF-474.

[REDACTED]

[REDACTED]

[REDACTED] (HX-113, p. 2)

COF-475. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(HX-3225, pp. 1, 2)

COF-476. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-3225 p. 3)

COF-477. To help drive sales of its Echo devices, Amazon priced its Music Unlimited interactive streaming service such that owners of the Echo would pay only \$3.99 a month for the service. (Brodsky WDT ¶ 65 (HX-3016); Kokakis WDT ¶ 60 (HX-3018); Tr. 1420:2-1423:23, 1606:24-1609:23 (Mirchandani))

COF-478. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-118, p. 4)

COF-479. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(Tr. 1606:24-1609:23 (Mirchandani); HX-20; HX-3225, p.1)

COF-480. Amazon heavily promoted the sale of Echo devices by reference to its use for streaming music. Also, as noted by the Judges and as Mr. Mirchandani admitted, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1418:10-1419:3 (Mirchandani);

HX-2644; HX-3383)

ii. Google

COF-481. The Services incur costs that relate to competing with each other. Giving them a larger share of the pie will likely result in them just spending more on marketing and other methods to compete and gain market share. As Mirchandani admitted, [REDACTED]

[REDACTED]

[REDACTED] (Tr. 790:13-24 (Joyce); 1326:4-1329:6, 1329:8-1331:14

(Mirchandani))

COF-482. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 790:25-791:24 (Joyce))

COF-482A. Internal [REDACTED] documents reveal that [REDACTED]

[REDACTED]

[REDACTED]

Android is Google's mobile operating system, which runs on both third-party manufactured mobile devices and Google own Nexus phone. (HX-546 at 6; Rysman WRT ¶ 18 (HX-3032); HX-546)

COF-483. Pandora also discusses [REDACTED] strategy to use [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Rysman WRT ¶ 19 (HX-3032);  
HX-2704, at PAN\_CRB115\_00070900)

COF-484. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-3209, at 18, 20, 22 [REDACTED])

[REDACTED]

COF-485. Google notes in an internal strategy presentation, [REDACTED]

[REDACTED]

[REDACTED] (Rysman WDT ¶¶ 18, 30 (HX-3026); HX-546, at GOOG-PHONOIII-00002858)

COF-486. Joyce admits that while the Google Play store sells digital content (including music), Google Play is very well-known for apps and games for the Android. (Tr. 772:19-773:11 (Joyce))

COF-487. The Google Play Music offering includes a number of components. First, it includes a download store where an individual can purchase singles and albums. Google keeps this downloaded music in the cloud so that an individual can stream the music to any of his or her devices. Second, Google Play Music includes a free-to-the-user locker service, which allows an individual to store his or her existing music collection (whether ripped from CDs or lawfully or unlawfully downloaded from other sites) to the Google cloud and similarly stream them on his or her devices. Third, Google has a free-to-the-user radio product, which is a non-interactive service. Finally, Google offers its interactive streaming service for \$9.99 a month subscription fee. (Tr. 774:4-775:7 (Joyce))

COF-488.

[REDACTED]

[REDACTED] (Tr. 801:13-802:20 (Joyce); HX-3212)

COF-489.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 187:9-

25, 194:13-20, 195:1-12 (Levine))

COF-490.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 195:22-197:5, 197:6-14, 198:4-9 (Levine))

COF-491.

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 196:18-20 (Levine) [REDACTED]

[REDACTED]; 197:15-25 (Levine) [REDACTED]

[REDACTED]; Tr. 197:22-198:3 (Levine); *see also* Rysman WDT ¶ 29 (HX-3026)

(Google realizes the benefits of customer acquisition through related services that are marketed with Google Play Music.))

COF-492. [REDACTED]

[REDACTED] (HX-3372, Response to Interrogatory No. 15 and Appendix A thereto)

COF-493. [REDACTED]

[REDACTED] (Tr. 198:10-17, 199:5-8 (Levine); HX-3372, Appendix A, at 16-17)

COF-494. Google Play's product manager Paul Joyce testified that, while the Google Play store sells digital content (including music), Google Play is very well-known for apps and games for the Android [REDACTED]

[REDACTED] (Tr. 772:19-773:11, 806:1-16 (Joyce); HX-3209, at 9)

COF-495. Google also bundles Google Play Music with its separate YouTube Red offering. A subscriber to either offering will get the other product for free. [REDACTED]

[REDACTED]

[REDACTED] (Joyce WDT ¶ 17

(HX-693); HX-3209, at 10; HX-3212, at 5581 [REDACTED]

[REDACTED]

COF-496. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 793:16-800:21 (Joyce);

HX-3209, at 9; HX-3212.)

COF-497. [REDACTED]

[REDACTED] (HX-3209, at 7; *see also* HX-3212, at 5576, 5592-93; HX-3209, at 7.)

COF-498. As David Kokakis testified, “[A]s far as the displacement issue, we see some services also trade value of music for other things of interest to the Service that doesn’t benefit the publishers or the songwriters. By way of example, Amazon Prime has its bundled service where the value attributable to music...” [to remain in open court discussing in general] “Without discussing terms, Services such as Amazon and many of the others that are part of this proceeding will look for an increased user base, increased stock price, they will sell other items. There is the Google Home device. There is the iPhone. There is the Amazon Echo. And we don’t share in the sale of or the proceeds from the sale of any of those devices. But music is a driver for pushing users into these other places that trigger monetization for the Services that aren’t shared with the copyright owners. (Tr. 3201:1-6, 3201:15-25-3202:1 (Kokakis))

iii. Spotify

COF-499. Spotify’s expert Dr. Marx testifies that for pure-play services, the definition of the revenue base for the purpose of calculating revenues under a revenue share model should include the total revenues of that entity. (Tr. 1965:10-24 (Marx))

COF-500. As Dr. Marx stated in the Pandora/ASCAP proceeding, companies like Apple are not trying to maximize revenues to their streaming plans, but are only maximizing overall future enterprise value. [REDACTED]

[REDACTED] (Rysman WRT ¶ 17 (HX-3032); Tr. 2081:13-2083:14 (McCarthy); Ex. R-20, Tr. at 869-876 (Herring))

COF-501. Spotify has not sought to maximize its present advertising revenue. While broadcast radio typically plays approximately 25 advertisements per hour, Spotify plays only around four per hour. (Brodsky WDT ¶66 (HX-3016); Kokakis WDT ¶ 61 (HX-3018))

COF-502. Because services receive little revenue from ads (especially in comparison with the revenues received from subscriptions), this can lead to lower per-stream rates relative to subscription based services. (Ramaprasad WDT ¶ 40 (HX-1615))

COF-503. In an internal 2016 presentation, Spotify concludes that it has a [REDACTED]  
[REDACTED]  
[REDACTED] (Eisenach WRT ¶ 97 (HX-3033), FN 132 (HX-2759))

COF-504. Dr. Marx testifies that revenue measurement problems may arise once a portion of a pure-play service's revenue come from sources other than its subscription or ad-supported streaming service, such as when the service is realizing revenue relating to live performances. (Tr. 1965:10-1966:12 (Marx))

COF-505. While Dr. Marx has argued that the inclusion of minima as a back-stop in a percent of revenue rate structure is an appropriate response to revenue measurement problems and that the level of such minima should mimic the applicable percentage of revenue rate when applied to a pure play service, she admits that companies with diversified offerings influence the pricing of pure play services. (Tr. 1976:11-1977:9, 18; 1978:14-18 (Marx))

COF-506. Spotify sells tickets through its music streaming service. [REDACTED]  
[REDACTED]  
[REDACTED] (HX-2719 at SPOTCRB0007084; HX-3110 at SPOTCRB0008476; HX-2700; Rysman WRT ¶ 32 (HX-3032); HX-2719)

COF-507. Services, such as Spotify, achieve complementary effects through contractual integration. For example, Spotify's integration with Facebook allows Spotify users to

post playlists to their Facebook profiles, bands can embed their songs in their profiles and fans can link their profiles to their favorite bands' profiles. (Rysman WDT ¶ 27 (HX-3026))

COF-508. Internal strategic documents show that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Rysman WRT ¶ 29 (HX-3032);

HX-2731; HX-2719, at SPOTCRB0007084)

COF-509. Not only does Spotify intend to engage in bundling, which, [REDACTED]

[REDACTED]

[REDACTED] Spotify recently announced a bundle that includes subscription to both its Premium service and the New York Times digital newspaper edition with a one-year commitment that appears to cost \$260/year, a price that rises to \$325/year after one year. It also provides "two complimentary" New York Times All Access subscriptions that can be given as gifts, and which are described as a \$50/month value. At such valuations would produce a zero valuation for Spotify's revenue from its music streaming service. (Rysman WRT ¶ 36 (HX-3032))

COF-510. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Rysman WRT ¶ 30 (HX-3032); HX-

801, at SPOTCRB0004469-0004473)

COF-511. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-2720, at SPOTCRB0007276; Rysman WRT ¶ 30 (HX-3032); HX-2720; HX-3110, at SPOTCRB0008498)

COF-512. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-2720, at SPOTCRB0007277; Rysman WRT ¶ 31 (HX-3032); HX-2720; HX-3110, at SPOTCRB0008498 )

COF-513. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-3107, at SPOTCRB0001376)

COF-514. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-799, at SPOTCRB0001551)

COF-515. Spotify views bundling as [REDACTED]

[REDACTED]

[REDACTED] (Tr. 2091:21-2092:11 (McCarthy); HX-2719, at SPOTCRB0007081)

COF-516. Just as Spotify has already emulated Amazon's bundling strategy, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-2719, at SPOTCRB0007084; Rysman WRT ¶ 29 (HX-3032); HX-2719; Tr. 2098:6-2100:20 (McCarthy))

COF-517. Spotify's CFO Barry McCarthy testified that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 2098:6-2100:20

(McCarthy))

COF-518. [REDACTED]

[REDACTED]

[REDACTED] (HX-3328)

COF-519. [REDACTED]

[REDACTED]

[REDACTED] -- Amazon, Apple and Google. (Rysman WRT ¶ 33 (HX-3032))

COF-520. Dr. Leonard concedes the possibility that services can use music to drive sales of complementary goods and that using a per-stream rate could address the problem. (Tr. 1218 (Leonard))

COF-521. Dr. Hubbard admits that he is not aware of any interactive streaming service in the US that offers a free-to-the-user, ad-supported service, other than Spotify. (Tr. 5960:3-21 (Hubbard))

COF-522. Dr. Hubbard admits he does not know the percentage of Spotify free users that have converted to the subscription service, or how long users that do convert had been using Spotify free, or the percentage of users of Spotify free that have remained on the free service for years without ever converting but, with respect to the latter, he believes it would be most of them. (Tr. 5963:22 (Hubbard))

iv. Apple

COF-523. Industry analysts have referred to the use of revenue displacement strategies, such as a company using music streaming as a loss-leader to make its hardware more attractive, as “pulling an Apple.” (Rysman WRT ¶ 26 (HX-3032); HX-2712)

COF-524. An internal Pandora competitive analysis notes that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX 2704, at 70887)

COF-525. Apple views its family plans and student plans as a funnel to introduce people into its ecosystem and with the hope they will become individual subscribers one day. Apple similarly uses its Beats 1 service, a non-interactive, free service, “as an opportunity and a gateway to bring people behind the paywall.” (Tr. 2461:25-2462:1 (Dorn))

COF-526. Apple purchased Beats music service for \$3 million in 2014; it benefits from this acquisition by using Beats to attract and keep consumers in Apple’s “ecosystem” where Apple generates profits in a variety of ways. (Rysman WDT ¶ 27 (HX-3026), FN27 (HX-2951); Tr. 2461:15-2462:9 (Dorn))

COF-527. Generally, Apple’s interactive streaming service can operate as a gateway into the iTunes ecosystem, which Apple uses to sell iPhones, apps, and other products. (Kokakis WDT ¶ 60 (HX-3018))

COF-528. In the Pandora/ASCAP case, Dr. Marx argued that the revenue base for a revenue-share model needed to account for revenues earned from complementary products. (Rysman WRT ¶ 17 (HX-3032); Tr. 1963:25-1964:20 (Marx))

COF-529. [REDACTED]  
[REDACTED]  
[REDACTED] (Rysman WRT ¶ 17 (HX-3032), CO EX R-20 (HX-2697); Tr. 1970:12-1971:6 (Marx))

COF-530. Dr. Marx testified that revenue measurement problems can arise under a revenue share rate structure in cases where it is difficult to separate revenues relating to streaming from a licensee’s other revenues and that, in order to address such cases, a per-subscriber fee is an appropriate part of the rate structure. (Tr. 1999:18-2000:2 (Marx))

v. Pandora

COF-531. Pandora has begun developing complementary products by acquiring Ticketfly, a company with fan-to-fan ticket exchange which may, in the future, enable it to generate revenue derived from its music streaming business but not included as “service revenue” in a revenue based rate structure. (Rysman WRT ¶ 34 (HX-3032); HX-2721)

c. The Services’ Focus In This Proceeding On Their Financial Performance Under GAAP Provides An Incomplete And Inaccurate Picture Of Their Financial Performance

COF-532. GAAP-based financial statements are a starting point for an analysis to determine profitability, financial position and cash flows; however, they are not sufficient to make such determination. (Barry WRT ¶¶10,15 (HX-3037); Eisenach WRT ¶ 84 (HX-3033),

FN108 (HX-2808); Timmins WRT ¶¶ 53-54 (HX-3036); Tr. 1028:13-14 (Herring); Tr. 5941:4-15 (Hubbard))

COF-533. For high-growth businesses -- like Spotify and Pandora -- focusing on GAAP financials provides a misleading and incomplete picture of financial performance. (Barry WRT ¶ 10 (HX-3037))

COF-534. Consistent with the limitations of focusing on GAAP financials, Pandora reports its financial condition to its investors on non-GAAP bases, including non-GAAP net income and Adjusted EBITDA, which, in each case, show profitability rather than losses. (Barry WRT ¶¶ 27-28 (HX-3037); HX-2699; HX-2703)

COF-535. The valuation of the services are based on future expectations. (Rysman WDT ¶ 32 (HX-3026))

COF-536. Amazon spent nine years focusing on growth and building its network, instead of seeking short run profits. It sustained billions of dollars in losses to build its network. The company sustained short term losses as an investment in building customer loyalty, collecting customer information, building its base to enjoy future network effects and economies of scale. Amazon now has a market cap of \$360 billion and is the largest online retail company in the United States. (Rysman WDT ¶ 32 (HX-3026))

COF-537. While Spotify has yet to post a GAAP profit, [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Rysman WDT ¶ 33 (HX-3026), FN33 (HX-2946, HX-2979); Tr. 2085:16-20 (McCarthy))

COF-538. If Spotify is sold to a large firm or if it goes public, while its investors will realize the entire benefit from its revenue deferral strategy to build market share and the discounted present value of future cash flows favored by its investors, there will not be a future increased revenue based royalty payoff for songwriters and publishers who have been forced to subsidize Spotify's revenue deferral business model which has suppressed mechanical royalties for current songwriters and publishers. (Rysman WDT ¶ 48 (HX-3026))

COF-539. While Pandora emphasizes its historical GAAP based losses when framing the discussion of prospective rates in this proceeding, [REDACTED] (Barry WRT ¶¶ 29-30 (HX-3037); FN20 (HX-2695); FN21 (HX-881))

COF-540. [REDACTED] (Barry WRT ¶ 22 (HX-3037); FN11 (HX-2749); FN12 (HX-2749))

d. The Services' Own Witnesses Admit That They Displace Revenue, And The Difficulties Measuring Revenue Are Indisputable

COF-541. Spotify's witness Will Page testified that companies such as Amazon that are able to subsidize their music streaming businesses from other sources are creating downward pressure in the pricing of interactive streaming services. (Tr. 1739:19-1740:1 (Page); Page WDT ¶¶ 58; 60 (HX-1061))

COF-542. David Pakman, an expert retained by Amazon, Google, Spotify and Pandora admitted that the large multifaceted companies – like Amazon, Apple and Google – have the wherewithal to “subsidize the music business, using music as a “loss leader.” In fact, as reflected in the revenue displacement business models adopted by these large companies, the music business is subsidizing their other activities. (Pakman WDT ¶ 29 (HX-696))

COF-543. Internal Spotify documents acknowledge that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Rysman WRT ¶¶ 25, 26 (HX-3032); HX-2705; HX-2712)

COF-544. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (McCarthy WDT ¶¶ 50-51 (HX-1060))

COF-545. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Ghose WDT ¶ 66 (HX-1617))

COF-546. Apple’s Dr. Ghose defined a loss leader strategy as “one in which a multiproduct firm sells one or more products below cost to attract customers that would then buy other more profitable products.” (Ghose WDT ¶ 66 (HX-1617))

COF-547. Dr. Ghose equates the upstream entity in this case to the songwriter and the downstream entity to the streaming service, and points to Spotify as an example of a service that employs a loss-leader strategy in its “freemium” offering, which may be highly beneficial to Spotify but results in lower compensation to songwriters. (Ghose WDT ¶ 67 (HX-1617); *see*

*also id.* ¶ 91 (pointing to Google’s free locker service as another example of a loss-leader strategy))

COF-548. Dr. Ghose further opined that a percent of revenue rate structure unfairly subjects the Copyright Owners to the particular business model and strategic decisions of the service provider. As a result, like the Copyright Owners and contrary to the Four Services and their experts, Dr. Ghose and Apple endorsed a rate structure that would tie the mechanical royalty to the number of times that a song is streamed (a per-play rate structure). (Ghose WRT ¶¶ 80, 81 (HX-1618))

COF-549. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]. (HX-129; HX-1373, at page AMZN 00076220, lines 17 and 27)

COF-550. As Mr. Mirchandani admitted, [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 1465:10-1467:3 (Mirchandani))

COF-551. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 1484:19-1487:18, 1504:15-1505:16 (Mirchandani))

COF-552. [REDACTED]

[REDACTED] (Rysman WDT ¶ 44 (HX-3026), FN47 (HX-790, at Kobalt 00000305); Tr. 1490:10-1494:3 (Mirchandani); HX-3059)

COF-553. As Mr. Mirchandani admits, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1481:24-1484:15 (Mirchandani))

COF-554. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1472:4-16, 1474:3-1475:15 (Mirchandani); HX-3007)

COF-555. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Amazon's Chief Financial

Officer has advised analysts in Earnings calls, that Prime members are "buying very good from a physical product standpoint as well as digital." The Prime members are "customers who buy

consumables from us. They'll buy clothing from us, they'll buy shoes from us, they'll buy electronics, they'll buy media items, so that's what we're seeing." (HX-3051, at AMZN00004166)

COF-556. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (HX-3054, at AMZN00004212)

COF-557. In a business insider article, Amazon's founder and CEO Jeff Bezos was quoted, "We get to monetize [our subscription video] in a very unusual way," Amazon CEO Jeff Bezos said this summer. "When we win a Golden Globe, it helps us sell more shoes. And it does that in a very direct way. Because if you look at Prime members, they buy more on Amazon than non-Prime members, and one of the reasons they do that is once they pay their annual fee, they're looking around to see, 'How can I get more value out of the program?' And so they look across more categories – they shop more. A lot of their behaviors change in ways that are attractive to us as a business. And the customers utilize more of our services." (Rysman WDT ¶¶29 (HX-3026), FN32; HX-2981; HX-2968; HX-2989)

COF-558. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1506:10-1510:11, 1474:13-1475:10

(Mirchandani); HX-129)

COF-559. [REDACTED]

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 1474:13-1475:10 (Mirchandani); HX-1373, AMZN00076220)

COF-560. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr.

1444:16-1446:9 (Mirchandani))

COF-561. [REDACTED]

[REDACTED]  
[REDACTED] (Rysman WRT ¶ 20 (HX-3032); Tr. 1551:5-1553:23 (Mirchandani))

COF-562. Amazon heavily promoted the sale of Echo devices by reference to the use of Echo for streaming music. Also, as Judge Strickler noted and Mr. Mirchandani admitted, [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] (Tr. 1418:10-1419:3 (Mirchandani); HX-2644)

COF-563. Amazon admits that in the technology world, it is viewed that Echo's main use is as a speaker for streaming music. (Tr. 1524:9-11 (Mirchandani); HX-2644)

COF-564. [REDACTED]

[REDACTED] (Tr. 1420:2-1423:23 (Mirchandani))

COF-565. [REDACTED]

[REDACTED] (Tr. 1570:14-1571:16 (Mirchandani), HX-118, p. 4)

COF-566. Several interactive streaming music services realize significant cross-selling benefits to their other business lines ("Indirect Revenues") which is excluded from the current definition of "Service Revenue" under Section 115. (Barry WRT ¶ 7 (HX-3037); Timmins WRT ¶ 32-34 (HX-3036), FN29 (HX-2629), FN30 (HX-2644, HX-2645), FN31 (HX-2646), FN32 (HX-2647), FN33 (HX-2648))

COF-567. Pandora's Dr. Katz testified that "[a]ccounting difficulties also arise when a streaming service is sold as a part of a larger bundle of services, or when the service is advertising supported and the advertising is sold in bundles that include other outlets. Under these circumstances, any proposed allocation of revenues across services and goods is likely to be contentious." (Katz WDT ¶ 82 (HX-885))

COF-568. Apple's Dr. Ghose also testified that a percent of revenue rate structure makes the calculation of mechanical royalties complicated, and renders service revenue "opaque" to songwriters and "inherently idiosyncratic." He further testified that, under the

current statutory rates, the service revenue for bundles “is subjective and can be interpreted differently by different service providers.” (Ghose WDT ¶¶ 78, 80, 81 (HX 1618))

COF-569. Quantifying Indirect Revenues is very subjective and accounting principles do not provide methodologies to quantify Indirect Revenues. (Barry WRT ¶ 8 (HX-3037))

COF-570. The lack of any clear principle by which to account for Indirect Revenues is a significant shortcoming in a rate structure in which mechanical royalties are paid based on a percentage of Service Revenue. (Barry WRT ¶ 8 (HX-3037))

COF-571. Leonard agrees that a service could game the system with respect to the deduction of up to 15% of a service’s costs from its revenues. (Tr. 1153, 1155 (Leonard))

COF-572. [REDACTED]  
[REDACTED] (Rysman  
WDT ¶ 45 (HX-3026))

COF-573. [REDACTED]  
[REDACTED] (HX-3283; Tr. 2123:5-10 (McCarthy))

COF-574. In addition to the facts set forth above respecting Amazon’s bundling and Spotify’s recent focus on bundling, YouTube Red, a Google service, bundles subscriptions with Google Play subscriptions. Google also operates a free mobile app called YouTube Music, which allows users to access music-related content from the YouTube catalogue. Subscribers to YouTube Red not only receive this content free of advertisements, but they also get the ability to switch the app into an audio-only mode, which allows the user to listen to the audio in YouTube’s music-related video content. (Tr. 784:14-785:23 (Joyce))

e. Streaming Cannibalizes Revenues From Multiple Other Distribution Channels

COF-575.

[REDACTED]

(HX-997, at SPOTCRB0004092, 0004111-0004112)

COF-576.

[REDACTED]

[REDACTED] (HX-215, at 78, 83-84)

COF-577. An internal Spotify strategy document states that, at one point, [REDACTED]

[REDACTED]

[REDACTED] (HX-2731, at SPOTCRB0007519)

COF-578. Another internal Spotify strategy document, titled [REDACTED]

[REDACTED]

[REDACTED] (HX-2759, at SPOTCRB0001467, 0001480-0001481, 0001486)

COF-579. A revenue-based royalty rate gives streaming services an unfair competitive advantage over download services at the expense of rightsholders. (Rysman WDT ¶ 51 (HX-3026))

COF-580. Royalty payment structures should be neutral across distribution technology and should not bias the market towards one technology or another. (Rysman WDT ¶ 51 (HX-3026))

COF-581. The aggregate royalty payments made by a streaming service are not directly linked to consumption, as they are for permanent download services. (Rysman WDT ¶ 51 (HX-3026))

COF-582. Services can increase the use of licensed music without paying additional royalties (because they can offer their users more consumption without raising the price), but download services cannot operate similarly since they must pay a fee for each download. As a result, this dynamic has led to an accelerated displacement of downloads in favor of streaming, which further decreases the per unit compensation earned by rightsholders and creates a misalignment in interests between services and copyright owners. (Rysman WDT ¶ 51 (HX-3026); Ghose WDT ¶ 23 (HX-1617))

COF-583. The increase in the popularity of interactive streaming has resulted in a decline in revenues from digital downloads, which has been declining since 2013 (as revenue from interactive streaming has been increasing since 2013). This shift suggests that interactive streaming is a substitute for digital downloads. In fact, Dr. Hubbard correlates the drop in downloads to an increase in streaming, and [REDACTED]

[REDACTED] (Tr. 2733:2-2734:2 (Ramaprasad); HX-1, ¶¶ 37, 56, 50-51, 60; Tr. 1458:5-1461:4, 1462:25-1464:16 (Mirchandani); Tr. 2226:21-2227:24 (Hubbard)); HX-215 at 70, 78-86; HX-909; [REDACTED]

COF-584. [REDACTED]

[REDACTED] (Israelite WDT ¶ 70 (HX-3014); HX-2773 (2014 Nielsen Report), at 2; HX-2780 (2015 Nielsen Report), at 7, 8)

COF-585. [REDACTED]

(Israelite WDT ¶ 70 (HX-3014); HX-1048)

COF-586. [REDACTED]

[REDACTED] (Israelite WDT ¶¶ 68-69 (HX-3014))

**B. Every Service Proposal Involves An “All-In” Rate Structure, Offsetting Mechanical Income Against Public Performance Income, For Which There Is Neither Statutory Authority Nor Evidence**

COF-587. The Services argue that there is alleged “fragmentation” in the public performance marketplace. (Katz WDT ¶¶ 10, 90-91 (HX-885); Parness WDT ¶¶ 16-21 (HX-875))

COF-588. The Services argue that that the Board needs to consider that performance rates may rise if publishers withdraw from PROs, or because PROs are now granting “fractional licenses.” (Katz WDT ¶¶ 10, 90-91 (HX-885); Parness WDT ¶¶ 16-21 (HX-875))

COF-589. However, the ASCAP and BMI rate courts in the Southern District of New York, the Second Circuit and the Department of Justice have determined that partial withdrawals by publishers are not permitted. (HX 876, at 4; Israelite WRT ¶¶ 62-63 (HX-3030), *citing In re Pandora Media, Inc.*, 12-CV-8035, 41-CV-1395, 2013 WL 5211927 (S.D.N.Y. Sept. 17, 2013) and *In re Pandora Media Inc.*, 785 F.3d 73 (2d Cir. 2015) (HX-3030))

COF-590. The publishers testified that they could not partially withdraw from the PRO's and [REDACTED] (Tr. 4499:23-4500:1 (Brodsky); Tr. 3203:19-3206:12, 3323:6-12, 3323:13-3325:1 (Kokakis); Tr. 362:12-364:6 (Parness))

COF-591. The Services admitted that GMR represents fewer than 100 songwriters and has a market share of roughly 3 percent of the performance market. (Tr. 365:3-367:13 (Parness); *see also* Israelite WRT ¶ 59 (HX-3030))

COF-592. The Services have presented no evidence that there has been an increase in performance rates in licenses issued by GMR. In fact, they have neither performed nor presented **any** analysis of **any** kind regarding the potential impact of this alleged “fragmentation” of the performance rights marketplace on their interactive streaming businesses. (Tr. 381:11-19 (Parness))

COF-593. According to the Services, it does not matter whether the mechanical royalties payable to songwriters and publishers are zero, because those rights owners are also receiving performance royalties. (Tr. 1237:23-1240:4 (Leonard); Tr. 2667:9-16 (Ramaprasad); Tr. 231:3-23 (Levine))

COF-594. Performance rights royalty rates for interactive streaming (among other uses of musical works that implicate the performance right) are, for the over 90% of the performance rights marketplace that is licensed by the performance rights organizations ASCAP and BMI, set by federal courts sitting in the Southern District of New York. (HX 920, at 20, 34, 37, 41)

COF-595. INTENTIONALLY OMITTED

COF-596. There has always been fractional licensing of performance rights by the PROs because there typically are multiple songwriters and publishers with ownership rights in a song and they may not all be affiliated with the same PRO. There is no legal basis on which any one PRO has the right to license rights that it does not have. (Israelite WRT ¶¶ 65-66 (HX-3030); Tr. 3662:15-3663:4 (Israelite), HX-327; HX-322, at pp. 6235:21-6240:8; Tr. 372:11-373:14 (Parness); HX 920, at 2-3)

COF-597. Public performance rights are not the subject of this proceeding. It is to set mechanical rates under Section 115 of the Copyright Act, not public performance rates, a separate right under Section 106 of the Copyright Act. In the 2008 hearing, Chief Judge Sledge referred to complaints by services that they need to pay both performance and mechanical rights as a ‘waste of time.’ He noted that Congress has created two separate rights (mechanical and public performance) and the Copyright Royalty Judges do not set public performance fees and criticized a service’s witness for complaining about having to pay mechanical royalties because that requirement has been part of U.S. law “for a century.” And he reminded the witness that “We’re not setting public performance fees” in a CRB proceeding. (HX-322, at 6237:22-6238:9, 6239:13-6240:12); Tr. 3658:5-3660:20 (Israelite); Tr. 350:22-25 (Parness); Tr. 3197:14-23 (Kokakis))

COF-598. INTENTIONALLY OMITTED

COF-599. [REDACTED]

[REDACTED] (Tr. 5836:24-5837:16, 5838:13-5839:20;

5839:21-5840:20 (Zmijewski); Zmijewski WRT Appendix C (HX-1070))

COF-600. Pandora's Michael Herring admitted that Pandora has been successful at taking listeners away from terrestrial radio as well as in cutting into terrestrial radio's ad revenue share. (Tr. 1021:4-17 (Herring))

COF-601. Mr. Herring further testified that Pandora has activated over 25 million automobile dashboard integrations in the United States, and over half of all car models sold in the U.S. in 2017 will have Pandora integrated into the dash. Those integrations will certainly cut further into terrestrial radio listening, which will cut into performance revenue that would otherwise be earned by rights holders from terrestrial radio plays. (Tr. 861:21-862:3, 1022:21-1023:12 (Herring))

COF-602. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

COF-603. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 5811:6-22 (Zmijewski))

COF-604. Professor Zmijewski proposed to fill the mechanical revenue hole created by the migration of consumers from the sale of physical recordings and downloads to interactive streaming with streaming performance income, all of which he attributed to interactive streaming. (Zmijewski WRT ¶¶ 14, 42, 60, 73; 86 (HX-1070))

COF-605. Professor Zmijewski admitted that he simply assumed that all of the streaming performance income (which is reported by the PROs without identifying interactive or non-interactive) is attributable to interactive streaming. He also admitted that he did not ask his own client, Pandora, by far the largest player in the non-interactive streaming business, about its non-interactive streaming performance income payments. (Tr. 5796:8-5797:4, 5836:24-5837:16, 5803:12-5804:25, 5838:13-5839:20; 5839:21-5840:20 (Zmijewski); HX-1048)

COF-606. Professor Zmijewski also did not consider whether his already inflated streaming performance income might be cannibalizing other forms of performance income, such as terrestrial performance income, [REDACTED]

[REDACTED]

[REDACTED] (Tr. 5836:24-5837:16; 5838:13-5839:20; 5839:21-5840:20

(Zmijewski))

COF-607. Moreover, while Professor Zmijewski [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 5842:2-24 (Zmijewski))

COF-608. Professor Zmijewski had information available to him regarding the growth in catalogues or market share of the publishers that he failed to consider. For example, in his WRT, he quoted the CFO of Warner Music Group, Eric Joshua Levin as stating that “our market share growth in publishing has been tremendous.” He admitted that the industry is growing and he would expect that a publisher’s increased market share would itself account for increases in mechanical income. (Zmijewski WRT ¶ 97 (HX 1070); Tr. 5848:9-5850:8 (Zmijewski))

COF-609. Similarly, Professor Zmijewski admitted that he was unaware of the testimony of Gregg Barron of BMG that BMG’s catalogue has [REDACTED] [REDACTED] And he was also unaware of the testimony of Justin Kalifowitz of Downtown that Downtown had acquired the catalogues of Bruce Springsteen and John Lennon. (Tr. 5820:14-5822:18 (Zmijewski); Tr. 4558:8-21 (Barron); Tr. 5822:19-5823:3 (Zmijewski); Tr. 3957:21-3959:3 (Kalifowitz))

COF-610. Professor Zmijewski admitted that mechanical income either grew or it did not grow, and he did not attribute any source of growth. (Tr. 5848:9-5850:8 (Zmijewski))

COF-611. Professor Zmijewski’s WRT and his Supplemental Report, which performed the same analysis for four additional small publishers (ABKCO, SONGS, Reservoir and Kobalt) further demonstrate [REDACTED]

[REDACTED]

[REDACTED] (Zmijewski WST (HX-1691))

COF-612. The Services’ contention that there are “revealed preferences” for all-in agreements and for agreements that mirror or mimic the existing rates and terms set by settlement in 2008 and continued in 2012 ignores that all such agreements were entered into “in the shadow of the compulsory rate.” As Amazon’s expert, Dr. Hubbard admitted, the statutory rate is a “ceiling” and “it would be hard to imagine somebody voluntarily giving you more.” This fact was confirmed by Dr. Watt. (Tr. 2205:19-24 (Hubbard); Watt WRT ¶ 36 n.22 (HX-3034); Eisenach WRT ¶¶ 26-31 (HX-3033))

COF-613. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 5949:13-5950:16 (Hubbard))

COF-614. [REDACTED]  
[REDACTED]  
[REDACTED] (HX-141; Tr. 5951:12-5954:18 (Hubbard))

**C. Apple’s Proposed “All-In” Per Play Rate Structure Is Unreasonable And Inconsistent With The Policy Objectives**

1. Apple’s Proposal Leads To Some Services Paying Zero Mechanical Royalties For Billions Of Plays

COF-615. [REDACTED]  
[REDACTED] (Ramaprasad WRT ¶ 52 (HX-1616))

COF-616. For a number of service months, Apple’s structure would have resulted in a service paying absolutely no mechanical royalties, a result which does not provide a “fair return” to Copyright Owners. For example, Tidal, in both December 2014 and 2015 would have owed no mechanical royalties for its entire service usage if Apple’s proposal had been in place. (Rysman WRT ¶ 85 (HX-3032))

COF-617. Rhapsody’s standalone non-portable streaming-only subscription service would have owed no mechanical royalties from at least June 2012 to April 2016, if Apple’s proposal had been in place. (Rysman WRT ¶ 85 (HX-3032))

COF-618. Spotify’s premium subscription service would have also owed no mechanical royalties in at least two months in 2014 - January 2014 and June 2014 - and would have owed nothing in several months in other years, if Apple’s proposal had been in place. In June 2014, [REDACTED] by its subscribers from its catalog of tens of millions of songs; under Apple’s proposal, Spotify would owe nothing for that usage. (Rysman WRT ¶ 85 (HX-3032))

2. Apple’s Proposal Ignores Value Of On-Demand Access That Separates Interactive From Noninteractive As Reflected In The Copyright Owners’ Proposed Rates And Terms

COF-619. The ability to play virtually any song at any time in any location is of great value to consumers. Such value is vigorously promoted to consumers by interactive services, including by participants Spotify and Apple Music. (Brotsky WDT ¶¶ 53-54, 111-121 (HX-3016); Kalifowitz WDT ¶¶ 32, 50 (HX-3022); Israelite WRT ¶ 44 (HX-3030); Barron WDT ¶ 29 (HX-3020); Page WDT ¶¶ 65,67 (HX-1061); Rysman WDT ¶ 58 (HX-3026))

COF-620. Songwriters and publishers, through their hard work and investment, create and provide the massive catalogs of songs that make it possible for streaming services like

Apple, Spotify, Google Play and Tidal to offer access to catalogues of over 30 million songs.

(Kalifowitz WDT ¶¶ 32, 50 (HX-3022); Brodsky WDT ¶¶ 53-54, 111-121 (HX-3016);

Ramaprasad WDT ¶ 68 (HX-1615))

COF-621. A vast catalog eliminates the need to purchase 30 million individual songs (or any songs, for that matter). (Hubbard WRT ¶ 2.8 (HX-132); Ghose WDT ¶¶ 50, 46 (HX-1617))

COF-622. There is a benefit of mobility and the elimination of the need to store digital files or physical products. These music libraries are vastly larger than any individual could have in his or her personal music collection, and that any individual could physically store on a smartphone or other device. This vastly larger library of music also promotes an increased diversity of listening. (Ramaprasad WDT ¶ 68 (HX-1615); Marx WDT ¶ 38 (HX-1065); Hubbard WRT ¶¶ 3.3-3.6 (HX-132))

COF-623. Dr. Eisenach notes that on-demand access to music is a substantial value, separate and apart from the value obtained from listening to music (which alone can be obtained from non-interactive sources and radio at lower costs), which is why on-demand services market the size of the catalogs they offer, and why they feel the need to obtain (and provide to their users) access to the full repertoires of the major publishers and record labels, as well as songs of major independent publishers and labels. (Eisenach WRT ¶ 51 (HX-3033))

COF-624. Michael Herring, President of Pandora Media, Inc., admits that “a big part of why people are paying for the subscription, the value proposition, is that they can hear a specific song when they enter it.” So instead of millions of songs, a service needs tens of millions of songs. (Tr. 938:8-939:6 (Herring))

COF-625. Spotify's economic expert Dr. Marx testified that an increase in immediate access to an extensive catalogue of songs is associated with an increase in economic value as measured by an increased willingness to pay for a service that offers such access. (Tr. 2004:8-24 (Marx))

COF-626. [REDACTED]  
[REDACTED] Amazon's expert, Dr. Hubbard, admitted that a key value of a streaming service is access to a vast amount of music when you want it and where you want it. (HX-113, at p. 6; Tr. 2228:3-22 (Hubbard))

COF-627. Google's economic expert, Dr. Leonard, admitted that access to a large library of music has value even if a user never streams all or many of the songs in the library. (Tr. 1100:8-1101:11 (Leonard))

COF-628. Dr. Marx also agrees that an increase in music experimentation is likely to increase consumer surplus or economic value. (Tr. 2005:12-15 (Marx))

COF-629. Dr. Ghose agrees that consumers value the option to stream music that comes with access, apart from any value in plays, and that this calls for a per-user rate to compensate for situations where access is given but there are no plays. [REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]. (HX-113, at pp. 6-7; Tr. 5730:6-5733:10 (Ghose))

**D. RM Services Have No Economic Grounds For Their Proposed Rate Structure; They Are Simply Trying To Lower Rates**

1. There Can Be No “Reliance” On The Current Rates

COF-630. Rates and terms are established *de novo* every five years, which represents a reduction from the prior 10-year period because of the concern that the digital music industry is a rapidly-changing market. (Israelite WRT ¶ 32 (HX-3030))

COF-631. A few of the Services (Pandora, Google and Amazon) claim that they relied upon the current rates in deciding to enter the interactive streaming marketplace or to offer certain products, and for that reason, the current rates and rate structure should not be changed. Mr. Herring claimed that “Pandora’s analyses and its decision to enter the market for on-demand streaming assumed no increase in the current statutory rates for the license at issue in this proceeding;” and further stated, “as discussed in my written direct testimony, Pandora made the decision to develop interactive product offerings on the assumption that there would be no increase from the current statutory rates for the license at issue in this proceeding.” Mr. Mirchandani claimed that Amazon and other unnamed services “built their businesses in reliance on the rates embodied in the current regulatory scheme,” asserting, as noted above, that Amazon would be forced to stop providing Unlimited for Echo and Prime Music if Copyright Owners’ proposed rates are adopted, ignoring the billions of dollars in revenue Amazon receives from its customers who use its streaming services. Dr. Leonard claimed that unnamed services had a “reasonable expectation that the regulatory ‘rules of the game’ (i.e., the form and level of the royalty rates for the compulsory license) would not change substantially over time.” (Herring WDT ¶ 55 (HX-880); Herring WRT ¶ 3 (HX-888); Mirchandani WDT ¶¶ 40-41, 69-73 (HX-1); Leonard WDT ¶ 128 (HX-695))

COF-632. Contrary to the arguments that one or another service supposedly relied upon the rates and terms remaining essentially static, despite the clarity of Sections 115 and 801 of the Copyright Act that requires the rates and terms to be fixed every five years, [REDACTED]

[REDACTED]

[REDACTED]

(Tr. 943:8-20 (Herring))

COF-633. The rates set forth in current Subparts B and C of the regulation are a snapshot from a time that has already passed. They cover ten different rate structures for ten different specific business models. While some of those business models are commonly used today, others have commonly been merged with other plans or are not as commonly used. Additionally, in place of more outdated models in the regulations, there are new types of business models on the market that do not have their own customized regulations. (Gans WDT ¶ 56-57 (HX-3028))

COF-634. Dr. Hubbard admitted that the streaming industry has materially changed since 2008 in terms of the number of consumers, number of streams, entry by new entities, revenue growth, subscriber growth, number of companies and the identity of the companies. (Tr. 2198:4-20 (Hubbard))

COF-635. The fact that Pandora chose to move forward with developing its interactive music service demonstrates that the expected returns of doing so exceed Pandora's internal "hurdle rate" for capital allocation, and that it was prepared to tolerate the risk that this proceeding would result in higher rates. Internal Pandora documents support both of these propositions. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(Eisenach WRT ¶ 89 (HX-3033), FN119; HX-939)

COF-636. Pandora does not consider musical works royalties – either currently or as might reasonably be expected to emerge from this proceeding – to be a significant impediment to enter the market for interactive streaming services. (Eisenach WRT ¶ 90 (HX-3033), FN120 (HX-2753), FN121 (HX-2695), FN122 (HX-2753), FN123)

COF-637. Google acknowledges that its rate proposal changes the status quo. (Tr. 235:7-21 (Levine))

COF-638. As Mr. Mirchandani described Amazon’s rate proposal, it is a roll forward with “four *minor* modifications.” However, the four supposedly “*minor*” modifications, for family plan discounts, student discounts, an annual plan discount of 16 2/3% (a revenue reduction of \$1.67 a month for annual plans alone) and up to an additional 15% deduction for app store fees and carrier fees, are anything but “minor,” amounting to, without consideration of the family plan and student discounts, a reduction in “service revenue” – and hence mechanical royalties based on a percent of revenue – of nearly 33%. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 1320:9-22, 1321:5-1326:1, 1448:9-1448:22, 1452:1-7 (Mirchandani))

2. Removal Of Mechanical Floors Is Purely An Attempt To Sharply Reduce Mechanical Royalty Payments Below Their Already Low Rate

COF-639. The mechanical only floor establishes a minimum value for the mechanical right. The problems publishers encounter with the percentage of revenue tier – which is often illusory in practice – do not exist with the mechanical royalty floor because, as a per subscriber/user minimum, it cannot be diluted or gamed. Unlike the percentage of revenue tier, the mechanical only floor is not subject to revenue deferment or displacement. The services are not maximizing revenue because, to compete against one another, they are focused on growing their user base, and they are doing it at the expense of songwriters and publishers. The songwriters should not be involuntarily required to subsidize the competitive business strategies of streaming services against one another. Songwriters often experience a moment in time when they are successful and they should be paid mechanical income based on the current success of their songs and not be forced to hazard the prospect that, years down the road, when perhaps the songwriter no longer has a successful song, mechanical income may be greater than at present. (Tr. 3199:14-25-3200:1-25 (Kokakis))

COF-640. The mechanical only minima in the existing rate statute serves an important purpose. The mechanical right and the performance right in musical works are two separately enumerated ownership rights under the Copyright Act, subject to separate licensing and payment. Under current publishing agreements, songwriters typically receive 75% or more of mechanical income whereas the PRO's split performance income 50/50 between publishers and songwriters. In addition, the PRO's charge a fee, further reducing the value of the performance income relative to mechanical income. Moreover, mechanical income is an important source of recoupment of advances, enabling both repayment to publishers of advances and faster recoupment for writers (resulting in earlier payment of royalties to them). Because the

PRO's pay songwriters directly, performance income is not a source of recoupment of advances. Finally, because many publishing contracts contain provisions linking future advances to the recoupment of prior advances, the mechanical royalty pool has been the most important revenue stream in the recoupment process. (Brodsky WDT ¶¶ 27-29; Barron WDT ¶¶ 59-60; Tr. 3197:14-3199:12 (Kokakis); Tr. 3730:5-16 (Israelite); Tr. 1782:5-1783:19 (Page))

COF-641. [REDACTED]

[REDACTED] (Eisenach WRT ¶ 115 (HX-3033))

COF-642. Dr. Marx admitted that she did not analyze all aspects of Spotify's rate proposal, including its adjustments to various terms relating to revenues and subscribers, and so could not offer an opinion on whether, as a whole, Spotify's proposed rates and terms, which seeks to jettison the mechanical only floor, are fair. (Tr. 5602:20-5605:2 (Marx))

COF-643. While advocating for the elimination of the mechanical-only floor from the current rate structure, Dr. Marx also takes the position that the current rate structure, which includes the mechanical-only floor, is consistent with the 801(b) factors. (Tr. 5595:2-5596:21 (Marx))

COF-644. In proposing a continuation of a percent of revenue rate structure, given the Services revenue displacement and deferment strategies, and to eliminate the mechanical only floor, the Services make a thinly veiled effort to sharply reduce the already unfairly low mechanical royalties. In fact, in the bundling context, Mr. Mirchandani was unable to provide any justification for the percent of revenue prong in a real-world context, and while he was reluctant to accept that the percent of revenue prong was an illusion, he admitted that it results in zero revenue and it is the minima that bind. (Tr. 1494:4-1495:8 (Mirchandani))

V. **THE SERVICES' PROPOSED RATES ARE UNREASONABLE**

A. **Apple's Proposed Per-Play Rate Is Unreasonable And Not Consistent With Policy Objectives**

1. **There Is No Economic Basis For The Conversion Ratio Benchmark**

COF-645. Dr. Ramaprasad's discussion of Apple's conversion rate does not merit any weight in the economic evaluation of rates because the question of what is being converted is not determined by her, and she did not undertake an analysis of how to apply a conversion rate to mechanical royalties, let alone identify reliable data on which to base such a rate. (Rysman WRT ¶ 91 (HX-3032))

COF-646. Nor did Dr. Ramaprasad herself calculate or derive a rate or a range of rates that she believed would meet the statutory objectives; rather, she merely opined on the reasonableness of the .00091 rate that was presented to her. (Ramaprasad WDT ¶ 1 (HX-1615); Tr 2739:16-2740:25 (Ramaprasad))

COF-647. The simple arithmetic conversion factors applied by Dr. Ramaprasad and certain other Service Experts fail to account for the fundamental economic differences between the access and usage involved and end up not comparing like and like. (Eisenach WRT ¶ 52 (HX-3033))

COF-648. It would be inappropriate for a five-year statutory mechanical royalty rate to be based upon the reports of Dr. Ramaprasad and Dr. Marx, which are devoid of scientific method. (Rysman WRT ¶ 91 (HX-3032))

a. **RIAA**

COF-649. Dr. Ramaprasad admits that she does not have any independent knowledge of how the RIAA ratio was calculated. (Tr. 2769:1-2770:16 (Ramaprasad))

COF-650. Dr. Ramaprasad's [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

COF-651. The only source cited by the Services' experts (but not by Dr. Ramaprasad) as a basis to supposedly explain how the RIAA ratio was derived is a 2016 RIAA press release in which the RIAA states that the ratio is based on "a comprehensive analysis of a variety of factors – including streaming and download consumption patterns and historical impact on the Gold and Platinum Program – and also consultation with a myriad of industry colleagues." The press release provides no further detail on the streaming and download consumption patterns (or even what streaming and download services were considered and during what period of time). No data is provided; nor are the RIAA's techniques for collecting and analyzing such data disclosed. The RIAA does not say how the "historical impact" on the Gold & Platinum Program affected its calculations – it does not even state in which direction, upward or downward, such "historical impact" moved the ratio – only that such impact was part of its analysis. The press release thus tells one nothing about the data on which the RIAA made its determination to ascribe a certain number of streams per download sales for purposes of artist record certifications. The same press release states that the RIAA's "analysis and . . . determination of a formula is based on comparative consumption patterns, not marketplace value." The press release notes that the RIAA's Digital Single Award ratio, which was previously set at a ratio of 100 on-demand streams to 1 download, would be "updated" to a ratio of 150 on-demand streams to 1 download in order to "reflect the enormous growth of streaming

consumption in the two plus years since that ratio was set.” (HX-903, at 2; Marx WDT ¶ 108 n. 121 (HX-1065); Katz WDT ¶ 110 n. 154 (HX-885); Leonard WDT Ex. 7 (HX-695))

b. The Aguiar/Waldfoegel Working Paper

COF-652. Dr. Ramaprasad testified that “academic research” is consistent with the benchmarks that she cites (RIAA, Billboard, and the U.K. Charts Company), citing only a single working paper by Luis Aguiar and Joel Waldfoegel, which was not published in a peer-reviewed journal. (Ramaprasad WDT ¶ 89 (HX-1615); Tr. 1945:21-24 (Marx))

COF-653. Drs. Marx and Katz also make passing reference to the Aguiar and Waldfoegel paper as corroborative of the RIAA “benchmark,” but do not provide any analysis or discussion of the paper. (Marx WDT ¶ 108 (HX-1065); Katz WDT ¶ 110 (HX-885))

COF-654. The Services’ experts did not verify that the input data that Aguiar and Waldfoegel used was accurate, sufficient, or appropriate for the analysis they purported to undertake. (Tr. 1945:25-1946:10, 1946:11-13 (Marx); Tr. 2789:19-2790:1 (Ramaprasad))

COF-655. Dr. Ramaprasad’s entire discussion of this paper consists of the following two sentences: “Specifically, academic research has investigated how the sales of singles or CDs change with an increase in interactive streaming, i.e., whether and to what extent consumers consider interactive steaming and singles/CDs as substitutes. Using data from the top 50 streams available on Spotify and Nielson data for music sales for the period of 2013-2015, this research has found that for every increase of 137 streams, there is a decrease of 1 song purchased, i.e., 137 streams are equivalent to one single.” (Ramaprasad WDT ¶ 89, (HX- 1615); Tr. 1945:21-24 (Ramaprasad))

COF-656. Dr. Ramaprasad’s proposed conversion ratio nevertheless invokes the admittedly preliminary working paper by Aguiar and Waldfoegel, which found that, on an aggregate but not track specific basis, 137 Spotify streams displace one track sale (whereas on a

track specific basis, no such displacement was found). Without analysis or inquiry into the nature of the preliminary findings – and Aguiar and Waldfogel called for further study in their working paper – Dr. Ramaprasad simply adopted the aggregate equivalence ratio without defining what equivalence means; without explaining how or why this definition would be relevant for this proceeding; and without assessing the aggregate/specific track distinction and its implications for assessing a per-stream mechanical rate that necessarily is track specific.

(Rysman WRT ¶ 96 (HX-3032); HX-909 at PAN\_CRB115\_00094279-00094281; Tr. 2775:17-2776:17 (Ramaprasad))

COF-657. The goal of Aguiar and Waldfogel “is to analyze data on streaming, sales and unpaid consumption to determine how streaming is affecting the recorded music industry.” (HX-909, at PAN\_CRB115\_00094262; Rysman WRT ¶ 97 (HX-3032))

COF-658. The streaming data which Aguiar and Waldfogel reviewed came from just one streaming service, Spotify, and was from a limited period. (HX-909, at PAN\_CRB115\_00094272-00094274; Tr. 2783:18-2784:3)

COF-659. Aguiar and Waldfogel do not attempt to ask what happens to the download behavior of an individual who adopts streaming, or how consumption of a particular song changes when it is available to stream. (Rysman WRT ¶ 97 (HX-3032))

COF-660. Aguiar and Waldfogel did not assess anything more than the top 50 songs on Spotify, using it as an “index of total streaming.” As suggested by the working paper’s observation that individual track displacement differed from aggregate data, the effect of streaming on the consumption of individual songs could reasonably be expected to be very different not only for the top 50 songs but even more so for songs outside of the top 50, which represented about 90 percent of total streaming volume. (HX-909; Rysman WRT ¶ 97 (HX-

3032)) For example, the top 50 tracks streamed on Spotify might be a much smaller proportion of total track streams on Spotify than the top tracks downloaded might be as a proportion of total download sales. If the top 50 songs accounted for a greater percentage of overall download sales than they did for total track streams, then displacement of the top 50 tracks might be greater in the download market than in the streaming market, a fact that the authors did not consider. (Tr. 2778:11-2782:7 (Ramaprasad))

COF-661. Aguiar and Waldfogel's aggregate observation of a 137 streams to download ratio is also a questionable statistical result based on the limited nature of the data given that annual streams per consumer for the Spotify free tier are less than 3000 or about 58 per week. (Rysman WRT ¶ 98 (HX-3032))

COF-662. Aguiar and Waldfogel specifically cautioned that their paper was preliminary and of limited significance. They state that the data available to them "[fell] short of the ideal" and that their 137:1 ratio represents merely a "best estimate." They admitted that "[a]dditional work would be helpful to provide more confidence in the[ir] answer" and that "it would be desirable to conduct experimental studies at the song level for interactive streaming services to see whether they stimulate or depress track sales," a statement that is consistent with the disparity in their findings between aggregate data and individual tracks. (HX-909, at PAN\_CRB115\_00094273, 00094281, 00094285; Rysman WRT ¶ 99 (HX-3032); Tr. 2783:18-2784:3 (Ramaprasad))

COF-663. Drs. Ramaprasad and Marx ignore that Aguiar and Waldfogel conducted *two* analyses. In the analysis that they cite, the authors compared data from Spotify relating to streams of the top 50 songs during the period April to December 2013 with data from Billboard relating to download sales during a different time period (from 2013 through 2015). The

Billboard data was aggregated data that was not tied or matched to the exact same 50 songs in the Spotify data. Using a regression analysis, the authors reached the 137:1 result. (HX 909, at 20-22. Tr. 1947:10-13 (Marx))

COF-664. In the second analysis, the authors compared the weekly data from Spotify for the period April to December 2013 with weekly data from Nielson on digital download sales for the same exact songs during the same overlapping time period. That analysis, which the authors called their “matched aggregate sales” analysis, yielded a ratio of 43 to 1. This “matched aggregate sales” analysis is based on a song-to-song comparison and looked at over 700 tracks on Spotify (while the analysis that yielded the 137:1 ratio looked only at 86 tracks. (HX-909, at PAN\_CRB115\_00094279-00094280, Tables 5 and 7; Rysman WRT ¶ 100 (HX-3032))

COF-665. Dr. Katz cites this “matched aggregate sales” analysis in a different section of his report, for the proposition that streaming has reduced piracy, stating that “a recent academic study finds that every 47 streams displaces one illegal download.” (Katz WDT ¶ 55 & fn. 70 (HX-885))

COF-666. Although Spotify’s economist Dr. Marx also invokes the Aguiar and Waldfogel ratio, which was based on an expressly limited set of Spotify data, Dr. Marx, who had access to any and all data she wanted from Spotify and could therefore have obtained a more current, expansive and robust set of data, either made no request therefor or Spotify did not provide such data and, as a result, Dr. Marx did not not conduct her own analysis or attempt to replicate Aguiar and Waldfogel’s analysis. (Tr. 1946:14-1947:4 (Marx))

COF-667. Dr. Ramaprasad cites in her WDT a more recent paper by Datta, Knox and Bronnenberg (“DKB”), which uses individual level data to measure the long-term effect on overall music listening of an individual user of a download service (mostly iTunes) who adopts

Spotify. Using consumption data from users pulled from Last.fm, DKB's analysis shows that when individuals begin to use Spotify, while their overall listening to both downloads and streams combined increased by a certain percentage, their download listening decreased by a different percentage. Assuming that using an analysis that attempts to "equate" the consumption of streams to the consumption of downloads were an appropriate way to set a rate in this proceeding, the DKB paper implies a very different conversion ratio of closer to 2:1.

(Ramaprasad WDT ¶ 70 n. 145 (HX-1615); HX-201 at 2-3 and 20)

c. Charts

COF-668. Dr. Ramaprasad has also invoked a conversion rate from Billboard magazine, with no discussion of Billboard's goals or basis for choosing the conversion rate.

(Rysman WRT ¶ 94 (HX-3032))

COF-669. The only evidence Dr. Ramaprasad uses to show that Billboard benchmarks exist is four news articles ( [REDACTED] [REDACTED] HX-1497 [REDACTED] contains any description at all of the method by which the Billboard ratio was derived. (Ramaprasad WDT ¶¶ 84-85, fns. 164-167 (HX-1615); HX-1497, HX-1483, HX-1498, HX-1441; Tr. 2758:24-2759:8 (Ramaprasad))

COF-670. Dr. Ramaprasad admits that there is "not a lot of insight" into how the Billboard benchmark is created. (Tr. 2760:10-18 (Ramaprasad))

COF-671. Dr. Ramaprasad also admits that it's "not clear what [Billboard] is doing" in calculating its conversion ratio. (Tr. 2828:13-2829:5 (Ramaprasad))

COF-672. The Billboard Ed Christman article states only that the ratio is a comparison of the 2014 average blended per-stream royalty payout (of \$0.005) to labels for audio and music videos with the labels' average blended wholesale revenue from an album sale (of \$7.50), applying a conversion ratio of 10 track sales per album unit. The Ed Christman

article provides no information as to how these blended per-stream royalty payouts and blended wholesale album sale revenue figures were derived, e.g., which labels' data were used and for what time period; or what weights, if any, were assigned in calculating the "blended" rate between audio and video streams. Dr. Ramaprasad admitted that she does not know [REDACTED]

[REDACTED] (HX-1497 at 1-2; Tr. 2760:19-2761:5  
(Ramaprasad))

COF-673. Dr. Ramaprasad states that the Billboard rate is based on Stream Equivalent Albums ("SEA") defined as "number of streams for which the total royalty payments to a record label (i.e., the revenue to the label from interactive streaming) would equate to the revenue from one album sale. Billboard defines this relationship as "an album is equivalent to 10 tracks" and that the "10 tracks are equivalent to 1,500 streams, which creates the benchmark of 1 track = 150 streams." (Rysman WRT ¶ 94 (HX-3032))

COF-674. Dr. Ramaprasad does not explain why the mechanical rate at issue in this proceeding should be based on a rate that is designed to equate aggregate label revenue (based on a deemed number of tracks which comprise an album, which may in fact not correspond to the actual number of tracks on albums) across a number of downloads and a number of streams. (Rysman WRT ¶ 95 (HX-3032))

COF-675. Billboard adopted a conversion ratio of 100 streams to 1 download, but as streaming gained popularity, and the effective per stream payment declined, Billboard changed its ratio to 150 to 1. Thus, counterintuitively, as streaming increased in intensity, Billboard devalued streaming vis a vis downloads, which were diminishing, again based apparently solely on an aggregate revenue metric. Dr. Ramaprasad does not address this and Dr. Marx could not

explain this (Judge Strickler questioning Dr. Marx: “Wouldn’t the ratio go in the other direction if there is a growth of streaming consumption on the basic economic analysis?”) (Rysman WRT ¶ 95 (HX-3032); Tr. 1944:5-1945:7 (Marx))

COF-676. Between 2013 and mid-2014 alone, the Billboard ratio shifted to 150:1 from another perfectly round and equally dubious number of 200:1. (Ramaprasad WDT ¶ 85 (HX-1615) ( [REDACTED]

[REDACTED] While the Billboard ratio *decreased* from 200:1 to 150:1, both the RIAA and U.K. Charts company ratios *increased* from 100:1 to 150:1. (Tr. 2063:12-15, 2627:2-11, 2771:5-25, 2774:4-7 (Ramaprasad); Tr. 2491:2-8 (Dorn); HX-1442; HX-1489)

COF-677. Dr. Ramaprasad does not know how the Billboard ratio was calculated. (Tr. 2759:10-2761:5; 2629:14-2630:2 (Ramaprasad))

COF-678. Dr. Ramaprasad also refers to the Official Charts Company 100:1 ratio. However, the only evidence Dr. Ramaprasad offers respecting the Official Charts Company ratio are two exhibits, each containing web pages for the Official Charts Company website, and she has no understanding of its ratio or why it changed its ratio. (Tr. 2771:5-25; 2774:4-7 (Ramaprasad); Ramaprasad WDT ¶ 87 (HX-1615); HX-1442; HX-1489)

COF-679. HX-1489 states only that the U.K. Charts Company “used value (in terms of royalties paid to the rights owners) to calculate this average rate,” conducted “extensive investigation of royalty rates paid,” and “sense-checked in consultation with independent and major labels, digital retailers and streaming services.” It does not state, among other things, which “rights owners” were examined, what data was collected and how it was collected, what

types of royalties were considered, which labels, digital retailers, and streaming services were consulted, or how such entities were chosen. (HX-1489)

COF-680. Moreover, the U.K. Charts Company *admits* that its ratio is unscientific – or not “slavishly pure,” in the company’s own words. (HX-1489)

COF-681. Dr. Ramaprasad admits that she did not contact anyone at Billboard or Official Charts Company to determine how their respective ratios were arrived at. (Tr. 2773:10-2774:3 (Ramaprasad))

COF-682. Dr. Leonard criticized Dr. Ramaprasad for using the 100:1 U.K. Official Charts Company ratio, claiming that the ratio had recently changed to 150:1. However, the document he cites is a BBC News article which also provides no information regarding how the 150:1 ratio was derived. (Leonard WRT ¶ 178 (HX-698))

COF-683. The U.K. Charts Company has inexplicably increased its ratio from 100:1 to 150:1, thereby devaluing streams as compared to downloads, even though more people are streaming music than ever before. (Leonard WRT ¶ 117 (HX-698); Ex. CO-13)

COF-684. [REDACTED]

[REDACTED] (HX 1497)

COF-685. [REDACTED]

[REDACTED]

[REDACTED] (see, e.g., Ghose

WDT ¶¶ 63-65 (HX-1617); Ramaprasad WDT ¶¶ 42-43 (HX-1615)), [REDACTED]  
[REDACTED] (Tr. 2764:1-20 (Ramaprasad))

COF-686. Dr. Ramaprasad admits that the Billboard conversion ratio depends on which services are being used for the calculation. (Tr. 2768:10-25 (Ramaprasad))

COF-687. Dr. Ramaprasad herself identified another facially obvious failing of the Billboard ratio when she acknowledges that Billboard combines video streaming royalty data with audio streaming royalty data to come up with a “blended” per-stream royalty rate. Dr. Ramaprasad admits that, in doing so, Billboard overestimates the ratio of streams to track sales relative to an audio-stream-only analysis. This is because on an effective per-stream basis, video streaming royalties tend to be lower than audio streaming royalties, which results from the video services’ reliance on the Digital Millennium Copyright Act. (Kokakis WDT ¶ 102 (HX-3018); Brodsky WDT ¶ 108 (HX-3016); Ramaprasad WDT ¶ 80 (HX-1615))

COF-688. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Tr. 2766:10-2768:7 (Ramaprasad))

COF-689. Dr. Ramaprasad does not recall requesting from Apple any data to perform her own conversion analysis despite the fact that Apple sells both downloads through its iTunes store as well as streaming subscription plans. She did not know if Apple tracks purchases

through iTunes, whether of downloads or streaming subscriptions and does not think she asked Apple to see any data produced by the other services in this proceeding. data (Tr. 2793:8-2795:1 (Ramaprasad))

COF-690. Dr. Ramaprasad advocates for the 100:1 ratio because it is a “clear” and “simple” way to calculate; this is not a reason to adopt a conversion ratio. (Tr. 2624:9-2624:8 (Ramaprasad))

COF-691. Dr. Ramaprasad criticizes Dr. Eisenach’s and Dr. Gans’s use of sound recording royalties as a benchmark in their analysis, but admits that the Billboard conversion ratio benchmark she invokes is also based on sound recording royalties. (Tr. 2797:17-2799:4 (Ramaprasad))

COF-692. David Dorn does not know how Billboard came to the 100:1 ratio. (Tr. 2491:18-21 (Dorn))

COF-693. The only evidence relied upon by David Dorn in support of the 100:1 ratio is the Official Charts Company. (Tr. 2495:24-2496:7 (Dorn))

COF-694. David Dorn testifies that basing a mechanical royalty rate on the Billboard 150:1 ratio as opposed to a lower ratio is inappropriate because Apple Music is “not a chart” but is rather a customer-facing music service. (Tr. 2496:20-2497:17 (Dorn))

COF-695. Dr. Marx admits that her understanding as to how the RIAA and Billboard ratios were developed is limited to the information contained in the 2016 RIAA press release. She also admits that she has no understanding of numerous aspects of the methodology behind the RIAA’s ratio as that methodology is described in the RIAA press release. She is unaware of whether the consumption patterns to which the press release refers include the purchasing of CDs or downloads, the number of times a purchased track is played, or the variety of albums or

downloads purchased by consumers. She also testifies that she made no assumptions as to the meaning of the RIAA's references to the "historical impact on the program" and "consultation with myriad industry colleagues," two factors which the press release indicates underlay the RIAA ratio. And she admitted that she is unaware of any incentive the RIAA may have to increase the number of streams used in its ratio based on additional compensation that may be due to artists as a result of their reaching gold or platinum album status. (Tr. 1849:8-1850:16; Tr. 1926:22-1927:25, 1931:16-1932:17, 1937:3-17, 1938:4-25, 1939:8-1942:1 (Marx); Marx WDT ¶ 108 (HX-1065) FN121; HX-903)

COF-696. Dr. Marx admits that a conversion ratio of streams to downloads which increases in response to an increase in streaming activity devalues an individual stream relative to a download. (Tr. 1849:8-1850:16, 1926:22-1927:25, 1931:16-1932:17, 1937:3-17, 1938:4-25 (Marx))

2. Downloads And Streams Are Not Equivalents

COF-697. Dr. Ramaprasad admits that the measurement of interactive streaming consumption, and its comparison with the consumption of downloads and albums, is more complicated than measuring digital downloads to albums because, with respect to interactive streaming, consumers do not pay for ownership of a particular song or album, but pay for access to a catalogue of songs. (Tr. 2754:25-2756:5 (Ramaprasad))

COF-698. Dr. Ramaprasad admits that for a download, you can only listen to the track purchased; and that streaming provides access to all the songs in the catalogue as many times as you like for a fixed monthly price. (Tr. 2796:14-2797:4; 2604:21-2605:13 (Ramaprasad))

COF-699. Spotify collects and analyzes many pieces of data about each of its users and is able to monetize that data, thereby creating more value for streaming than the purchase of digital downloads. (Tr. 2271:16-2272:1 (Lucchese))

COF-700. Spotify's Will Page also noted the absurdity of the approach when he said that comparing streams to downloads to derive "stream equivalent albums" is akin to asking how many e-mails equals one fax, or creating a ratio of "fax equivalent e-mails." (HX-992)

COF-701. Access to music on-demand is a substantial value, separate and apart from the value obtained from listening to music (which can be obtained from non-interactive sources and radio at lower costs). This is why on-demand services market the size of the catalogs they offer, and why they feel the need to obtain (and provide to their users) access to the full repertoires of the major publishers and record labels, as well as songs of major independent publishers and labels and more. (Eisenach WRT ¶ 51 (HX-3033), FN58, FN59, FN60)

3. Apple's Rate Proposal Would Drastically Reduce Royalty Payments And Lead To Zero-Dollar Royalty Payments

COF-702. Dr. Ramaprasad admits that she did not perform any analysis on the data produced by the participants in this proceeding to compare Apple's proposed rate to the effective per-play rates paid by any service participant during any period. (Tr. 2752:11-17 (Ramaprasad))

COF-703. Dr. Ramaprasad admits that she did not perform any analysis on Apple's own data to compare Apple's proposed rate to the effective per-play rate paid by Apple in any period. (Tr. 2752:18-22 (Ramaprasad))

COF-704. Dr. Ramaprasad was not aware that Apple's proposed per-play rate would result in a decrease of 85 percent from Apple's current effective per-play rate. (Tr. 2752:23-2753:6 (Ramaprasad))

COF-705. For a number of service months, Apple’s structure would have resulted in a service paying absolutely no mechanical royalties, a result which does not provide a “fair return” to Copyright Owners, [REDACTED]

[REDACTED] For example, Tidal, in both December 2014 and 2015 would have owed no mechanical royalties for its entire service usage if Apple’s proposal had been in place. (Rysman WRT ¶ 85 (HX-3032); Ramaprasad WRT ¶ 52 (HX-1616))

COF-706. Rhapsody’s standalone non-portable streaming-only subscription service would have owed no mechanical royalties from at least June 2012 to April 2016, if Apple’s proposal had been in place. (Rysman WRT ¶ 85 (HX-3032))

COF-707. Spotify’s premium subscription service would have also owed no mechanical royalties in at least two months in 2014 - January 2014 and June 2014 - and would have owed nothing in several months in other years, if Apple’s proposal had been in place. [REDACTED]  
[REDACTED] its subscribers from its catalog of tens of millions of songs; under Apple’s proposal, Spotify would owe nothing for that usage. (Rysman WRT ¶ 85 (HX-3032))

**B. The Interactive Services’ Proposed Rates Are Unreasonable And Not Consistent With Policy Objectives**

1. Current Statutory Rates And Direct Deals Under The Compulsory Shadow Are Not Useful Benchmarks
  - a. The Statutory Rate Is a Ceiling For Agreements Made In Its Shadow

COF-708. The royalty rate contained in virtually any agreement made by a music publisher or songwriter with a license for rights subject to the compulsory license will be depressed by the availability of the compulsory license. (Israelite WDT ¶ 60, 61 (HX-3014); Israelite WRT ¶ 53, 54 (HX-3030); Eisenach WDT ¶ 29 (HX-3027), FN 21 (HX-280))

COF-709. In its 2015 Music Marketplace Report, the U.S. Copyright Office acknowledged that royalty rates for musical works have been historically depressed by compulsory licensing. (Gans WDT ¶ 10 (HX-3028); HX-920 at 159)

COF-710. According to the Copyright Owners' expert Dr. Gans, the compulsory rate for mechanical royalties acts as a ceiling for negotiated deals, and in so doing has negatively influenced perceptions regarding the market value of composition rights, creating an "unvirtuous cycle" that depresses royalty rates for musical works. (Gans WDT ¶ 10 (HX-3028))

COF-711. Dr. Hubbard agrees that a statutory rate acts as a ceiling in private negotiations and that it would be hard to imagine a party voluntarily paying more than the statutory rate. (Tr. 2205:19-24, 5949:13-5950:16 (Hubbard))

COF-712. Dr. Marx testified that there is no reason to believe that the current statutory rates reflect marketplace benchmarks. (Tr. 1912:10-18 (Marx); Eisenach WRT ¶¶ 26-31 (HX-3033))

COF-713. However, Dr. Marx also claimed that the statutory rate, which was the product of a settlement, was agreed to in the shadow of the compulsory license and that she actively sought it out as a benchmark for that reason. (Tr. 1844:14-25 (Marx))

COF-714. Dr. Marx takes the position that rates that are explicitly governed by the 801(b) factors – namely, the statutory rates themselves – are optimal benchmarks for determining rates under the 801(b) standard. On this basis, she excludes all privately negotiated agreements as possible benchmarks, including agreements between labels and interactive services. (Tr. 1911:13-1913:1, 1914:5-1917:2 (Marx))

COF-715. Dr. Marx previously testified in a rate court proceeding that licenses that are negotiated competitively are the best benchmarks for determining a rate reflecting fair market value. (Tr. 1919:9-1921:6 (Marx))

COF-716. Dr. Leonard admits that the shadow of the compulsory license can affect directly negotiated agreements, including Google’s direct deals with publishers. As he admitted in a footnote to his WDT, “there would be no economic incentive” for a service to pay a royalty greater than the statutory rate unless it was receiving something more than a license for the rights subject to the compulsory license. (Leonard WDT ¶ 71, FN132 (HX-695); (Tr. 1243:5-1245:16))

COF-717. Dr. Watt testified:

I am aware that publishers in fact routinely bargain with services and license their repertoires directly, despite the existence of a statutory rate. This should come as no surprise — market participants will often find win-win situations that can marginally improve upon statutory rates for both sides or provide non-rate benefits for both. But it must be emphasized that this is nothing resembling a free market bargain. ***Licensors subject to a statutory rate have no ability to obtain materially higher rates than the statutory rates. Licensors can only bargain around the margins of the statutory rate,*** identifying regulatory terms that may have more value to licensees, and which may thus be bargained away for alternative value. One example of this might be a bargain to eliminate a burdensome paperwork requirement associated with statutory rates. Such a term may be a substantial burden for the licensee, but provide little financial benefit to the licensor. There is thus a potential bargain to be had where the licensor waives the need for the paperwork in return for a transfer of surplus larger than its minimal paperwork value but less than the licensee’s substantial paperwork value. But these are bargains around the margins of the statutory rate, and should not be confused with actual bargaining for higher royalty rates. ***Direct agreements at or near statutory rates simply measure the statutory rate and are wholly unhelpful as a measure of fair rates.***

Watt WRT ¶ 36 n. 22 (emphasis added) (HX-3034); *See also* Eisenach WRT ¶¶ 26-31 (HX-3033)

COF-718. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 5949:13-5950:16

(Hubbard); (HX-141))

COF-719. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Tr. 4486:3-11 (Brodsky); HX-748)

COF-720. [REDACTED]

[REDACTED]

[REDACTED]

(Tr. 4491:15-25-4492:1-15 (Brodsky); HX-372, HX-380, HX-390)

COF-721. [REDACTED]

[REDACTED]

[REDACTED] (Tr. 4493:8-4494:3 (Brodsky); HX-742, HX-743)

b. Subpart A Is Not A Useful Benchmark

COF-722. The Subpart A penny rate does not reflect market prices, as it is the result of regulatory fiat. (Eisenach WRT ¶¶ 43-45 (HX-3033))

COF-723. The higher 24-cent ringtone royalty, which partially resulted from market forces while there was confusion as to whether ringtones fell within the scope of Section 115, demonstrates the uneconomic nature of the Subpart A penny rate. (Eisenach WRT ¶¶ 46-47 (HX-3033), fn. 55)

COF-724. Dr. Katz and Dr. Marx each testified that the most that might be presumed from settling parties is that they are playing a game of anticipating what they think the Judges

might rule – a game that can be far removed from reality. (Tr. 573:4-5801:1 (Katz); Tr. 1845:4-9 (Marx))

COF-725. Dr. Leonard and Dr. Marx compare how much record labels might obtain in the free market from selling physical product or digital downloads to how much musical works owners obtain from the statutory Subpart A license. (Leonard WDT ¶¶ 42-44 (HX-695); Marx WDT ¶¶ 113-115 (HX-1065))

COF-726. Under Subpart A, the record label is the licensee of the musical work. (Tr. 1956:21-1957:2 (Marx))

COF-727. Under the Subpart A rate structure, the label (as licensee) pays the same amount in mechanical royalties regardless of the price at which the sound recording is ultimately sold. There is a range of price points for individual tracks in the market ranging from \$0.49 to \$1.29 and the mechanical penny rate binds regardless of the price of the track. (Ramaprasad WDT ¶ 28 & Table 1 (HX-1615); Tr. 1956:15-1958:7 (Marx))

COF-728. Although the record label is the licensee of the musical work under Subpart A, Dr. Marx's analysis of musical works royalties as a percentage of revenue under Subpart A licensing looked only to the retail price of a track to determine revenue rather than the revenue actually received by the label, which may be lower on a per-track basis than the retail price. (Tr. 1958:18-1960:15 (Marx))

c. The Market Has Changed Dramatically Since The Current Statutory Rates And Terms Were Negotiated

COF-729. The 2008 and 2012 Settlements and the Section 115 Direct Agreements were negotiated under the shadow of a compulsory license. The 2012 marketplace bears little resemblance to the contemporary marketplace. In 2012 the market was dominated by iTunes and Pandora's non-interactive streaming service, and the interactive streaming services had a much

smaller presence than they have today. (Eisenach WRT ¶¶ 20, 22-37 (HX-3033); HX-302; HX-2728; HX-2729; HX-2730; HX-2699; HX-2698; Ramaprasad WDT ¶ 47 (HX-1615))

COF-730. At the time of the 2008 Settlement, from which Subpart B originated, interactive and non-interactive streaming together accounted for less than four percent of RIAA revenues. (Eisenach WRT ¶ 32 (HX-3033); HX-6; HX-7; HX-1444)

COF-731. By the time of the 2012 Settlement, streaming in general – while relatively new – had seen substantial growth, but interactive streaming had not yet taken off. (Eisenach WRT ¶ 33 (HX-3033); HX-1444)

COF-732. Since the 2012 Settlement, the interactive market has experienced rapid entry, including by such major and multi-dimensional businesses as Amazon, Apple, Google and iHeartMedia. (Eisenach WRT ¶ 35 (HX-3033), fn. 39; Tr. 646:16-19 (Katz))

COF-733. A percentage of revenue structure was implemented in 2008 when the future of the interactive streaming market was uncertain. (Dorn WDT ¶ 30 (HX-1611))

COF-734. Dr. Hubbard admitted that the streaming industry has materially changed since 2008 in terms of the number of consumers, number of streams, entry by new entities, revenue growth, subscriber growth, number of companies and the identity of the companies. (Tr. 2198:4-20 (Hubbard))

COF-735. A percentage-of-revenue structure, which protects services by allowing them to enter the market without paying for music being streamed is no longer appropriate, as the streaming industry is now a thriving industry. (Dorn WDT ¶ 32 (HX-1611))

COF-736. In the *Phonorecords II* proceeding, involving physical product, permanent digital downloads, and interactive streaming, what drove NMPA to settle with the interactive streaming services was that downloads dominated the market and NMPA wanted to focus its

efforts on Subpart A rates for downloads without the distraction of litigating with DiMA over streaming, which was experimental. NMPA did not know who would be operating streaming services or what their business model would be. Streaming was of no economic significance. It had not been widely adopted by consumers as the preferred means of accessing music and NMPA lacked any data to evaluate the business or its prospects. Conversely, NMPA settled Subpart A rates in this proceeding because physical sales and digital downloads have been declining, while interactive streaming has become the most popular form of music consumption and by all accounts, it is expected to continue to grow. (Israelite WRT ¶¶ 49 (HX-3030); Tr. 3715:22-3717:15; 3764:25-3765:12 (Israelite))

COF-737. All of the Services participating in this proceeding other than Spotify entered the U.S. interactive streaming market after the Phonorecords II settlement. Prior to 2012, there were very few services. Rhapsody had been in the streaming market for a few years, and Spotify launched its streaming service in the US in mid-2011, starting with a six month free trial. It was only after 2012 that Google, Apple, Tidal, Amazon and Pandora entered the market. Even then, interactive streaming did not explode until streaming went mobile. (Eisenach WRT ¶¶ 91 (HX-3033); Tr. 3830:15-3832:22, 3833:10-3838:8 (Israelite))

d. The Marx Shapley Delivers A Relative Ratio Of Value Between Sound Recording And Musical Works Licenses Of [REDACTED]

COF-738. The Shapley value based royalties that Dr. Marx presents in her written direct testimony imply a sound recording to musical works ratio of about [REDACTED]. Dr. Eisenach's benchmarking analysis also produces a ratio of [REDACTED]. Dr. Gans's Shapley value-based analysis produces [REDACTED]. These three analyses, including Dr. Marx's, make it clear that the current ratio between sound recording and musical works royalties for interactive music streaming (which is approximated to be [REDACTED]) is too high, indicating that the Copyright

Owners do not receive fair compensation under the current compulsory licensing regime. (Gans WRT ¶ 18 (HX-3035))

e. The Statutory Rate For Ownership Is Not Informative About The Market Rate For Access

COF-739. From an economic perspective, ownership business models, on the one hand, and access business models, on the other hand, are fundamentally different. It is akin to trying to derive the value of a gym membership by asking the question: “How many visits to the gym equals one barbell?” (Eisenach WRT ¶ 49 (HX-3033))

COF-740. In order for a consumer of a PDD to obtain the same access to musical works as an end user of an interactive streaming service, the PDD customer would have to purchase copies of the tens of millions of musical works in the service’s library. (Eisenach WRT ¶ 50 (HX-3033))

2. Marx’s Shapley Analysis Suffers From Serious Flaws

COF-741. Although Dr. Marx uses her Shapley analysis to estimate a fair allocation of royalties for the use of musical works and sound recordings, her model fails to accurately reflect realities of the market. One straightforward example of the mismatch between the results produced by Dr. Marx’s analysis and market evidence is that Dr. Marx’s estimate of royalty rates for combined sound recording and musical works – [REDACTED] – is below the current observed market rates for [REDACTED]. (Watt WRT ¶ 23 (HX-3034); Gans WRT ¶ 19, 28 (HX-3035))

COF-742. As explained by Dr. Gans, treating sound recording and musical works rightsholders as a single entity in a Shapley framework lowers their total Shapley value. In the hypothetical market without compulsory rates for musical works, the institutional structure is such that the two would not jointly negotiate with licensees. Combining entities in the Shapley

framework that are, in reality, separate causes a misrepresentation of their bargaining power. If the entities being combined are substitutes for one another—such as alternative music services—then combining them ignores the effects of competition between them, thereby inflating their combined share of surplus from the joint enterprise (i.e. their Shapley value). In contrast, if the entities being artificially combined are complements to one another—such as the publishers and labels—then combining them ignores their separate abilities to be hold outs from an otherwise profitable coalition (i.e. exercise veto power), and thereby bargain for a higher portion of the shared profit. By combining publishers and labels, as Dr. Marx does in her “Baseline” model, Dr. Marx thus artificially depresses the Shapley value of musical works rights holders. (Gans WRT ¶ 21 (HX-3035); Watt WRT Appendix 3 (HX-2619) at 2)

COF-743. Dr. Marx admits that when sound recording and musical works rightsholders are separated as part of the Shapley analysis, the result of the analysis will attribute greater aggregate royalties to them because the number of veto players in the model is increased from one to two. (Tr. 1883:16-1884:9 (Marx))

COF-744. Dr. Gans compares Dr. Marx’s “Baseline” model to her “Alternative” model, and notes that combining the rightsholders in a single “representative” entity, as Dr. Marx does in her “Baseline” model, [REDACTED]

[REDACTED]. (Gans WRT ¶ 21 (HX-3035))

COF-745. Although the rates to be determined in this proceeding are for the period 2018 to 2022, Dr. Marx uses data from 2015 to estimate her model. As the evidence shows and as Dr. Gans explains, the use of 2015 data is a flaw in Dr. Marx’s analysis because interactive streaming revenues and costs have changed since 2015 and are expected to change dramatically in the immediate future. Revenue from paid subscriptions in 2016 and the number of subscribers

were already more than double that in 2015, and revenue is projected to grow even more during the statutory period. (Gans WRT ¶ 36 (HX-3035); Mirchandani WDT ¶ 53 (HX-1))

COF-746. Recalculating Dr. Marx's model with data for the first half of 2016 and making no other adjustments, increases Dr. Marx's estimated royalty payments by [REDACTED]. (Gans WRT ¶ 36 (HX-3035))

COF-747. Dr. Gans also demonstrates that Dr. Marx's use of historical accounting data to model future surplus is inappropriate. It is necessary to adjust Dr. Marx's model using estimates of future revenues and costs in order to make the Shapley analysis relevant to the estimation of mechanical royalties for the 2018-2022 rate period. Using projections for future interactive streaming revenues and future non-content costs to correct this error in Dr. Marx's analysis, and making no other adjustments, results in a royalty increase of [REDACTED] from Dr. Marx's calculations. (Gans WRT ¶ 39 (HX-3035))

COF-748. Dr. Watt corrects for methodological errors in Dr. Marx's model, including her modeling of all of the interactive services as a single player and her use of estimates for non-content costs that are not in line with more recent industry information and internal forecasts. The results are a significant rise in estimated royalties over her projections. A conservative estimate of fair royalties would be total royalties for content of [REDACTED] of downstream revenues, with 29.1% of downstream revenue going as royalties for the use of musical works. (Watt WRT ¶¶ 28-35 (HX-3034))

COF-749. The changes in the Shapley values that Dr. Gans calculates as resulting from the use of projected revenues and costs are depicted in his written rebuttal report's Figure 4. The change in shares of surplus reflects differences in the projected growth of each sector of the market over coming years and the fact that non-content costs are not expected to scale in

proportion to revenues. In accordance with the symmetry axiom that holds the Shapley values for veto players equal, the increased values for the publishers and labels remain equal, a point that Dr. Marx herself admits. (Gans WRT ¶ 40 (HX-3035), Figure 4)

COF-750. The growth of interactive streaming in recent years is expected to affect revenues, costs, and profit margins during the rate-setting period. Royalties are set on a forward looking basis, making it essential to account for such changes. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] (Gans WRT ¶¶ 41-42 (HX-3035); HX-2764)

COF-751. As Dr. Gans notes, while there may be some variable costs for interactive streaming services, Dr. Marx herself repeatedly states that there are effectively no marginal costs associated with the delivery of an additional music stream. Accordingly, it is inappropriate to estimate costs as increasing proportional to revenue. Dr. Gans performs a statistical analysis of Spotify's internal global financial data in order to project expected non-content costs as a function of revenue and finds that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Applying the results of his statistical analysis of Spotify's non-content costs and revenues to streaming revenues in the U.S. overall, Dr. Gans concludes that, across the industry, this [REDACTED]

[REDACTED] (Gans WRT ¶¶ 44-45, 47-48 (HX-3035); Gans WRT Figures 5 and 6 (HX-3035); HX-2764; HX-923)

COF-752. To corroborate his findings for Spotify’s non-content costs as well as the expected effects of economies of scale, Dr. Gans also reviewed internal cost projections relating to Amazon’s “Unlimited” interactive streaming service, which showed that [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. (Gans WRT ¶ 49 (HX-3035); HX-117, at 8)

COF-753. Dr. Gans found that by using Amazon’s 2018 and 2019 non-content costs in the Shapley analysis, the analysis produces [REDACTED]

[REDACTED] According to Dr. Gans, Apple and Google, like Amazon, are mature, diversified companies, and thus should be expected to have non-content costs similar to those observed for Amazon. (Gans WRT ¶ 49 (HX-3035))

COF-754. Dr. Gans’ corrections to Dr. Marx’s Shapley analysis also took into account industry analysts’ expectation that global revenue generated by distribution channels other than streaming will decrease over the statutory period. (Gans WRT ¶¶ 50-51 (HX-3035))

COF-755. In addition, Dr. Marx’s analysis was flawed by its assumption of one representative streaming service. Dr. Marx’s analysis models a market in which there is no competition between services. As Dr. Gans points out, this is not a valid representation of the market, because services are substitutes for one another, providing rights holders with a wide array of choices in their licensing decisions. In the actual market, competition among interactive streaming services reduces individual services’ bargaining power. There is a high degree of substitutability among interactive streaming services. Artificially combining interactive

streaming services in a Shapley model thus increases their combined Shapley value and diminishes the relative value allocated to rightsholders. The appropriate modelling assumption for correctly capturing the reality of the interactive streaming industry, and the essence of the standard Shapley model itself, is to separate the interactive streaming companies out as different individual players. Artificially combining all alternative channels of music distribution, which are also substitutes, in Marx's model has a similar distortional effect. (Watt WRT ¶¶ 25, 32 fn. 19 (HX-3034); HX-117; HX-2679 at AMZN00053095; Gans WRT ¶ 55-56 (HX-3035))

COF-756. The very essence of the Shapley methodology is to bring to the forefront what each player contributes to the total net surplus, and in that sense, it is important to capture correctly the different degrees of substitutability on each side of the market.

COF-757. By increasing the number of interactive services and alternate "other" channels to three each, Dr. Gans shows that the royalty rates estimated by Dr. Marx's model increase [REDACTED]. Dr. Gans also notes that more than three streaming services and three alternative distribution channels exist in the market, and that while modeling all of them would be computationally challenging, doing so would yield even higher shares of surplus for rights holders than modeled by Dr. Marx. (Gans WRT ¶¶ 59, 62 (HX-3035))

COF-758. Dr. Marx's Shapley analysis relies on a number of other assumptions which have not been verified against actual market values or outcomes and are actually inconsistent with the financial evidence provided by SATV, UMPG, Warner/Chappell, BMG and Downtown. These additional assumptions include:

- Dr. Marx assumes all revenue going to songwriters is profit, and that they incur no costs.
- Dr. Marx makes a range of arbitrary assumptions about the substitutability of her one streaming service and her one alternate channel.

- Dr. Marx assumes Warner Music's cost structure is representative of the entire musical works and sound recording markets.
- Dr. Marx assumes Warner Music's US cost margins are the same as Warner Music's global cost margins.
- Dr. Marx assumes the costs attributed by Spotify (a multinational company) to the US as well as Spotify's cost structure accurately reflect actual costs incurred by US operations.
- Dr. Marx assumes the cost structures of Pandora and SiriusXM represent the cost structure of all non-interactive streaming services, all internet radio services, all distributors of physical media, all download services, and terrestrial radio.
- Dr. Marx assumes exactly half of SiriusXM's revenue is generated by music.

(Gans WRT ¶ 27 (HX-3035) fn. 33-34)

COF-759. Figure 3 of Dr. Gans's written rebuttal report illustrates the effects on Dr. Marx's model of the key corrections that Dr. Gans makes to Dr. Marx's Shapley analysis. As the figure shows, once such corrections are made, Dr. Marx's model produces a result for musical works royalties that is consistent with, and higher than, the result produced by Dr. Gans's Shapley analysis. (Gans WRT ¶ 34, Figure 3 (HX-3035))

COF-760. Figure 9 of Dr. Gans's written rebuttal report illustrates how Shapley values and non-content costs combine to produce different estimates of royalty revenues for musical works, sound recording royalties, and services that change with the successive cumulative corrections that Dr. Gans makes to Dr. Marx's model. (Gans WRT ¶ 66, Figure 9 (HX-3035))

COF-761. The corrections that Dr. Gans makes to Dr. Marx's Shapley model closes the revenue gap between labels and publishers, resulting in a ratio of label revenue to publisher revenue of [REDACTED], which is lower than Dr. Gans's own estimate [REDACTED] under his Shapley

analysis. The narrowing of the gap is a result of musical works royalties increasing and sound recording royalties decreasing. (Gans WRT ¶ 70 (HX-3035))

COF-762. When the ratios of label revenue to publisher revenue that Dr. Gans and Dr. Marx each calculate – Dr. Gans’s top-down Shapley analysis [REDACTED], Dr. Marx’s alternative model without any corrections [REDACTED], and Dr. Marx’s model with the correction that Dr. Gans makes [REDACTED] – are applied to the benchmark per-play rate for sound recording royalties of [REDACTED], the result, in each case, is a per-play mechanical royalty rate that is greater than the per-play rate proposed by the Copyright Owners. Table 3 of Dr. Gans’s written rebuttal report illustrates the results of this analysis. (Gans WRT ¶ 72 and Table 3 (HX-3035))

COF-763. Dr. Marx’s Shapley analysis, when corrected for methodological errors in Dr. Gans’ bottom-up analysis, results in musical works royalties rising and sound recording royalties falling with an implied mechanical royalty rate of [REDACTED] the absence of the compulsory license. The results of Dr. Gans’s analysis are shown in Table 4 of his written rebuttal report. (Gans WRT ¶ 75-84 and Table 4 (HX-3035))

COF-764. There are numerous services that have paid effective per-play rates above what the Copyright Owners propose. (Rysman WDT ¶ 63 (HX-3026))

COF-765. [REDACTED]  
[REDACTED]  
[REDACTED] (Rysman WDT ¶ 64 and Table 1 (HX-3026))

COF-766. Rhapsody’s range of effective per-play rate between 2012 and 2015 is [REDACTED]. (Rysman WDT ¶ 65 (HX-3026))

COF-767. The Copyright Owners proposed monthly per-user rate of \$1.06 is consistent with the proposed \$0.0015 per-play rate at current user stream intensity. Subscribers of major services (including Apple, Rhapsody and Spotify) ranged between [REDACTED] [REDACTED]. At a \$0.0015 per-play rate, this is equivalent to a range of [REDACTED] per user per month, or a weighted average of [REDACTED] per user per month. Data shows that the number of streams per user is increasing for those services. (Rysman WDT ¶ 66 (HX-3026))

COF-768. Dr. Hubbard confirmed that there has been explosive growth in streaming activity since 2015 and that, given the pattern he has observed, he expects that the number of streams or the average number of streams to continue to increase in over the next years. (Tr.5992:18-5993:15 (Hubbard))

COF-769. For each of the Services' proposals, on average, there are significant decreases in both the effective per-play and per-user rate, ranging from approximately [REDACTED] [REDACTED] (Rysman WRT ¶ 83 (HX-3032))

COF-770. Apple's proposed \$0.00091 all-in per play royalty rate would result in a [REDACTED]. (Rysman WRT ¶ 84 & Table 1 (HX-3032); Tr. 2549:23-2550:3 (Dorn))

**C. The Threat Of Piracy Is Not A Basis For Reducing Statutory Rate, Nor Did The Services Eradicate It**

COF-771. Spotify's witness Will Page, despite testifying at length as to Spotify's purported effects on piracy, testified that he was unaware of any research on piracy in the United States that has been undertaken by Spotify. (Tr. 1756:1-5 (Page))

COF-772. Spotify has not introduced any evidence or provided any methodology which would indicate how reports of piracy trends in countries outside the United States can be used to understand piracy trends within the United States. (Tr. 1753:19-1754:25 (Page))

COF-773. [REDACTED]

[REDACTED] (HX-997, at SPOTCRB0004092, 0004157, 0004161)

COF-774. A June 2016 survey commissioned by Spotify found that a large majority of individuals who engage in music piracy through peer-to-peer services or apps and who also use legal streaming services or satellite radio in fact continue pirating music at the same or higher rates. (HX-215, at 96-97)

COF-775. As interactive streaming has grown, a host of “stream ripping” websites and applications have been developed that enable users to convert interactive streams into digital downloads. (Israelite WDT ¶ 43 (HX-3014), FN11 (*UMG Recordings, Inc. v. PMD Technologie UG d/b/a YouTube-mp3*, Docket No. 2:16-cv07210 (C.D. Cal. 2016); HX-275))