



PUTTING THE BAND BACK TOGETHER

Remastering the World of Music

Citi GPS: Global Perspectives & Solutions

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PUTTING THE BAND BACK TOGETHER

Remastering the World of Music

The music industry is in the midst of two profound changes. First, consumers are increasingly opting to rent — rather than buy — music. Second, the demise of physical music has prompted artists to tour more often, driving significant growth in concerts and festivals.

In the U.S., the music industry generated \$43 billion in revenue, matching the prior peak in 2006. While business-to-business (B2B) revenues (Music Publishing and Licensing) and music ads (AM/FM, YouTube) are flattish, consumer outlays (Concerts, Subscriptions) are at all-time highs.

While consumer spending habits are undergoing profound changes, the current industry structure has remained relatively static. That is, record labels are still record labels. Music distributors — Apple, Pandora, Sirius, and Spotify — are just music distributors. And, concert promoters — like Live Nation and AEG — are still concert promoters.

Artists' share of music revenues is small. In 2017, artists captured just 12% of music revenue with most of the value leakage driven by the costs of running a myriad of distribution platforms — AM/FM radio, satellite radio, Internet distributors — augmented by the costs (and profits) of the record labels.

The proportion captured by artists is, however, on the rise (it was just 7% of industry revenues in 2000). The bulk of the improvement is not driven by the growth in music subscription services. Rather, it's driven by the strength in the concert business. Music labels act as intermediaries for subscription services (Apple, Spotify) but are largely excluded from the economics of the concert business. As such, growth in concert revenue is particularly helpful to artists.

With this backdrop, we think there are three ways the industry's structure could evolve. First, we could see vertical integration. For example, concert promoters could merge with an existing distribution platform. Second, we could see horizontal integration. For example, existing distribution firms could consolidate. Third, we could see organic forms of vertical integration. That is, existing web-based distribution firms could organically morph into music labels (by targeting younger, less established artists). This would allow artists to capture more of music's value while allowing Internet-based music distributors to capture profit pools currently earned by the music labels.

Time to get paid for that catchy tune

Revenue in the music industry is near peak levels with rising consumer spending, but how and where consumer dollars are spent has changed dramatically

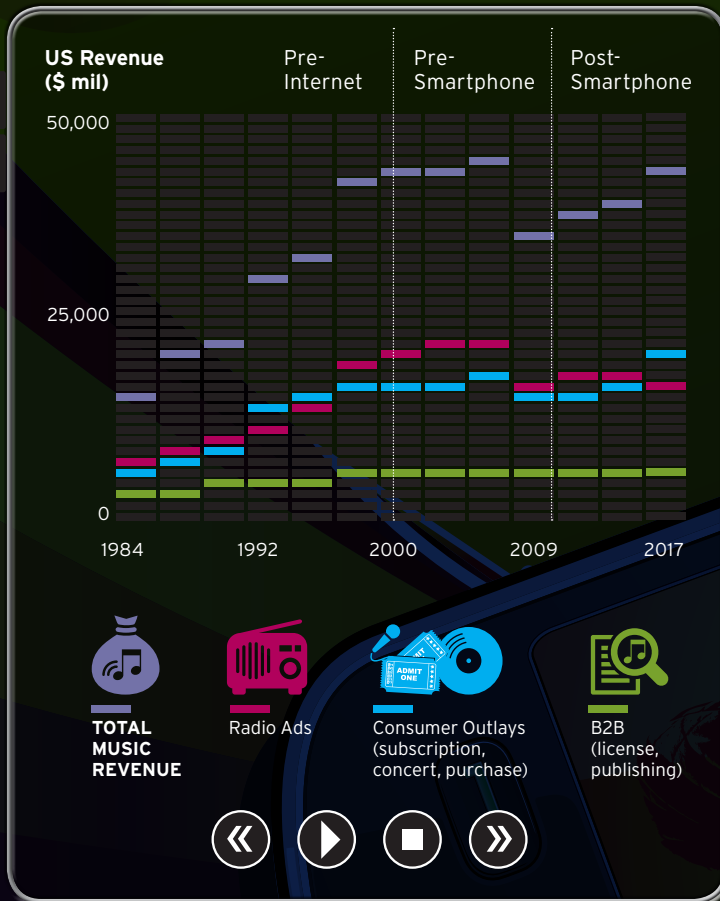


Chart 1: Source: RIAA, Polltrack, Magna, Citi Research

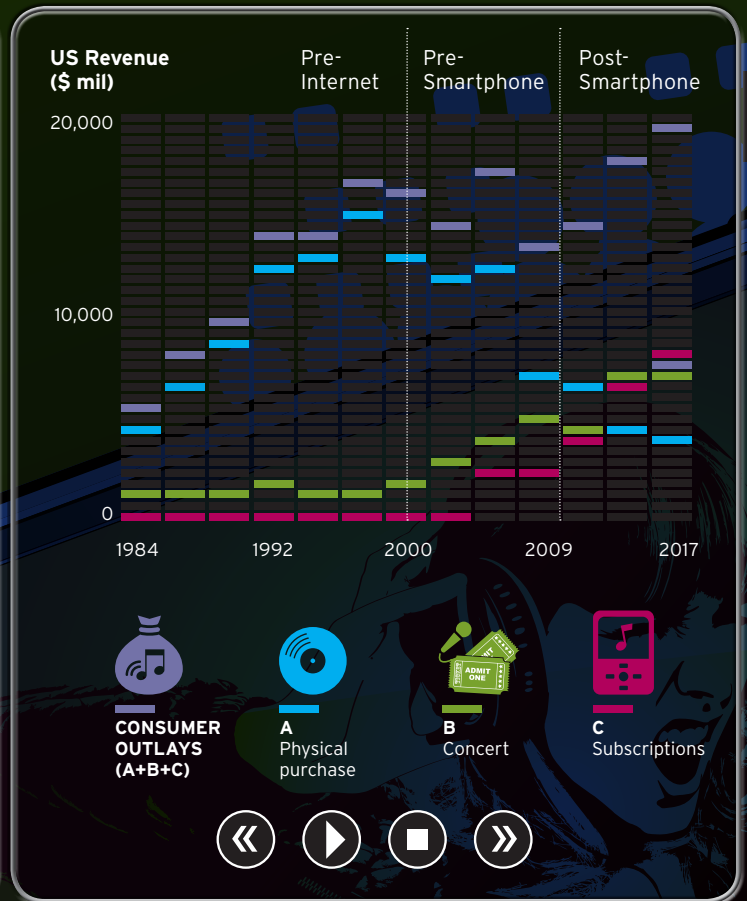


Chart 2: Source: RIAA, Polltrack, Citi Research

Despite the change in revenue mix, the structure of the music industry itself has remained the same

Source: RIAA, Company Reports, Citi Research

Revenue



\$45

2017 Allocation of Music Revenue (\$ billions)

\$0

Record producer
Collection fees
Concert agent

Cost of concerts including venue rental

Record label (publishing and recorded music)

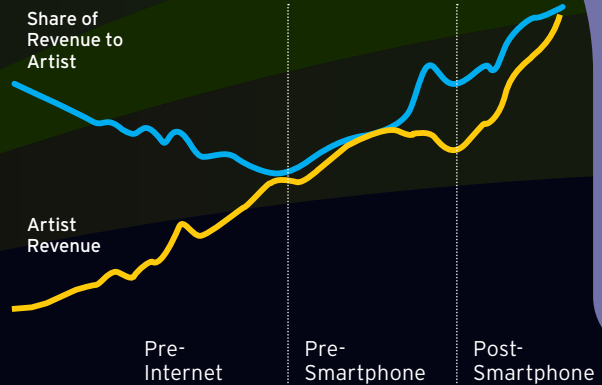
Artist revenue
Concert promoter
Retail mark-up
Manager

EBITDA of distribution platform

Platform cost (i.e. FM, Sirius, Spotify)

Artists are seeing their share of total revenue rising, but the absolute level of value capture is still quite small...

Source: RIAA, Company Reports, Citi Research



Given this backdrop, there are ways the industry's structure could evolve to allow artists to capture more share and significantly disrupt the allocation of value across the music value chain

The **Real** World



The **Ideal** World



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Backdrop

Musicians like making music. They also like making money. Consumers like listening to music. And, many are willing to pay for it. You'd think consumers would just buy music directly from artists.

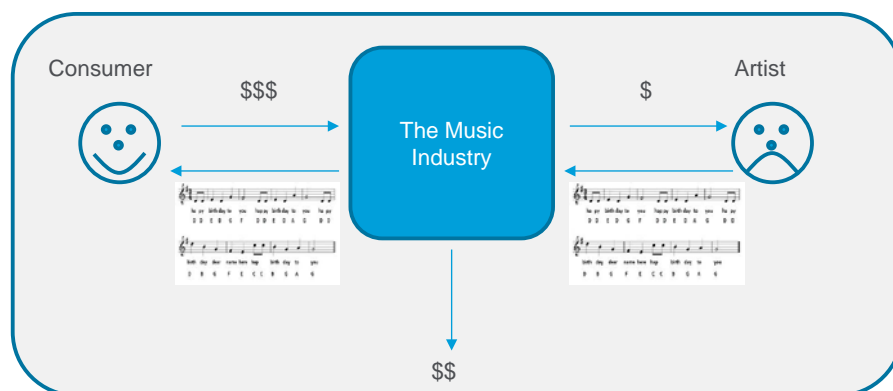
Figure 1. The Ideal World of Music



Source: Citi Research

But, in the middle of this elegant (and theoretical) transaction is an amorphous blob: the music industry. The blob means both consumers and artists deal with intermediaries.

Figure 2. The Actual World of Music



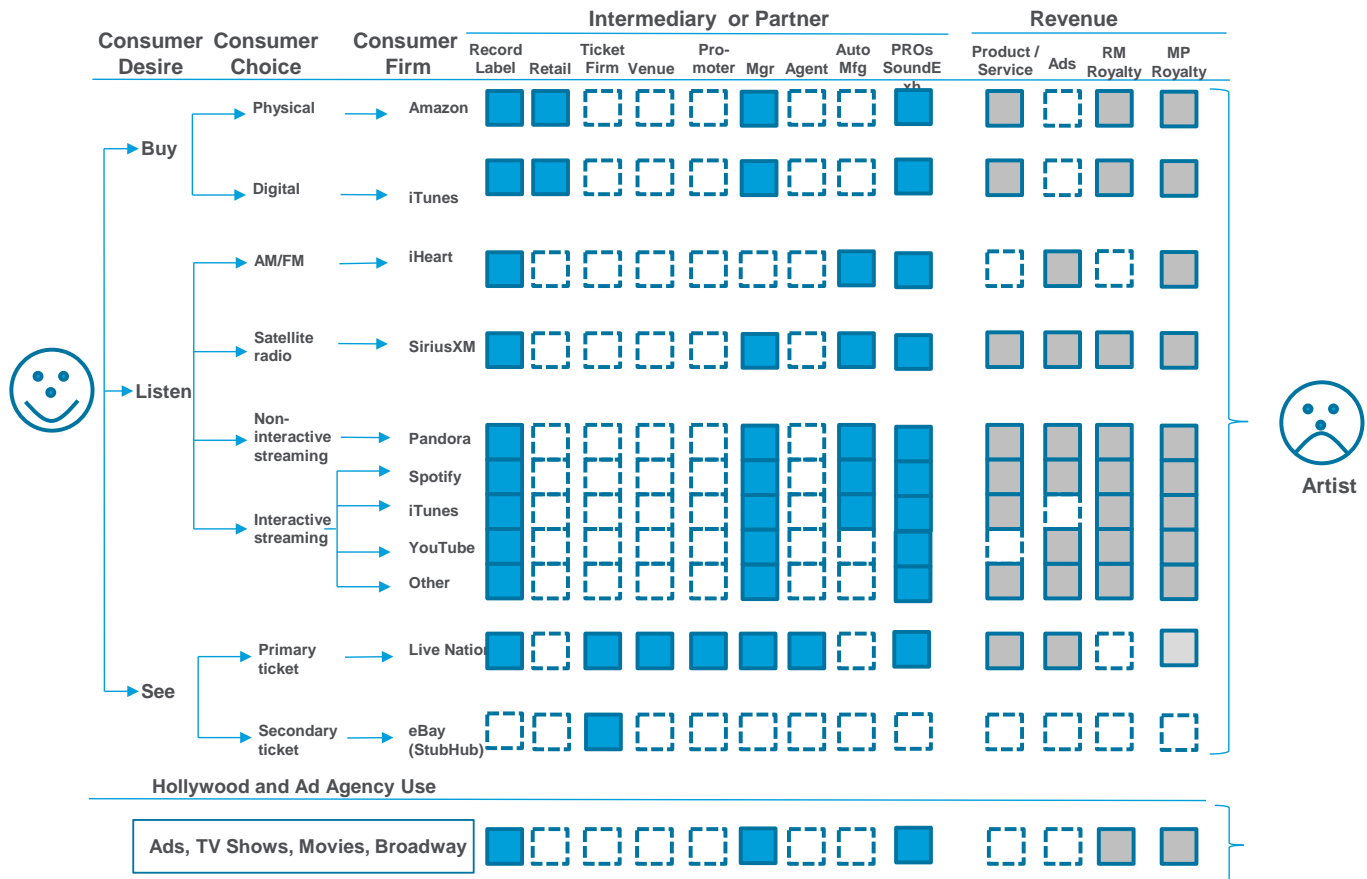
Source: Citi Research

Who are the intermediaries? Retail outlets, apps, record labels, music publishers, ticketing firms, venue owners, concert promoters, personal managers, agents, royalty collection firms, and (even) auto manufacturers. To unpack the blob, we need to do three things:

- First, parse the various ways consumers spend money on music: they buy it, listen to it, or attend concerts.
- Second, we need to delineate how artists generate revenue: from music sales, from royalties and from concerts.
- Third, we need to map the intermediaries — and the roles they play — based on the transaction type.

In Figure 3 we unpack the music blob. It suggests we need to do quite a bit of work. That's because the role of the intermediary — and the type of revenue an artist generates — varies significantly depending on how, exactly, the consumer decides to part with her cash to enjoy some music.

Figure 3. U.S. Music Ecosystem



Note: RM = Recorded Music; MP = Music Publishing
Source: Citi Research

So, our aim in this report is:

- First, understand how music revenues have changed over time.
- Second, develop a deeper understanding of the key roles in the music industry.
- Third, delve into the legal underpinnings supporting the monetization of music.
- Fourth, size the royalty payments tethered to copyright law.
- Fifth, track the dollars from the consumer — through the blob — to see how much revenue the artist captures.
- Sixth, develop a roadmap for how the various players — including the artists, labels, and streaming services — will likely adjust their business models (via merger & acquisition) over time.

So, let's dig in....

Total Music Revenues

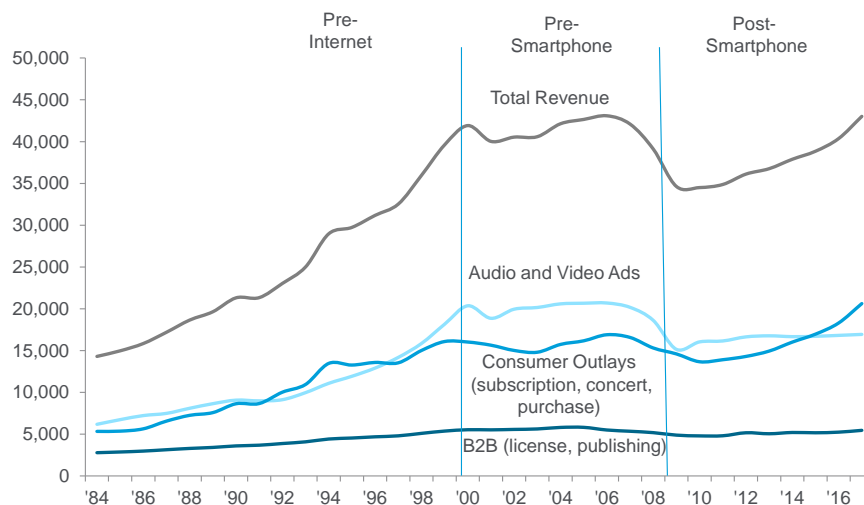
In the last 35 years, total U.S. music revenues — consumer outlays, ads, and business-to-business (B2B) expenditures — have gone through three eras:

- First, prior to the Internet (1995), U.S. consumers spent as much on music as radio stations generated in ads. These revenues tended to move in tandem.
- Second, after the Internet but before smartphones (1995 to 2007), radio ads stalled as marketers began to use the Internet for advertising. And, consumer outlays faltered as households acquired music — for free — from sites like LimeWire and Napster.
- Third, in the smartphone era (2007 to present), consumer outlays on music began to rise. But, radio ads are still shrinking.

The trends suggest three things:

- Total music revenues are back to peak levels at \$43 billion. (The last peak was in 2006.)
- U.S. consumers are spending more on music than ever before, over \$20 billion a year.
- The Internet was bad for the music industry, but the smartphone has been good for the music industry.

Figure 4. U.S. Music Value: Advertising and Consumer Outlays (\$ millions)



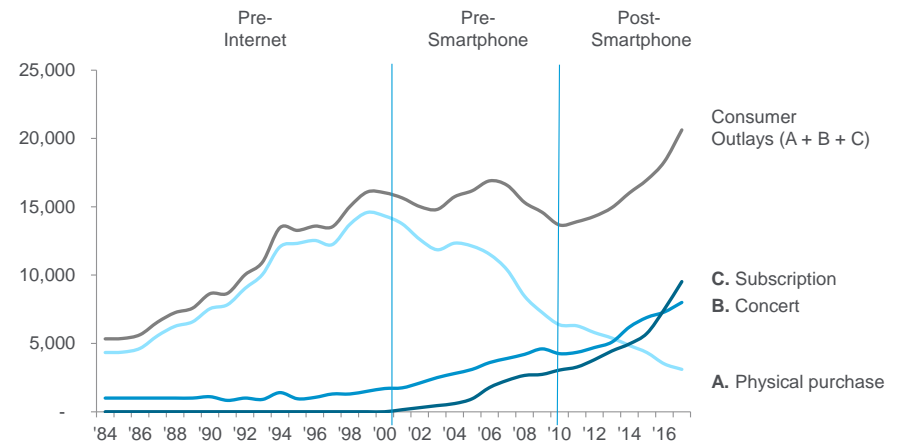
Source: Citi Research, RIAA; Polltrack; Magna

If we unpack the ~\$20 billion in consumer outlays — as shown in Figure 4 — three things are clear:

- First, physical music sales are still falling.
- Second, subscription services (dark blue line in Figure 5) are growing due to services like Spotify, iTunes, and SiriusXM.
- Third, consumer outlays for concerts (grey line in Figure 5) are also growing briskly.

In aggregate, U.S. consumers are now spending more than ever on music, but the mix is undergoing profound changes.

Figure 5. U.S. Consumer Spending on Physical Music, Concerts, and Subscriptions (\$ millions)



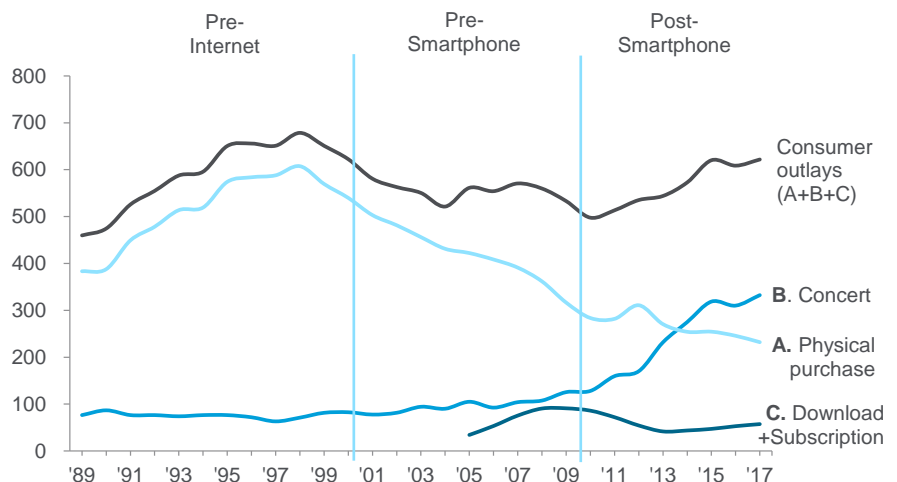
Source: Citi Research

A similar story is unfolding in Japan, the second largest market (after the U.S.) for recorded music. Indeed, the parallel between the U.S. and Japan is striking on many levels:

- First, both markets are insular. In the U.S., 93% of music consumption is from U.S. artists. And, in Japan, 87% of music consumption is from Japanese artists.
- Second, in Japan physical music sales are falling.
- Third, consumer spending on concerts is rapidly rising.
- Fourth, aggregate consumer outlays are now approaching a new high.

Perhaps the only major difference between the U.S. and Japan is this: subscription services have not yet seen material growth.

Figure 6. Japan's Music Consumption Market (Yen billions)



Source: Citi Research; A.C.P.C.; RIAJ

Key Players in the Music Industry

So far, we've reviewed how music revenues have changed over the last 35 years. We showed that total U.S. revenues have matched the prior peak. But, U.S. consumer spending on music is reaching new highs. Now, let's shift gears and define the basic roles in the music industry:

- First, it all begins with a **songwriter**, the person — or team — that writes the lyrics and sets the words to a melody. (Collectively, the lyrics and melody are called a composition.)
- Second, the songwriter usually hires a **publisher** (if the writer doesn't self-publish). The publisher pitches the song to musicians. Most publishers are owned by record labels. The revenues from a song are usually split 50/50 between the songwriter and the publisher.
- Third, the **performer** — or band — is the entity that actually records the song. The performer may use their own songs or use the content of another songwriter.
- Fourth, most bands will sign with a **record label**. The label markets and distributes the music. The label usually keeps ~85% of the performer's revenues.
- Fifth, several entities keep track of where — and how — a song and the song's recording are used. They **collect royalty payments**. And, after keeping ~10% of the revenue, they distribute funds to the copyright owners (typically, the songwriter and the artist's record label).

Figure 7. Basic Roles of the Music Industry

	Role of Entity	Business	
		Music Publishing	Recorded Music
Songwriter	The person that writes the lyrics and melody	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Publisher	Promotes the song, pitches to recording artists. Largest publishers owned by record companies. Licensing revenues split 50/50 with songwriter/publisher. Songwriter can self-publish.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Performer	Licensing song to publicly perform it. Performer doesn't control the song (the songwriter or publisher does). Performer doesn't control the recording (the record label does).	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Record Label	Firms that create, market and distribute recordings.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Royalty Collection	Associations that license musical works on behalf of copyright owners. Includes Performance Rights Organizations (PROs) and Mechanical Rights Agencies.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

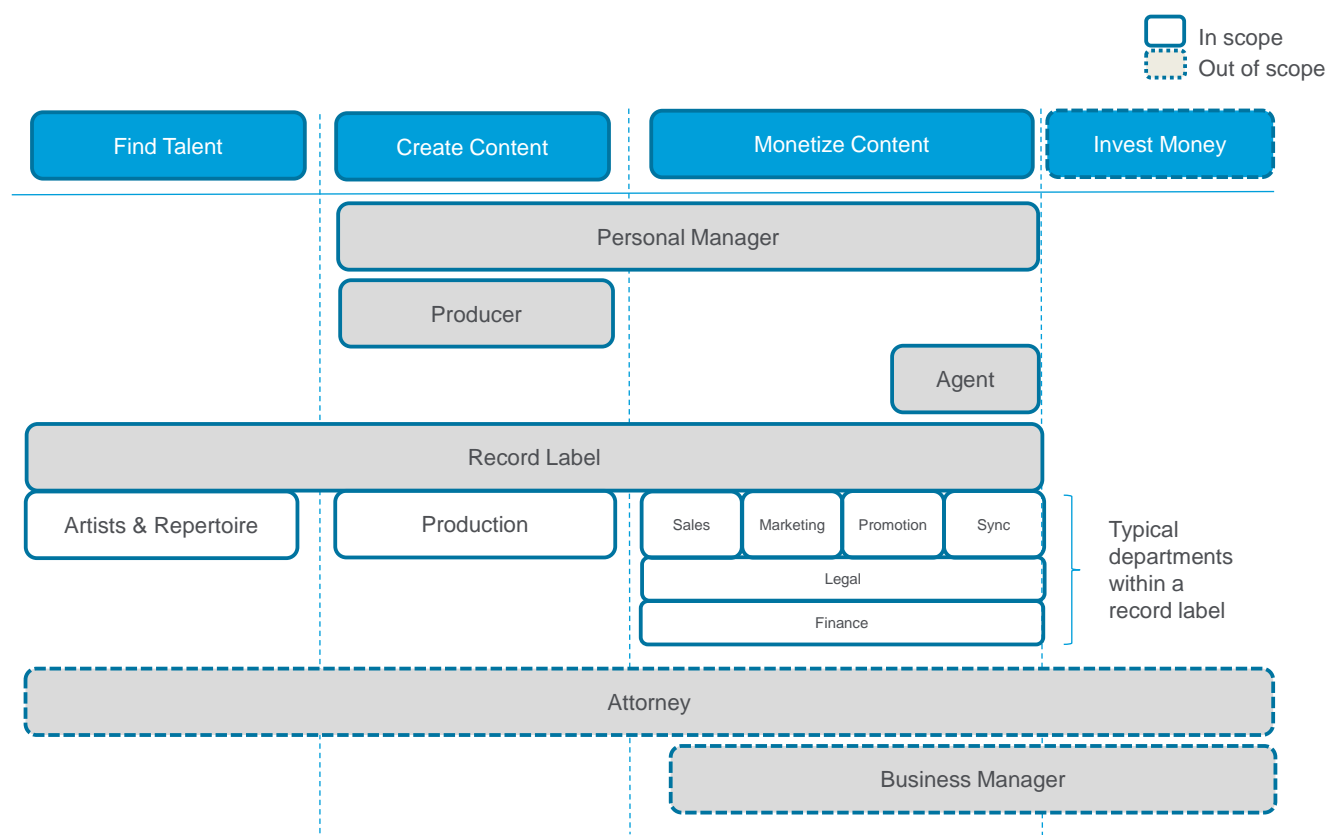
Source: Citi Research

If we organized these five roles along business lines, it's clear the music business is really two businesses: (1) **Music Publishing**: the monetization of the song; and (2) **Recorded Music**: the monetization of the song's recording. In the U.S., Music Publishing is about one-fifth the size of the Recorded Music business.

The Key Roles

But, there are many players a band will interact with to monetize musical content: Personal Managers, Record Producers, Agents, Record Labels, Attorneys and Business Managers. Let's take a closer look at each:

Figure 8. Key Roles in the Music Business



Source: Citi Research; All You Need to Know About the Music Business

- **Personal Manager** – The band's personal manager links the artist to the business world. They help with all business decisions. That is, they often select a producer, coordinate publicity, and manage the band's record label. That means ensuring the label is doing everything in its power to help the artist thrive commercially. For new artists, managers typically get 15-20% of gross earnings (or the band's revenue less a few expenses). Established artists can push this fee down a bit. In a large band of six, for example, a manager can make more money than individual band members. But, if a manager is helping a solo act, the artist will typically collect 5-6x more than the manager.

Figure 9. Ratio of Manager to Artist Revenue Depends on Band Size (percent; number)

	Members in the Band					
	1	2	3	4	5	6
Gross earnings	100%	100%	100%	100%	100%	100%
- Manager's share	15%	15%	15%	15%	15%	15%
= Band share	85%	85%	85%	85%	85%	85%
/ Band members	1	2	3	4	5	6
= Member share	85%	43%	28%	21%	17%	14%
Member share	85%	43%	28%	21%	17%	14%
/ Manager share	15%	15%	15%	15%	15%	15%
= Band member to manager	5.7x	2.8x	1.9x	1.4x	1.1x	0.9x

Source: Citi Research; All You Need to Know About the Music Business

Typical expenses that are deducted before the manager takes their share of earnings include: the cost to record the album, fees paid to the producer, payments made to those that co-write the song, and the costs of the opening act (when a band tours).

There are no publicly listed artist management firms. But, Live Nation (which is publicly listed) has a division called Artist Nation. In the U.S., Artist Nation is home to a number of management firms. These include Roc Nation, 24 Artist Management, Blueprint Artist Management, Spalding Entertainment, LMG Management, Mick Artists, Three Six Zero Group, Vector Management, Career Artist Management, and Philymack Management in the U.S. In the U.K., Artist Nation owns Plan B and Quest.

In 2017, Live Nation folded Artist Nation into its Concerts segment. But, prior to 2017, it was a separate division. A few things are clear from the firm's disclosures:

- First, Live Nation has about 125 managers on its payroll.
- Second, each manager serves, on average, four artists.
- Third, each artist generates about \$1 million of revenue per year for Live Nation. The inference is that the artists are generating 1x to 6x as much in annual revenue depending on the size of the group that is managed (see Figure 9).
- Fourth, Live Nation hasn't generated EBITDA in this segment since 2009. And, even in 2009, Artist Nation generated a paltry 1% EBITDA margin at Artist Nation.

Figure 10. Live Nation's Artist Nation Division (number; \$ millions; percent)

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Managers	70	90	90	70	60	60	100	140	125
x Artist per manager	3.0	2.8	2.8	3.3	4.0	4.7	3.5	3.6	4.0
= Artists	210	250	250	230	240	280	350	500	500
x Revenue per artist	1.2	1.4	1.6	1.7	1.5	1.4	1.2	0.8	0.9
= Artist Nation revenue	251	362	393	400	353	389	434	422	425
x EBITDA margin	1%	-4%	-6%	-20%	-3%	-6%	-6%	-12%	-12%
= Artist Nation EBITDA	3	(13)	(25)	(81)	(12)	(23)	(28)	(51)	(50)

Source: Citi Research, Live Nation

All of this raises an interesting question: over the last few years, why has Live Nation doubled the number of artists it manages — from 250 to 500 — if managing artists isn't profitable for Live Nation's shareholders?

Although as a matter of policy Live Nation doesn't force its managed artist to use Live Nation exclusively for concert touring, we suspect these relationships help drive top-line growth in Live Nation's Concerts segment. (In Figure 71 we show that between 2009 and 2017, Live Nations Concerts business has grown the top line 9% and EBITDA 15%. And, this EBITDA growth includes the losses from Artist Nation.)

- **Agent** – In the film business, an agent plays a similar role to a personal manager in the music business. That is, film agents are the key gatekeeper of all business activities for film and TV actors. But, in the music business, an agent's role is limited.

A music agent primarily books concerts. But, she can also get involved in commercials, tour sponsorships, and TV appearances. However music agents don't get involved with records, songwriting, or merchandising sales.

Agents typically get paid 5-10% of the revenues associated with concerts, commercials, and TV appearances. They do not collect fees from the sales of recorded music (in physical or digital form).

- **Record Producer** – A record producer is responsible for translating the band's creative talents into an actual recording. This includes finding the right songs to record, booking studio time, and hiring musicians and back-up singers. Historically, the record company would hire one producer for the entire album. But, today it's common for several producers to work on a single album. As such, the artist or the artist's personal manager — rather than the record label — typically hires the producers.

Producers usually get paid a fee per unit sold and the fee is paid by the artist. Crucially, the producer gets paid before the recording costs are recouped. So, if a band doesn't sell enough units, the band (or artist) will have to pay the producers out of their own pocket.

In the following example, the band gets \$0.65 "all-in" royalty and the producer gets a \$0.10 royalty. Because the band needs to pay back the record label for the recording cost and the advance payment, after 250,000 units are sold, the artist is \$37,000 in the hole. The producer, on the other hand is entitled to receive a \$15,000 payment. In this example, the band would need to use some of the cash from the record label advance (if the band didn't already spend it).

Figure 11. Hypothetical Difference Between Artist and Producer Royalties (units; \$ per units; \$)

	Artist or Band	Producer
Units sold	250,000	250,000
x Royalty per unit	0.65	0.10
= Gross revenue	162,500	25,000
- Recording costs	100,000	-
- Advance	100,000	10,000
= Net income	(37,500)	15,000

Source: Citi Research; All You Need to Know About the Music Business

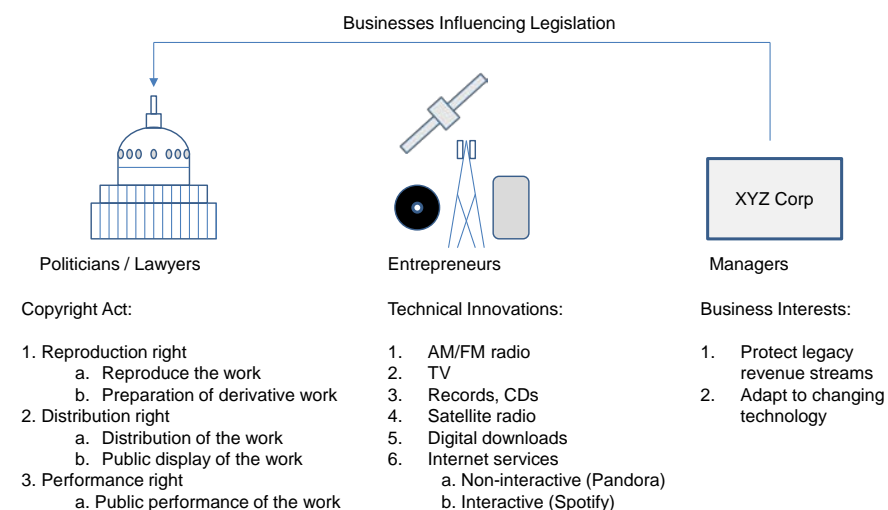
- **Business Manager** – An artist's business manager handles all financial matters. This includes collecting funds, paying bills, filing tax returns, and investing the artist's money. The business manager role is outside the scope of this report.
- **Attorney** – A band's lawyer negotiates contracts and advises the artist about key legal issues. Most lawyers in the music business do not charge on an hourly basis. Rather, they often charge a retainer (a set monthly fee) or some mix of a retainer and an hourly rate (often called value billing). This role is outside the scope of this report.

Music's Legal Underbelly

Now that we know the key players are in the music business, let's look at the industry's legal underpinnings. To do this, we need to understand music copyrights (a particularly complex part of copyright law). A copyright gives the owner of intellectual property exclusive rights to protect — and monetize — their work. That sounds simple. But, it's not. The complexity stems from three areas:

- First, when governments pass laws — like the U.S. Copyright Act — those static laws are applied to evolving technologies: like compact discs (CDs) or the Internet.
- Second, in parallel, businesses try to influence legal changes to protect legacy businesses.
- Third, for music, there are three basic copyright protections: reproduction, distribution and performance. But, these crisp lines of legal distinction can get blurry with different technologies.

Figure 12. Linkage Between Copyright Law, Technical Innovations and Businesses



Source: Citi Research, Copyright Act

As we delve into this, keep one thing in mind: the complexity stems from years of incremental — versus sweeping — legal changes. Indeed, industry observers know something isn't right:

- In 2001, Rob Glaser, former Chairman of MusicNet, said this about U.S. music copyrights: *"It's as if Franz Kafka designed this system and employed Rube Goldberg as his architect."*
- In 2015, the U.S. Copyright Office agreed: "Our music licensing system is in need of repair. The question is ...how to fix it."

At the Beginning

To understand how we got here, let's start at the beginning. The world's first copyright law — the Statute of Anne — was adopted in Britain in 1710. It gave English book publishers a legal monopoly. America liked the idea: the U.S. Constitution contains the Copyright and Patent Clause. It authorizes Congress to:

“promote the progress of...useful arts, by securing for limited time to authors...the exclusive right to their respective writings and discoveries.”

It took Congress ~15 years to codify this into law. In 1790, the U.S. passed its first copyright statute. The law said *nothing* about music: it covered books and maps.

Copyrights for Music Publishing

Another 40 years elapsed before Congress addressed *music's* copyright protections. In 1831, Congress gave Music Publishing — but not Recorded Music — copyright protection. The rights were narrow: distribution and reproduction rights for sheet music. Music Publishing was not given *performance* rights.

That changed in 1897 when performance rights were added to Publishing's existing protections. If you wrote a song and it was performed in public — for a profit — you were entitled to a royalty. But, it took ~20 years for songwriters to benefit. That's because song writers didn't know who was performing their work or if the entity was generating a profit. (Radio stations didn't start operating until 1920.)

In 1913, the American Society of Composers, Authors, and Publishers (ASCAP) was formed. ASCAP tried to collect royalties from venues — like pubs — where music was performed. But the venues claimed they used music for ambiance, not profits. The Supreme Court heard the case and agreed with ASCAP: Even if an entity wasn't charging *explicitly* for music, a Music Publishing royalty for performances was legal.

Around the same time, in 1909, music copyrights faced another legal test. Apollo Music manufactured perforated cylinders to enable pianos to automatically play music. Mr. Smith, a composer, argued that Apollo infringed upon his copyright by making a piano roll of his song. The U.S. Supreme Court ruled that since Apollo didn't make a physical *paper* copy of the music, there was no infringement.

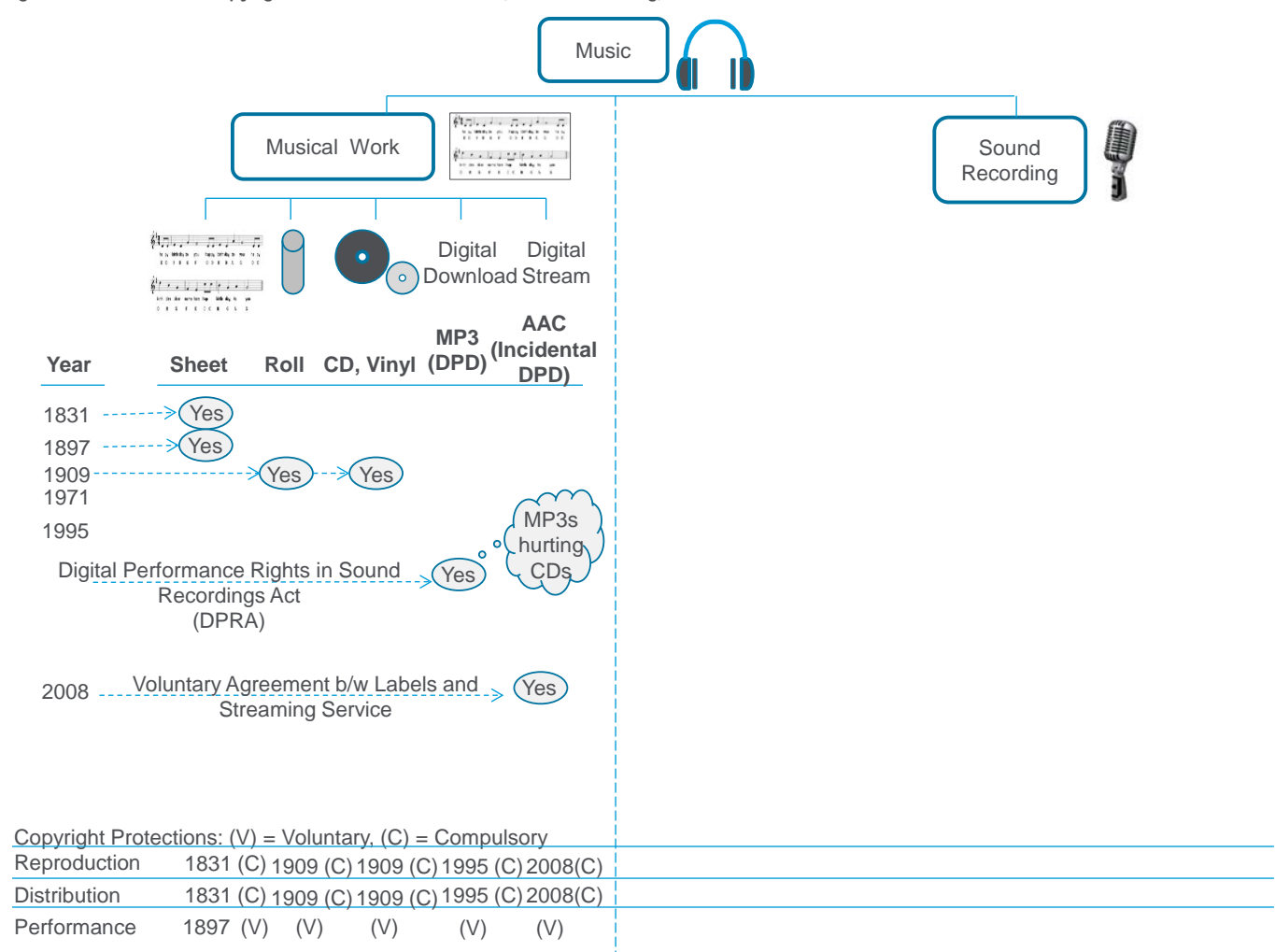
A year later, Congress stepped in and granted copyright holders the right to control the “mechanical” reproduction of their work. But, Congress also created a compulsory license. That is, *any* roll maker — not just Apollo — could use *any* song for music rolls. In effect, songwriters were *compelled* to make their music available to roll makers. This is a compulsory — or statutory — license. And today, Music Publishers call *all* reproduction royalties “mechanicals” for *any* physical medium: piano rolls, vinyl, or CDs. And, all of these licenses are compulsory.

By 1995, Congress got worried that MP3 digital downloads might dampen CD sales and diminish songwriters' royalty income. They passed the Digital Performance Rights in Sound Recording Act (DPRA). This expanded mechanical royalties to digital files, called ‘digital phono-record deliveries’ or DPDs.

However, in 2001 the Copyright Office wondered if interactive digital streaming services — where consumers request a specific song — should pay mechanical (reproduction) royalties along with performance royalties. After all, streaming music isn't a DPD.

By 2008, the digital streaming firms reached a voluntary agreement with the music industry to allow mechanical royalties for streaming music services.

Figure 13. Evolution of Copyright Law for Musical Works (Music Publishing)



Source: Citi Research; Congressional Research Office; Case Western Reserve Law Review

Copyrights for Recorded Music

While Music Publishing was first granted copyright protection (for sheet music) in 1831, it wasn't until 1972 that Recorded Music was given *any* copyright protections.

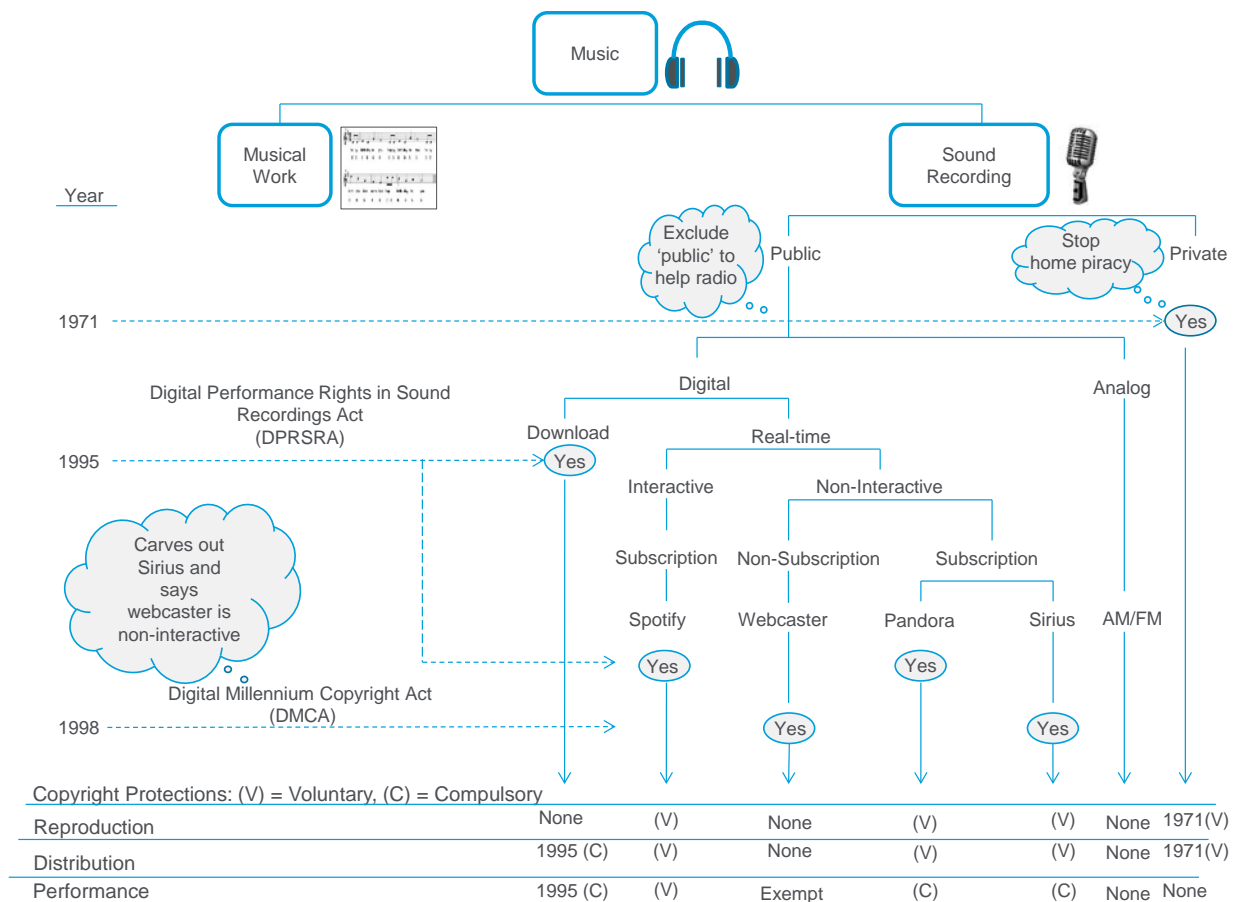
As home stereo systems — with recording capabilities — proliferated, unauthorized copies of music were common. To thwart these efforts, Recorded Music was given legal protections for reproduction and distribution (for titles released *after* the 1972 law passed). But, Recorded Music still didn't have copyrights on *public* performances because Congress didn't want to force radio stations to pay for music. Radio was accustomed to using music for free (other than small Music Publishing payments).

In 1995 — almost 25 years later — Congress passed the Digital Performance Rights in Sound Recording Act. The law was aimed squarely at digital downloads, or MP3s. Record labels thought digital downloads would cannibalize the CD market. So, for the first time, Recorded Music's copyright protections were expanded to include *public* performance rights.

However, Congress still wanted to save the radio industry. So, the law specifically excluded copyright protections for “non-subscription, non-interactive” transmissions. But, the law granted copyright protections for “subscription, non-interactive” services like Pandora. It was a compulsory license. In parallel, “subscription, interactive” services — like Spotify — were *not* given a compulsory license. These services would have to reach a commercial agreement with the music labels.

But, it still wasn't clear if webcasters — radio stations that use the Internet for delivery — were interactive services or traditional AM/FM radio stations. So, three years later in 1998, Congress passed the Digital Millennium Copyright Act (DMCA). The law gave a compulsory license to satellite radio (i.e., SiriusXM) as a “pre-existing subscription service.” In parallel, terrestrial radio's web-based broadcasts were exempted from the law.

Figure 14. Evolution of Copyright Law for Sound Recordings (Recorded Music)



Source: Citi Research; Copyright Act; Congressional Research Service

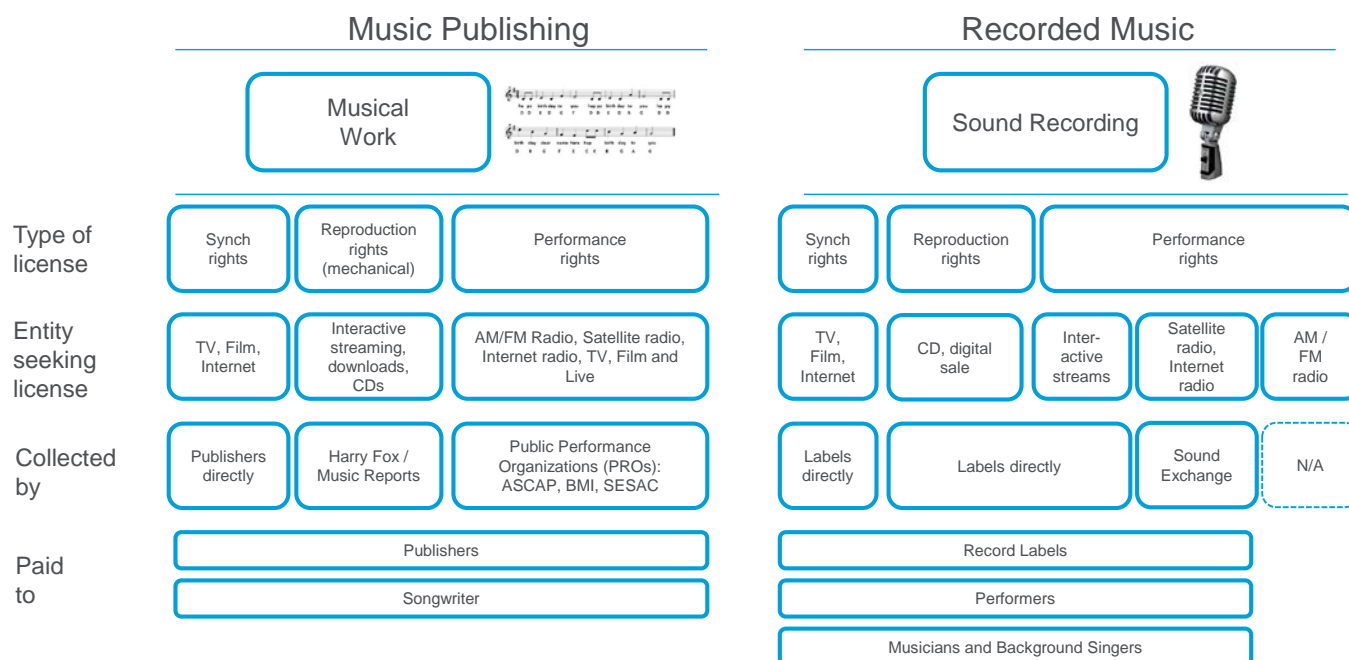
So far, we've simplified the Copyright Act into three rights: reproduction, distribution, and performance. But, when it comes to royalty *payments*, there are three terms that are used: Synchronization rights (a blend of reproduction and distribution), Reproduction Rights, and Performance Rights. They can be summarized this way:

- **Synchronization (Synch) rights:** when music is **used** in a TV show or a commercial.
- **Reproduction (mechanical) rights:** when music is **sold** on a CD, downloaded or used in an interactive stream (i.e., Spotify, Apple).

- **Performance rights:** when music is **performed** via terrestrial radio, satellite radio, TV, or the Internet (including interactive Internet services, like Spotify, and non-interactive Internet services, like Pandora).

All three rights — Synchronization, Reproduction and Performance — are applicable to both Music Publishing *and* Recorded Music. Mechanical rights — a type of Reproduction right — are applicable *only* to Music Publishing.

Figure 15. U.S. Licensing Framework for Music



Source: Citi Research, U.S. Copyright Office

But how are the royalty rates set? There are three options:



- First, there are **voluntary rates regulated by a consent decree**. Recall, ASCAP was set up in 1913 to help music publishers collect performance royalties. Since ASCAP was a monopoly, they kept raising prices. So, in 1939 the radio stations set up their own organization called Broadcast Music Inc. (BMI). But, the duopoly kept raising prices, too. By 1941, the Department of Justice entered into a consent decree with ASCAP and BMI. These entities are overseen by two judges. The judges are primarily concerned with violations of antitrust law (since ASCAP and BMI are dominant). These entities are the two largest Performance Rights Organizations, or PROs.
- Second, there are **compulsory rates** established by the Copyright Royalty Board (CRB). The CRB is comprised of three judges who set rates for statutory (compulsory) licenses. They do not set rates with an eye towards antitrust. Rather, the CRB — established by Congress — is deemed an expert rate-setting body. The CRB uses rules laid out in section 801(b)(1) of the Copyright Act, which requires the CRB to use four rate setting objectives:
 - First, maximize the availability of the works to the public.
 - Second, give copyright owners a ‘fair return’ for the creative work.

- Third, reflect the relative role of the copyright owner and the entity seeking the use of the copyright — like Spotify, Sirius, or Pandora — by incorporating items like technical contribution, capital investments, cost, and risk.
 - Fourth, minimize disruptive impact on the industries involved.
- Third, where the PROs and CRB are not involved, the **free market** dictates the reasonable prices for copyrights.

When we map the two businesses — Music Publishing and Recorded Music — and the three primary licenses — Sync, Reproduction, and Performance — it's clear that the free market dictates *most* rates. But, we've shaded the areas where the U.S. government gets involved.

It is important to note that two parties can *always* enter into a private negotiation even if the CRB has established the rate. The CRB rate is, in effect, like a 'ghost in the attic' setting a ceiling on what a copyright owner *can* charge.

Figure 16. U.S. Rate Setting Framework for Music

	Music Publishing				Recorded Music					
	Musical Work 				Sound Recording 					
Type of license	Sync rights	Reproduction (mechanical)	Performance rights		Sync rights	Reproduction rights	Performance rights			
Entities seeking license	TV, Film, Internet	Interactive streaming, downloads, CDs	AM/FM Radio, Satellite radio, Internet radio, TV, Film and Live		TV, Film, Internet	CD, digital sale	Inter-active streams	Satellite radio	Internet radio	AM / FM radio
Consent decree	N/A	N/A	Yes (ASCAP, BMI)	No (SESAC, GMR)	N/A	N/A	N/A	N/A	N/A	N/A
Rate set by	Free market	Copyright Royalty Board	Federal District Courts (rate courts)	Free market	Free market	Free market	Free market	Copyright Royalty Board	Copyright Royalty Board	N/A
Legal authority	N/A	801(b)(1) Factors	"Reasonable rate"	N/A	N/A	N/A	N/A	801(b)(1) Factors	"Willing buyer / willing seller"	N/A
Collected by	Publishers directly	Harry Fox / Music Reports	Public Performance Organizations (PROs): ASCAP, BMI, SESAC		Labels directly	Labels directly		Sound Exchange	Sound Exchange	N/A

Source: Citi Research; U.S. Copyright Office

In the U.S., the royalty payments are collected by several entities:

- Synchronization royalties — sometimes called Sync or Synch royalties — are usually collected directly by the publishers or music labels.
- Performance royalties are collected by: (1) the labels; (2) Public Performance Organizations (PROs) or Global Music Rights (GMR); or (3) Sound Exchange. The entity that collects the money is based on the type of performance copyright — Music Publishing or Recorded Music — and the nature of the medium. SoundExchange focuses on digital (non-interactive) platforms like satellite radio and Internet radio. Labels focus on interactive digital services (like Spotify).
- Mechanical royalties are collected by private firms like Harry Fox (recently acquired by SESAC) and Music Reports.

The actual movement of the dollars gets more complex depending on whether the artist has signed with one of the major record labels — like Universal, Sony, or Warner — works with an independent label or self-releases. (See Figure 17)

Figure 17. Detailed Royalty Payment Flows by Service, Royalty Type and Type of Record Contract

Consumer facing firm:	Digital Sale, CD			Terrestrial Radio			Non-Interactive Radio			Satellite Radio			Interactive Streams			
	iTunes, Amazon, Google			iHeart			Pandora, Webcast Streaming			SiriusXM			Spotify, Apple (Beats), Pandora (Radio)			
Type of record deal:	Big Labels	Indie	Self-Release	Big Labels	Indie	Self-Release	Big Labels	Indie	Self-Release	Big Labels	Indie	Self-Release	Big Labels	Indie	Self-Release	
	Record	Record	Artists own	Record	Record	Artists own	Record	Record	Artists own	Record	Record	Artists own	Record	Record	Artists own	
	Label	Label	Copyrights	Label	Label	Copyrights	Label	Label	Copyrights	Label	Label	Copyrights	Label	Label	Copyrights	
	Deals with	Deals with	Uses	Deals with	Deals with	Uses	Deals with	Deals with	Uses	Deals with	Deals with	Uses	Deals with	Deals with	Uses	
	Services	Aggregators	Aggregators	Services	Aggregators	Aggregators	Services	Aggregators	Aggregators	Services	Aggregators	Aggregators	Services	Aggregators	Aggregators	
B2B firm:	Universal Sony Warner	The Orchard iNGrooves	CD Baby Tune Core	Universal Sony Warner	The Orchard iNGrooves	CD Baby Tune Core	Universal Sony Warner	The Orchard iNGrooves	CD Baby Tune Core	Universal Sony Warner	The Orchard iNGrooves	CD Baby Tune Core	Universal Sony Warner	The Orchard iNGrooves	CD Baby Tune Core	
Music Publishing Royalty																
Royalty paid for:																
	Collected by:	None			Performance Rights			Performance Rights			Performance Rights			Performance Rights		
	Paid to:				PROs	PROs	PROs	PROs	PROs	PROs	PROs	PROs	PROs	PROs	PROs	PROs
					Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	Songwriter Publisher	
Royalty paid for:																
	Collected by:	Mechanical Rights			None			None			None			Mechanical Rights		
		Labels	The Orchard iNGrooves	CD Baby Tune Core										Publisher	Harry Fox Songtrust Music Reports	Harry Fox Songtrust Music Reports
	Paid to:	Songwriter Publisher	Labels	Artist										Songwriter Publisher	Publisher	Publisher
	Then paid to:	Songwriter Publisher Publisher												Songwriter Publisher Publisher		
Recorded Music Royalty																
Royalty paid for:																
	Collected by:	Reproduction Rights			None			Performance Rights			Performance Rights			Performance Rights		
		Labels	The Orchard iNGrooves	CD Baby Tune Core				SoundExchange	SoundExchange	SoundExchange	SoundExchange	SoundExchange	SoundExchange	Labels	The Orchard iNGrooves	CD Baby Tune Core
	Paid to:	Artist Band	Labels	Artist Band				Record label Artist	Record label Artist	Record label Artist	Record label Artist	Record label Artist	Record label Artist	Artist Band	Labels	Artist Band
	Then paid to:	Artist Band						AFM, SAG-AFTRA	AFM, SAG-AFTRA	AFM, SAG-AFTRA	AFM, SAG-AFTRA	AFM, SAG-AFTRA	AFM, SAG-AFTRA	Artist Band		

Sizing Music's Royalty Payments

So far, we've reviewed the various legal rights for Music Publishing and Recorded Music. And, we've summarized the key entities involved in royalty payments. Let's shift gears and size — in dollar terms — the various royalties.

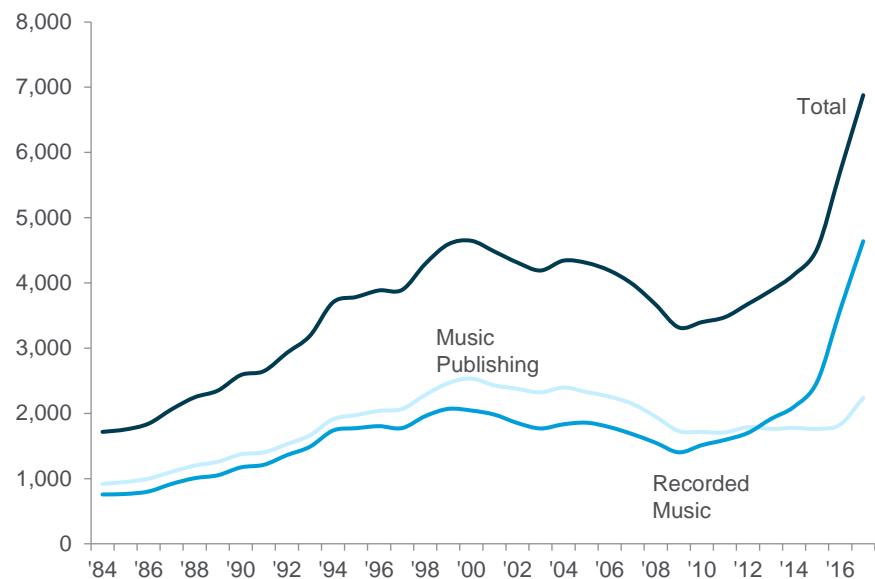
Aggregate U.S. music royalties reached record levels in 2017 at \$7.3 billion. The rapid rise in royalties is driven by a simple shift in consumer spending. Now that consumers are streaming music, digital players are making royalty payments to the record labels.

But, where does the true economic value lie? Is it with the musical work (Music Publishing) or the sound recording (Recorded Music)? Outside the U.S., these two values are roughly equal.

But, inside the U.S., Recorded Music captures more value. The root cause of this disparity is hotly debated. The publishers suggest the compulsory license structure in the U.S. retards the economic value of Music Publishing.

Help may be on the way. In April 2018, The U.S. House of Representatives passed the Music Modernization Act. This bill was supported by all the Music Publishing trade groups but was opposed by SiriusXM.

Figure 18. Total U.S. Music Royalties (\$ millions)

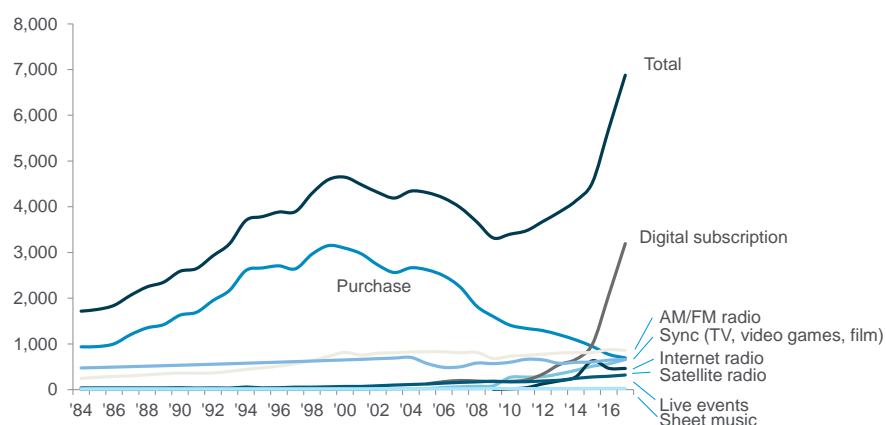


Source: Citi Research; HFA; ASCAP; BMI; Warner Music

If we slice the U.S. royalty streams slightly differently — by consumer activity — we can see the shift more clearly. Royalties from digital subscription services — like Spotify and Apple — have risen sharply. Royalties from other activities — from terrestrial radio, Internet radio, live events, and satellite radio — have been far more stable.

Most royalties have a modest upward bias with the exception of purchased music. The magnitude of this royalty revenue stream has fallen as music sales — in both physical and digital formats — have declined.

Figure 19. Total U.S. Music Royalties by Consumer Activity (\$ millions)

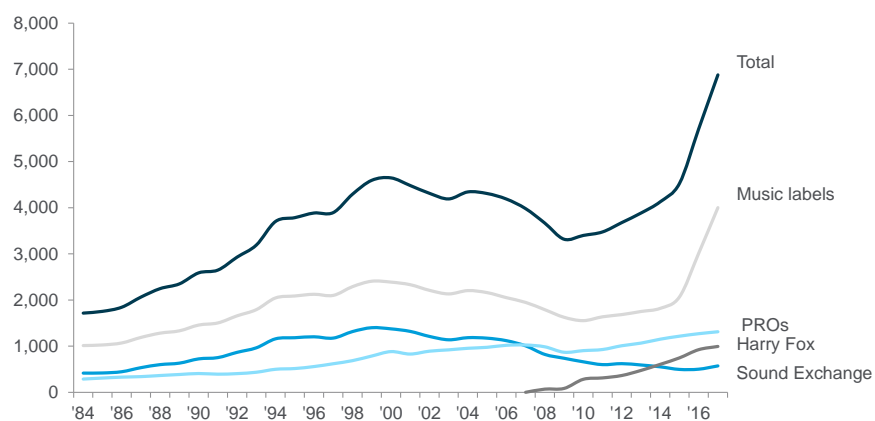


Source: Citi Research; HFA; ASCAP; BMI; Warner Music

As we showed in Figure 16, royalty payments are collected by several entities: the music labels, PROs (for Publishing's performance rights), Harry Fox (for Publishing's mechanical royalties), and SoundExchange (for Recorded Music's non-Interactive digital services like satellite radio and Internet radio).

If we slice the data by collecting entity, it's clear that music labels collect most royalties, followed by the PROs, SoundExchange, and Harry Fox (HFA). Harry Fox has seen the largest decline given the demise of physical music sales. Indeed, Harry Fox recently was sold to Society of European Stage Authors & Composers (SESAC) (one of the PROs) for just \$20 million. There is some debate within the industry why the purchase price was so low. But, Blackstone — the ultimate owner of SESAC and HFA — how has broader exposure to a wider array of music royalties.

Figure 20. Total U.S. Music Royalties by Collecting Entity (\$ millions)

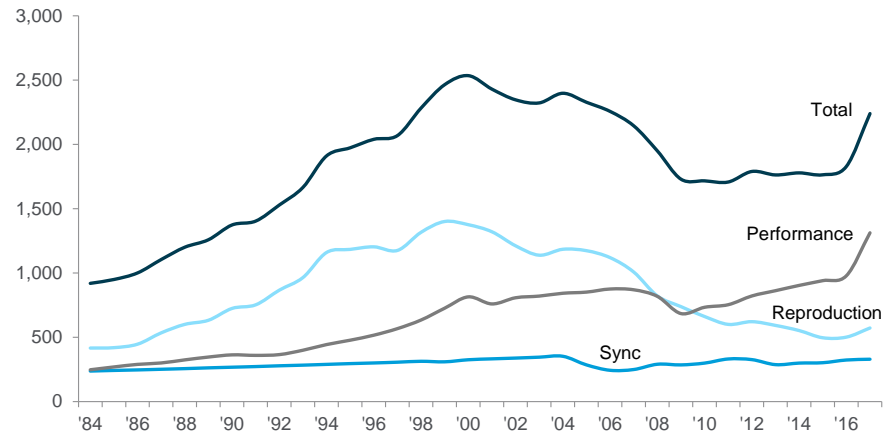


Source: Citi Research; HFA; ASCAP; BMI; Warner Music

Music Publishing Royalties

Now that we've sized total royalty payments — around \$7.3 billion — let's dig into a bit more detail on how these royalties actually work. We'll start with Music Publishing. In total, Publishing generated about \$2.4 billion in 2017. In broad terms, the U.S. has seen a decline in Reproduction royalties (due to lower music sales) and a rise in Performance royalties (due to growth in music subscriptions). Royalties for Sync and have remained fairly stable.

Figure 21. U.S. Music Publishing Royalties (\$ millions)



Source: Citi Research; HFA; ASCAP; BMI; Warner Music

Group #1: Performance Rights Organizations (PROs)

Performance Rights Organizations (PROs) collect Music Publishing royalties for songwriters and publishers every time a song is performed. In the U.S., there are two large PROs (BMI and ASCAP), one mid-sized PRO (SESAC) and one niche PRO (GMR). Each artist can only sign up with one PRO.

Collectively, these entities represent about 1.4 million composers and just over 22 million musical works. Globally, the PROs collect about \$2.6 billion a year, suggesting an average song generates about \$114 in revenue per year for the songwriter and publisher across all platforms (terrestrial radio, satellite, and the Internet).

ASCAP and BMI collect less revenue per song than SESAC and GMR. Recall, ASCAP and BMI are subject to consent decrees; SESAC and GMR are not. In effect, artists that think they can get a higher rate can switch from a non-profit PRO (ASCAP and BMI) to a private PRO (SESAC and GMR), if they are invited.

Figure 22. PRO Revenues (number; \$ millions)

	ASCAP	BMI	SESAC	GMR	Total
Composers	600,000	750,000	30,000	75	1,380,075
x Musical works per composer	17	16	13	347	16
= Musical works repertory	10,000,000	12,000,000	400,000	26,000	22,426,000
x Annual revenue per musical work	106	94	606	5,000	114
= Total PRO royalties (\$ mil)	1,059	1,130	242	130	2,561

Source: Citi Research, ASCAP, BMI, SESAC

In 2017, the PROs collected about \$2.6 billion globally. But, they retained about 12% of the revenues to cover their overhead. As such, \$2.3 billion was distributed to the music labels and about \$1.3 billion of this comes from the U.S. market.

About 50% of PRO revenues come from traditional AM/FM radio. The balance is spread across satellite radio, non-Interactive Internet radio, TV, film, and live performances.

Figure 23. PRO Revenues Over Time (\$ millions; percent)

	2013	2014	2015	2016	2017
BMI	950	970	1,010	1,075	1,130
+ ASCAP	945	1,003	1,015	1,014	1,059
+ SESAC	167	182	200	220	242
+ GMR	-	50	75	100	130
= Total royalties	2,062	2,205	2,300	2,409	2,561
- PRO costs to collect and distribute	247	265	276	289	307
= Distributions	1,815	1,940	2,024	2,120	2,254
- International	1,028	1,088	953	933	956
= U.S. distributions	787	852	1,071	1,187	1,298

Source: Citi Research, ASCAP, BMI, SESAC

Songwriters and publishers collect Mechanical royalties when music is sold (via a CD, digital album or digital track), use an ad-based interactive streaming service (Spotify), or pay for streamed music (Spotify, Apple). (Non-interactive streaming services - like Pandora or SiriusXM - do not pay mechanical royalties.) But, the royalties for the applicable services are quite different. Let's walk through them.

Group #2A: Mechanical Royalties for Digital Downloads

Harry Fox Agency (HFA) collects mechanical royalties for many music publishers (Figure 16). While there are smaller firms — like Music Reports, MediaNet (now part of Apple) and RightsFlow (now part of Google) — we estimate that about 95% of U.S. mechanical royalties are collected by HFA.

Figure 24. Estimated Mechanical Royalties for Digital Downloads (number)

	HFA	Smaller	Total
Publishers	48,000	nm	nm
x Compositions per publisher	14	nm	nm
= Compositions	670,000	710,075	1,380,075
x Musical works per composition	31.9	1.4	16.2
= Musical works repertory	21,400,000	1,026,000	22,426,000

Source: Citi Research, SESAC

For music that is purchased, mechanical royalty rates are set by statute (Figure 16). The current rate is \$0.091 for every recording that is five minutes or less in duration. (We assume 10 songs per album.) We estimate in 2016 mechanical royalties were \$225 million in the U.S.

Figure 25. U.S. Mechanical Royalties for Music Sales (millions; \$ per unit; \$ millions)

	Digital track	Physical Album	Digital Album	Total
2016 Units sold	734.2	89.4	83.9	nm
x Mechanical royalty per unit	0.091	0.91	0.91	nm
= Mechanical royalties (\$ mil)	67	81	76	225
Mechanical royalty payment per unit	0.091	0.91	0.91	nm
/ Retail price per unit	0.99	16	16	nm
= Mechanical royalty rate for physical music	9.2%	5.7%	5.7%	nm

Source: Citi Research, Buzzangle, CRB

Group #2B: Mechanical Royalties for Interactive Digital Streaming

Similar to physical music, mechanical royalties for streaming services are also set by statute via the CRB (Figure 16). But, the formulas are complex for two reasons:

- First, the CRB has rules for 13 distinct services including 10 services for every conceivable permutation (from paid lockers to bundles of physical and digital music). Among the 10 digital services, two are popular: ad supported streaming service (#8) and subscription services (#6). A firm like Spotify offers both services.
- Second, the formulas set by the CRB require a multi-step calculation. We haven't performed the actual calculation in Figure 26. But, we have populated the table with the CRB rates.

Figure 26. CRB Mechanical Royalties for Various Streaming Services (percent; \$ per sub per mo)

CRB service	1	2	3	4	5	6	7	8	9	10	11	12	13
Example firm	Amazon	iTunes				Spotify		Pandora					
	Physical CD	Digital Track	Ring-tone	Desktop Subscription Online	Desktop Subscription Offline	Untethered Subscription	Untethered Subscription w/ Mobile Svs	Free ad Based Subscription	Paid Locker Service	Purchased Content Locker	Limited Catalog Streaming	Mixed Service Bundle	Sale of Physical w/ Digital
Format (digital or physical)	Physical	Digital	Digital	Digital	Digital	Digital	Digital	Digital	Digital	Both	Digital	Digital	Mixed
Standalone or bundle	na	na	na	Standalone	Standalone	Standalone	Bundle	Standalone	Standalone	Bundle	Standalone	Bundle	Bundle
Portable or tethered	na	Portable	Portable	Desktop	Desktop	Portable	Portable	Portable	Portable	Portable	Portable	Portable	Portable
Sale, Subscription or free	Sale	Sale	Sale	Subscription	Subscription	Subscription	Subscription	Free	Subscription	Sale	Subscription	Subscription	Sale
Locker	na	na	na	na	na	na	na	na	Copy of Track	Copy of CD	na	na	na
Catalog	na	na	na	na	na	na	na	na	na	na	Limited	na	na
1. Price per sub	na	na	na	0.50	0.50	0.80	na	na	na	na	na	na	na
2. Share of pmt to record cos for Sound Recordings	na	na	na	22.0%	21.0%	21.0%	21.0%	22.0%	20.7%	22.0%	21.0%	21.0%	21.0%
A. Minimum of 1 and 2	na	na	na	TBC	TBC	TBC	TBC	TBC	na	na	na	na	na
B. Share of Music Service Revenue	na	na	na	10.5%	10.5%	10.5%	10.5%	10.5%	12.0%	12.0%	10.5%	11.4%	11.4%
C. All in Royalty (greater of A and B)	na	na	na	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
- 4. Performance royalties	na	na	na	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
= 3. Mechanical royalties	na	na	na	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
5. Price per sub	na	na	na	0.15	0.30	0.50	0.25	na	0.17	na	0.18	na	na
E. Payable Royalty Pool (Greater of 3 and 5)	na	na	na	TDC	TDC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
x Allocation portion to tracks	na	na	na	100%	100%	100%	100%	100%	100%	100%	100%	100%	x%
= Payable Royalty Pool	na	na	na	TDC	TDC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
/ Total number of plays	na	na	na	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC
= Royalty per play	0.091	0.091	0.24	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC	TBC

Source: Citi Research, Harry Fox

Let's dig into #6 (Spotify Premium) and #8 (Pandora). We'll ignore the other CRB services because they're less popular.

- Step 1: The streaming platform applies 21-22% of the funds it pays labels for sound recordings. And, for the paid subscription services — like Spotify — it also applies \$0.80 per subscriber per month. The streaming service takes the minimum of these two figures.
- Step 2: The platform takes the larger figure between: (a) 10.5% to its total revenues and (b) the value from Step 1. This is the "All-In Royalty".
- Step 3: Take the "All-In Royalty" less the Performance royalties paid to the PROs (from Figure 23) to isolate Mechanical royalties.
- Step 4: The Payable Royalty is the greater of \$0.50 per sub per month (for a paid service like Spotify) or the figure from Step 3.

All told, Mechanical royalties for two interactive streaming services generated about \$210 million a year, or about 6% of the streaming services revenue.

Figure 27. Mechanical Royalties for Streaming Service (\$ million; percent; \$ per sub per month)

	Paid Streaming Subscription	Free Non-Subscription Streaming	Total
Example firm	Spotify (#6)	Pandora (#8)	
Subscribers	23	nm	nm
x \$0.80 per sub per month	0.80	nm	nm
x Months	12	nm	nm
= A. Minimum royalty	219	nm	nm
Revenues	2,258	1,073	nm
x Payment to record cos for Sound Recordings	75%	75%	nm
= Est payment for Sound Recordings	1,694	805	nm
x CRB rate (2016)	21.0%	22.0%	nm
= A. Minimum royalty	356	177	nm
Step 1: Minimum of two A figures	219	177	
Revenues	2,258	1,073	3,331
x CRB rate (2016)	10.5%	10.5%	nm
= B. Applicable revenues	237	113	nm
Step 2: Greater of Step 1 and B. (All-In Royalty)	237	177	nm
Step 2: All-In Royalty	237	177	nm
- PRO royalties for Performance rights	235	104	nm
Step 3: = Mechancial Royalty	2	73	nm
US subscribers	22.8	nm	nm
x \$0.50 per sub per month	0.50	nm	nm
x Months	12	nm	nm
= Subscriber fee	137	nm	nm
Step 4: Greater of Step 2 and sub fee (Payable Royalty Pool)	137	73	210
memo: mechanical royalty rate for streaming services	6.1%	6.8%	6.3%

Source: Citi Research, Harry Fox

If we express these Mechanical and Performance royalties on a per stream basis, it suggests that about 40% of the Publishing royalties are for Mechanical and 60% are for Performance fees. The total Music Publishing royalties per stream are about seven one hundredths of a penny per stream, or \$0.0007.

Figure 28. Total Music Publishing Costs per Stream (\$ mil; billions; \$ per stream; percent)

	Paid Streaming Subscription	Free Non-Subscription Streaming	Total
Example firm	Spotify (#6)	Pandora (#8)	
Mechanical royalty fees (\$ millions)	137	73	210
/ Total streams (billions)	432	384	816
= Mechancial royalty per play	0.0003	0.0002	0.0003
Public performance royalties (\$ millions)	235	104	339
/ Total streams (billions)	432	384	816
= Public performance royalty per play	0.0005	0.0003	0.0004
Mechanical royalty per stream	0.0003	0.0002	0.0003
+ Performance royalty per stream	0.0005	0.0003	0.0004
= Total Publishing royalty per stream	0.0009	0.0005	0.0007
memo: share from mechanical	37%	41%	38%

Source: Citi Research, Harry Fox

This raises an interesting question. Why has the CRB set the mechanical royalty for a downloaded song at \$0.091 but set the mechanical royalty for an interactive stream (excluding the performance royalty) at 1/30th of that level, or \$0.0003 per stream?

The answer, we suspect, is based on how many times the CRB thinks you'll listen to a song that you own (versus stream via a subscription). Presumably, the CRB thinks a consumer will listen to a song they own 30x over the life of the medium (album, CD, digital track).

If we add up the mechanical royalties for music sales (digital tracks, physical albums, digital albums) plus the mechanical royalties for interactive streaming services, we estimate the total is around \$575 million per year.

Group #3: Synchronization Royalties

Recall, Sync rights are paid when a song is synchronized with another visual medium like TV, film, the Internet, or video games. The biggest buyers of Sync rights are ad agencies, video production studios, and video game developers.

To use a track, the user needs two licenses: a 'synchronization license' from the composition owner (usually a music label that represents a writer) and a 'master use license' (from a label that represents the recording artist). Because there are two licenses — one for Music Publishing and one for Recorded Music — Sync rights span the two businesses within the music industry (Figure 7).

Most Sync licenses go through the major record labels. But, for independent artists, there are a handful of publishers that focus exclusively on Sync rights. These include Music Dealers, Pump Audio, Jungle Punks and Music Supervisors.

For recording artists that want to maximize Sync income, they often record an instrumental version of the song. Around 3/4ths of Sync licenses are for instrumentals. (A song without lyrics is usually most suitable for TV commercials, movies, and video games.)

Sync revenues are split 50/50 between the songwriter and the performer. This revenue split is far more equitable versus other royalties. For example, streaming services — like Spotify — typically pay the recording artist 6x more than they pay the songwriter. So, a 50/50 split is helpful to songwriters.

But, how large are Sync revenues? Because there isn't a Sync collection agency, the bulk of these revenues are buried within the record label's income statement. With a few assumptions about Warner Music's mix of U.S. and International revenues and U.S. market share among the labels, we estimate Sync revenues are about \$650 million per year (spanning Music Publishing and Recorded Music).

Figure 29. Estimated Sync Revenues (\$ millions; percent)

	'04	'05	'06	'07	'08	'09	'10	'11	'12	'13	'14	'15	'16	'17
Recorded Music licensing	198	202	186	244	230	223	218	234	202	222	269	288	278	276
+ Music Publishing sync	120	97	83	85	99	97	102	113	111	98	102	103	110	112
= Total Warner license revenue	318	299	269	329	329	320	320	347	313	320	371	391	388	388
- Recorded Music non-Synch revenue	78	105	103	159	131	126	116	121	91	124	167	185	168	164
= Total Warner Sync revenue	240	194	166	170	198	194	204	226	222	196	204	206	220	224
x Share from U.S.	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%	44%
= Est US Warner Sync revenue	106	85	73	75	87	85	90	99	98	86	90	91	97	99
/ Est Warner market share	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
= Est total U.S. Sync revenue	704	569	487	499	581	569	598	663	651	575	598	604	645	657

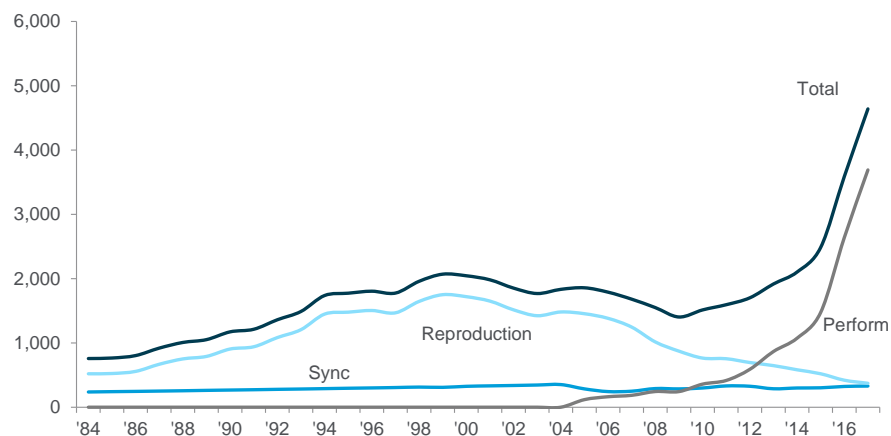
Source: Citi Research, Warner Music

Recorded Music Royalties

Now that we've reviewed Music Publishing royalties, let's shift to Recorded Music royalties. And on the Recorded Music portion of the business, it generated about \$4.9 billion in royalty payments in 2017, about 2x the level of Publishing royalties.

Over time, the U.S. has seen a rise in Performance royalties — due to subscription growth — and a decline in Reproduction royalties, due to lower music sales. Royalties for Sync have remained relatively stable.

Figure 30. U.S. Recorded Music Royalties (\$ millions)



Source: Citi Research; HFA; ASCAP; BMI; Warner Music

Similar to Music Publishing, there are three types of royalties: Sync, Reproduction and Performance. But, the entities that collect these funds are not Harry Fox or the PROs. Recorded Music royalties are collected by the labels or SoundExchange. There is a simple way to determine who collects the revenue:

- SoundExchange collects digital royalties. This includes satellite radio (SiriusXM), and non-interactive radio (Pandora) or traditional radio when it's delivered over the web (iHeartRadio). The only subtle confusion is that Spotify's non-interactive service opted out of SoundExchange and negotiates with the labels directly.
- Since music labels own the master recording of the song once an artist signs with a music label, the music label collects the royalty payments for all sales (digital or physical) and collects all royalties related to interactive streaming services like Spotify.

Group #1: Performance Royalties

SoundExchange collected about \$700 million in royalties in 2017. About 8% of the funds were used to cover the entities' expenses. SoundExchange then allocates the money following a simple formula: 50% is paid to the copyright owner (typically the music label unless the artist self-releases their content), 45% is paid to the featured artist and 5% is paid to back-up musicians.

Figure 31. SoundExchange Revenues (\$ millions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Royalties collected	147	173	206	271	378	507	656	788	888	952	717
- Expenses	10	12	17	18	20	45	66	15	85	68	65
= Gross distributions	137	161	189	253	358	462	590	773	803	884	652
Copyright owner (label)	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
+ Featured artist	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%	45%
+ Back-up musicians	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
= Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Copyright owner (label)	69	81	95	127	179	231	295	387	402	442	326
+ Featured artist	62	72	85	114	161	208	266	348	361	398	293
+ Back-up musicians	7	8	9	13	18	23	30	39	40	44	33
= Total distributions	137	161	189	253	358	462	590	773	803	884	652
SoundExchange	147	173	206	271	378	507	656	788	888	952	717
Citi estimate	-	69	84	282	312	364	474	606	746	924	994
Gap	147	104	122	(11)	66	143	182	182	142	28	(277)

Source: Citi Research, SoundExchange

Group #2: Reproduction Royalties

Reproduction royalties for Recorded Music are generated every time music is sold in physical or digital form. Since these payments are negotiated privately between the artist and the music label, we've used industry norms to size these payments. In general, there are three tiers:

- **New Artist** – A new artists will typically collect between 13% and 16% of the published price to dealers (PPD). The PPD is akin to a wholesale price.
- **Mid-level Artist** – A mid-level artist will typically collect between 15% and 18% of the PPD.
- **High-end Artist** – A very popular artist can typically collect 18% to 20% of the PPD. Very few artists collect more than 20% of the PPD.

For our purposes, we have applied 15% to the wholesale outlays on purchased music. According to RIAA, U.S. consumers spend \$3.1 billion on music sales. We have assumed \$2.5 billion of wholesale spending on music or \$370 million of Reproduction royalties for Recorded Music (15% x \$2.5 billion) in 2017.

Group #3: Synchronization Royalties

The sync royalties we summarized in Figure 29 encompassed both Music Publishing and Recorded Music sync payments. As such, we won't rehash the results. But, suffice it to say that 50% of the total Sync payments accrue to the publisher and 50% accrue to the label.

With that brief background behind us, let's shift gears and focus on making an actual album.

Making an Album

So far, we've reviewed three things: First, we showed that consumer outlays on music fell with the Internet but are rising with the advent of the smartphone. Second, we reviewed the key players in the music industry. Third, we explored the legal complexities of the music business including Music Publishing and Recorded Music and traced the various forms of royalty payments. Now, we're in a position to record an album.

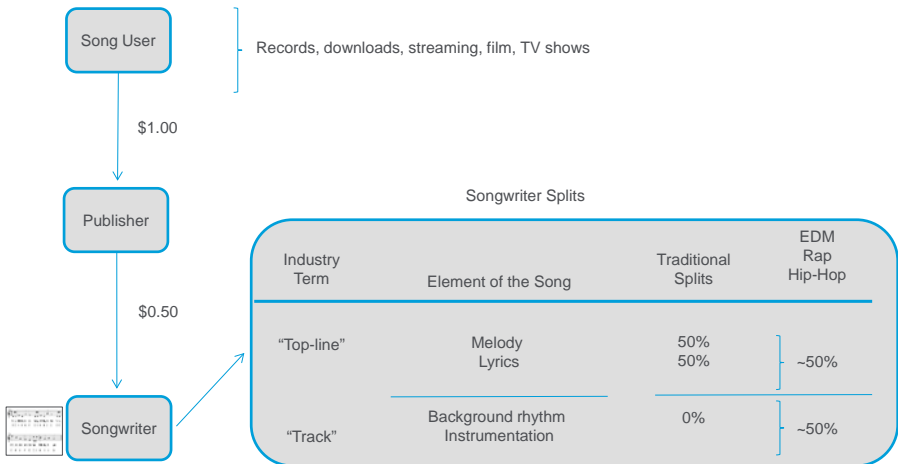
If you are an artist, the first thing you'll need to do is find some songs to record. Perhaps you write your own songs. But, we'll assume you'll rely on a songwriter.

Most songwriters will hire a publisher. The publisher's job is to find users for the song, issue licenses for the song, collect royalty payments and pay the writer for the song's use. Typically, a publisher keeps 50% of the song royalties (called the "publisher's share"). The remaining 50% is passed on to the songwriter (called the "writer's share").

The writer's share is split 50/50 between the person that wrote the lyrics and the person that came up with the melody. The lyrics and the melody are known as the song's **top-line**. With the advent of electronic dance music (EDM), rap, and hip-hop, background rhythm and instrumentation have become far more important. These elements are called the song's **track**. As such, the creators of EDM, rap and hip-hop tracks can get a slice of the royalties as well.

However, the lyrics, melody, background rhythm and instrumentation cannot be divided into separate legal rights. Songwriters can only seek a single copyright for each song. It's up to the songwriters to negotiate amongst themselves to hammer out an equitable distribution of Music Publishing royalties.

Figure 32. Allocation of Music Publishing Royalties



Source: Citi Research; All You Need to Know About the Music Business

So, let's presume you have enough songs under your belt and you're ready to record an album. You have four choices:

- First, to jumpstart the process – and get some upfront cash – you could sign with a **major record label** like Warner, Sony or Universal.
- Second, you could sign with a **major-distributed independent label**. These are independent labels with little staff. The independent labels make the recording, but then outsource the activities related to music distribution (in physical or digital form) to the major labels.
- Third, the band could sign with a **true independent** label (like Rounder, Victory or Merge). Somewhat confusingly, many “true” independent labels are still owned by the major labels. For example, Sony has RED and Warner owns ADA. Why do the major labels own true independent labels? That answer has to do with the artist's definition of success. If your aim is to sell 5,000 CDs (versus 50,000 CDs), an independent firm might be more appropriate because you'll get the attention you deserve from a true independent.
- Fourth, you could release your own music, called **DIY**. Under this model, you could use the web (social media, YouTube) to build an organic fan base. And, you could play local clubs to build additional support. Then, once you're ready to sell your music, you can use sites like TuneCore, CD Baby or The Orchard. These firms can distribute both physical and digital music. However, today, most artists still prefer to sign up with one of the major record labels.

Let's assume our artist has big ambitions and successfully signs with a major label. The record label will typically invest about \$1 million in a new band. The financial commitment is broken into five areas:

- The band will receive a **financial advance**. This allows the artist to focus its energy on the creative process.
- The band will be given money to pay for **studio recording costs**.
- The label will pay for **video production** support.
- The label will pay for **touring** support.
- The label will spend money to **market and promote** the new album.

All of these expenses — except marketing and promotion — are recouped by the label once the album starts selling. Across the industry, a label's investment in new bands isn't small. With about 7,500 bands under contract — and 20% of these bands signing with a label each year — the upfront financial commitments across the major labels are ~\$2 billion per year.

Figure 33. Average Label Investment in a New Artist (\$; percent)

	Low	Mid	High	Recoupable
Advance	50,000	200,000	350,000	Yes
+ Recording	150,000	325,000	500,000	Yes
+ Video production	50,000	175,000	300,000	Yes
+ Tour support	50,000	100,000	150,000	Yes
+ Marketing and promotion	200,000	450,000	700,000	No
= Total upfront investment per band	500,000	1,250,000	2,000,000	
Major label roster (number of acts)		7,500		
x Pct signed last 12 mos		20%		
= New record label deals		1,500		
x Avg label upfront investment per artist		1,250,000		
= Major label outlays on new bands per year		1,875,000,000		

Source: Citi Research; IFPI; All You Need to Know About the Music Business

Let's assume your new band just got signed by a major label. And, you've just wrapped up the recording process and your album is now on the market retailing for \$1.29 per digital track and \$18 per CD. Who gets that revenue?

- First, about 30% of the revenue is retained by the retailer — the website or physical store — while 70% is retained by the record label.
- Second, mechanical royalties — about 10% of the label's gross revenue — are deducted. The fee is paid by the band to the song writer. If we assume the band sells 2 million digital tracks and 200,000 CDs, the record label would receive about \$4 million in revenue. (If the band wrote its own songs, there would be no mechanical royalty deduction.)
- Third, the artist (or band) will then collect between 12% and 20% of this figure based on their contract with the record label. We've assumed 15% or ~\$600K.
- Fourth, the label will assume 10% of the music was sold for free — called "free goods" — and will also deduct 25% of the CD sales (but not digital sales) to pay for the physical disc, the jewel case and the artwork.
- Finally, the record producer will collect a 3% fee.

This means the band will actually receive ~\$430,000 out of the ~\$600,000 figure.

If we assume this ~\$430,000 holds steady over the next three years, we can see how the label's \$840,000 upfront investment — all upfront outlays excluding marketing and promotion — is recouped. It suggests the band would break-even by about year two and would generate about \$450,000 by the end of year three.

Figure 34. Example of New Band Record Label Economics (\$ per item; \$)

	iTunes	+	CD	=	Total	Comments
Retail price	1.29		17.98			
- Retailer	0.39		5.39			30% to distributor
= Gross label royalty	0.90		12.59			
- Mechanical royalty	0.09		0.91			\$0.091 per song; 10 songs per CD
= Recorded music label revenue	0.81		11.68			
x Volume	2,000,000		200,000			Example
= Recorded music revenue to lab	1,624,000		2,335,200		3,959,200	
- Gross artist royalty	243,600		350,280		593,880	12-20% is typical; assume 15%
= To record label	1,380,400		1,984,920		3,365,320	
Gross artist royalty	243,600		350,280		593,880	
- "Free goods" standard deductio	24,360		35,028		59,388	10% of units (until sales verified)
- "Packaging" standard deductio	0		87,570		87,570	25% of CD sales; 0% on digital sales
- Producer royalty	7,308		10,508		17,816	3% of artist royalty (on gross)
= Artist royalty pre-fixed label c	211,932		217,174		429,106	
Record label advance				(200,000)		Average new band
+ Video costs				(175,000)		Average new band
+ Recording costs				(325,000)		Average new band
+ Tour support				(100,000)		Average new band
= Non-recording portion of advance				(800,000)		
+ Manager				(40,000)		Manager gets 20% of post-recording advance
= Artist deficit				(840,000)		
	Year 1	Year 2	Year 3			
Begin artist (deficit) surplus	(840,000)	(410,894)	18,211			
- Artist royalty pre-fixed label cost	429,106	429,106	429,106			Assumes steady sales over 3 yrs
= End artist (deficit) surplus	(410,894)	18,211	447,317			

Source: Citi Research; All You Need to Know About the Music Business

Here's what's interesting: our new band sold 2 million singles and 200,000 CDs, but generated only ~\$450,000 in pre-tax income over three years. If a band has four members, that's annual income of ~\$40,000 per person per year (\$450,000 / four band members / three years = \$37,000 per band member per year).

According to the International Federation of the Phonographic Industry (IFPI) — an industry group that includes Sony, Universal, and Warner — over 80% of albums released in 2011 sold less than 100 copies. And, 94% of albums sold less than 1,000 copies. Indeed, only 0.5% of albums released in 2011 sold more than 10,000 copies. Recall, in our example, we assumed the band sold 200,000 copies!

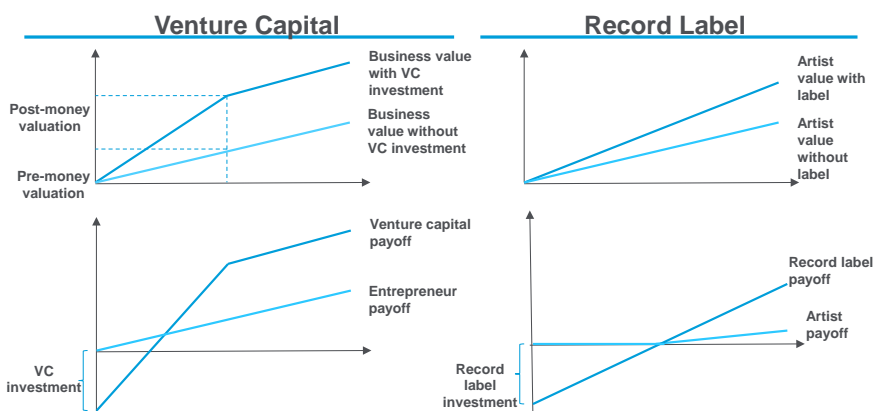
So, even if a new band signs with a major record label, they are unlikely to make a lot of money from music sales. And, the corollary is this: a record label probably loses money on the vast majority of new contracts it signs. But, the labels are willing to do this because a handful of artists are very, very lucrative to the labels.

A recent Recording Industry Association of America (RIAA) report claimed that record companies are really "venture capitalists for the music industry". We don't think that's a fair description. To see why, let's compare the venture capital model to the record label model.

- On the left side of Figure 35, we show the traditional venture capital (VC) model. A start-up will agree with a VC on the pre-money valuation of the business. The VC will inject capital into the business, resulting in a post-money valuation. The VC and the entrepreneur will share in the upside. The downside to the VC is capped by the size of the initial investment.
- On the right side of Figure 35, we show the record label model. Presumably, the record label can help make an artist more successful. But, once an artist signs with a label, the artist has ceded most of the upside.

This is one reason record labels usually require artists to sign with the label exclusively. And, the label contract stipulates that an artist can't switch to another label without permission. Moreover, an artist can't terminate the contract if they are unhappy. The label, on the other hand, is free to sign and promote as many artists as they wish.

Figure 35. Venture Capital Versus Record Label Payoff Diagrams



Source: Citi Research

Record companies tend to have both a recording business and a publishing business. The market is currently dominated by three global majors: Universal, Sony, and Warner.

Although we don't have public data for all the major record labels, Warner Music's financials are publicly available. Warner captures about 16% market share in the Recorded Music business and 12% market share in Music Publishing. In effect, Warner is the smallest of the majors. Nonetheless, we think the firm's financials do shed some light on the music label's business model.

Figure 36. Market Share Among Record Labels (percent)

	Total	
	2017	2016
Universal Music Group (Vivendi)	29.8%	29.1%
+ Sony Music Entertainment	22.3%	22.8%
+ Warner Music Group	18.1%	17.5%
+ Self Released Independents	2.7%	2.3%
+ Other Independents	27.2%	28.4%
= Total Recorded Music	100%	100%
	Total	
	2017	2016
Sony Music Entertainment	27.3%	27.0%
+ Universal Music (Vivendi)	19.5%	19.8%
+ Warner Music Group	12.0%	12.0%
+ Independents	41.2%	41.2%
= Total Music Publishing	100%	100%

Source: Citi Research, Music and Copyright

Warner's data suggests the Recorded Music business generates about 15% EBITDA margins and the Music Publishing business generates about 25% EBITDA margins. Since Music Publishing is about one-fifth the size of the Recorded Music business, the aggregate margins are around 15%.

Figure 37. Warner Music Profit & Loss (2016, \$ millions; percent)

	Music	+	Publishing	=	Total
Digital	1,364				1,364
+ Physical	726				726
+ Artist services	368				368
+ Licensing	278				278
+ Performance			193		193
+ Digital			141		141
+ Mechanical			70		70
+ Synch			110		110
+ Other			10		10
+ Eliminations	(14)		0		(14)
= Total revenue	2,722		524		3,246
Revenue	2,722		524		3,246
- Royalties	211		320		531
- A&R	582		0		582
- Create recordings	521		0		521
- Product cost	73		0		73
- Distribution	55		6		61
- Marketing	437		0		437
- SG&A	467		67		534
= EBITDA	376		131		507

Source: Citi Research, Warner Music Group

We believe Warner's margins are not atypical. Indeed, we estimate Sony and Universal have similar margins.

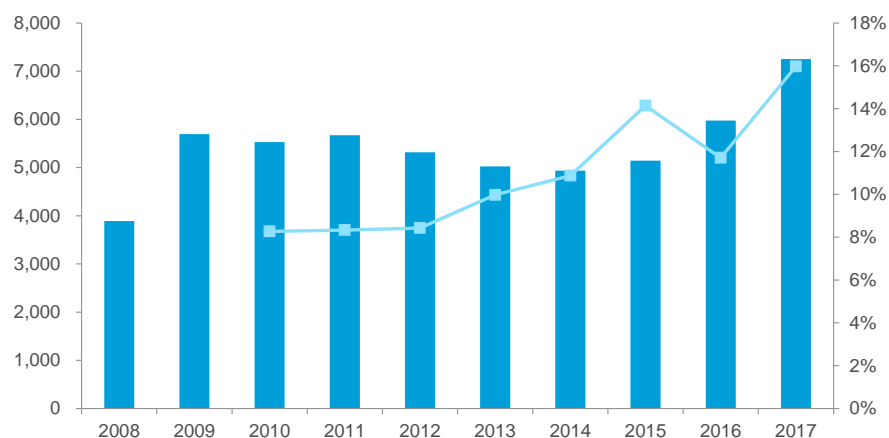
Sony Music Entertainment (SME) is the largest Music Publisher and has the second largest global share in Recorded Music. In Publishing, Sony recently converted its stake in EMI from an equity-method affiliate to a consolidated subsidiary potentially increasing SME's portfolio from 2.3 million to 4.3 million songs. In Recorded Music, SME is placing new emphasis on discovery and development of artists to boost its earnings potential. The firm is focused on acquiring small independent music labels and on in-house development.

In addition, SME operates a few other ventures. These include a Japan-based concert business, visual content including animation titles, and mobile game content. These businesses are handled primarily by a subsidiary: Sony Music Entertainment Japan, or SMEJ.

The company operates six concert venues in Japan and three in other parts of Asia. A SMEJ subsidiary, Aniplex, is responsible for animation content, which includes theme tunes for animation programs and songs performed by animation voice actors. Operations also include development of animated film content for media such as television and smartphone games using anime characters.

Sony's music segment entered a phase of profit expansion in 2016 which has endured through 2018. This growth coincides with the turnaround in Recorded Music and Music Publishing across the industry (driven by the growth of subscription services like Spotify). Sony's profits are rising in tandem with sales.

Figure 38. Sony Music Sales and Operating Margin (millions; percent)



Source: Citi Research, Company Reports

Avoiding the Labels

There are, of course, some artists who elect to skip the labels altogether. These include Chance the Rapper, Pomplamoose, Macklemore and Zoe Keating (a cellist).

But, in the same breath, there are artists who criticized music labels – like Prince – but ultimately entered into a JV with Warner Music Group under the Paisley Park label. And, there are other artists — like Keyshia Cole — who left Geffen (when it folded), only to later sign with Interscope before she ended up with Sony's Epic Records in 2016. In effect, even if artists like the idea of avoiding labels, most ultimately find a music label is beneficial to their financials.

Of course, in Figure 34 we simplified the revenues by focusing on music sales (physical CDs and digital tracks). But, as we showed in Figure 5 music sales (which used to comprise the bulk of consumers outlays) are now quite small. So, to get a holistic picture of the revenues, we need to delve into every type of music business from buying music, listening to music to attending concerts.

Exploring Every Major Music Business

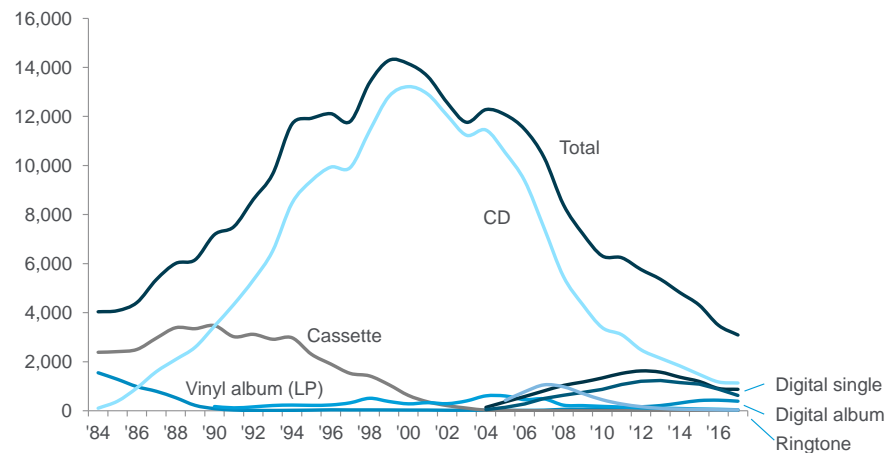
In this chapter, we dive into the three major businesses: buying music, listening to music, and attending a concert.

Business #1: Buy Music

Over the last few decades, the purchase of music has experienced two major shifts.

- First, music purchases grew at a rapid clip from 1984 to 2000. But, since 2000, the sale of music has experienced a profound decline. In 2017 outlays on music purchases dropped to \$3.1 billion. That's about \$1 billion less than the outlays in 1984 (in nominal terms).
- Second, we've seen the physical medium change several times. In the 1980s, cassettes were replacing vinyl albums (or LPs). By the 1990s, CDs were replacing cassettes. But, beginning in 2000, CD sales began to contract with no obvious medium to replace it. (One of the more surprising recent trends is the rebound in vinyl LPs. LP sales have grown in 10 of the last 11 years. Indeed, in 2017, LP sales rebounded to levels not seen since 1989!)

Figure 39. U.S. Consumer Outlays on Purchased Music (\$ millions)



Source: Citi Research, RIAA

Business #2: Listen to Music

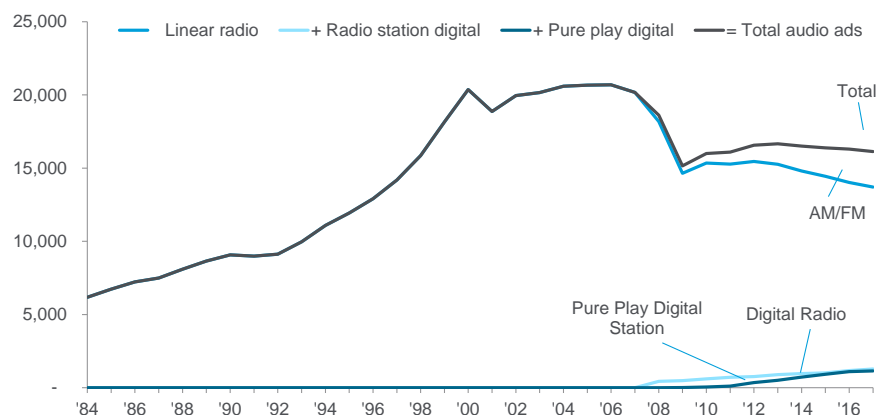
Consumers can listen to music in four ways: terrestrial radio (iHeart), satellite radio (SiriusXM), non-interactive streaming services (Pandora) or interactive streaming services (Spotify, Apple, YouTube, Tencent Music). Each of these businesses is quite distinct. So, let's take them in turn.

A. Terrestrial Radio: iHeart

In the U.S., consumers can listen to free, ad supported radio on nearly 5,000 AM stations and over 6,600 FM stations. Many of the terrestrial stations also offer web delivery of the same content. And, of course, there are many smaller pure-play webcasters.

Collectively, the AM/FM radio stations generate \$13.7 billion of revenue a year. And, if we add the web version of these station (\$1.2 billion) and pure-play webcasters (\$1.1 billion), total U.S. radio advertising surpasses \$16.1 billion a year.

Figure 40. U.S. Radio Advertising Revenue (\$ millions)



Source: Citi Research, Magna

While radio stations broadcast non-music content — including talk radio, sports, and news — terrestrial radio is still the most popular way to listen to music, making up about 50% of all hours of audio listening.

Figure 41. Mix of U.S. Audio Listening (minutes per person a day; percent)

	2014	2015	2014	2015
AM/FM	52%	52%	128	125
+ Owned music (CD, digital)	20%	15%	50	36
+ Internet radio (Spotify, Pandora)	12%	19%	28	46
+ Satellite radio (Sirius)	8%	6%	19	14
+ TV music (Music Choice)	5%	5%	13	12
+ Podcast	2%	2%	4	5
+ Other	1%	1%	3	2
= Total	100%	100%	245	240

Source: Citi Research; Edison Research

Unfortunately for the music labels — and the artists — terrestrial radio doesn't generate much direct revenue for the music industry. There are two reasons for this:

- First, in the U.S., radio airplay is considered a public performance. As such, terrestrial radio stations don't pay Recorded Music royalties. Radio stations only pay Music Publishing royalties (see Figure 15). That is, if you wrote a song, you'll get a royalty check from a radio station. But, if you recorded a song — and it's played on the radio — you won't get a royalty. (Parenthetically, there are only a few countries in the world where terrestrial radio stations don't pay Recorded Music royalties: North Korea, Iran, China, Rwanda, and... the U.S.)
- Second, the Music Publishing royalties from terrestrial radio are quite small. The payments amount to ~4% of the revenues a radio station generates from ads related to music (but not sports, news or talk radio).

Music Publishing royalties are collected by Public Performance Organizations (often called PROs). PROs include entities like ASCAP, BMI, SESAC, and GMR. (ASCAP and BMI are non-profit entities but, SESAC and GMR generate profits. Indeed, SESAC was acquired by Blackstone in 2017 for ~\$1 billion.)

We estimate the three major PROs collected about \$2.5 billion of revenue in 2017. The PRO revenues include collections outside the U.S. And, the PRO revenues include U.S. revenues from venues other than radio — including songs used in TV shows, TV commercials, film, Internet videos, and stage performances. But, we estimate that U.S. radio generated ~\$600 million of revenue for song writers. That's about 40% of all PRO revenues.

Figure 42. Public Performance Organization Revenue (\$ millions; percent)

	2013	2014	2015	2016	2017
U.S. radio ad revenue	16,664	16,509	16,381	16,294	16,131
x Portion of ads from music	85%	85%	85%	85%	85%
= Music related ads	14,164	14,033	13,924	13,850	13,711
x 4% royalty fee	5%	4%	4%	4%	4%
= U.S. radio fees to PROs	646	631	618	608	599

Source: Citi Research; BMI; ASCAP; Billboard; Magna

Including fees to the PROs, program rights, sales for costs, talent contracts and rent, a typical radio station group will generate 30% EBITDA margins. So, while the top-line trends for terrestrial radio aren't robust, the margins are quite high (particularly given the low levels of capital intensity).

Figure 43. Typical P&L for Terrestrial Radio (\$ millions; percent)

	CBS (Radio)			iHeart (Radio)		
	2013	2014	2015	2015	2016	2017
Revenue	1306	1303	1231	nm	3,403	3,443
- Direct	406	408	422	nm	975	1,059
- SG&A	504	509	501	nm	1,103	1,246
= EBITDA	396	386	308	nm	1,325	1,138
memo: margin	30%	30%	25%		39%	33%

Source: Citi Research, CBS Radio, iHeart Radio

B. Satellite Radio: SiriusXM

So, terrestrial radio generates over \$16 billion of revenues. But, radio generates only \$600 million of royalties to song writers (and zero for musicians that record music). But, there are other ways to listen to music in the U.S., including satellite radio.

In 1997, at the urging of David Margoese, the co-founder of Rogers Wireless, the Federal Communications Commission (FCC) allocated wireless spectrum for satellite delivered radio services. Originally, two firms — Sirius and XM — were launched to take advantage of this new spectrum. Both firms began service in 2001. And, after financial difficulties, they merged. In 2008, the Department of Justice (DoJ) approved a merger. So, today, the U.S. has one satellite radio firm: SiriusXM.

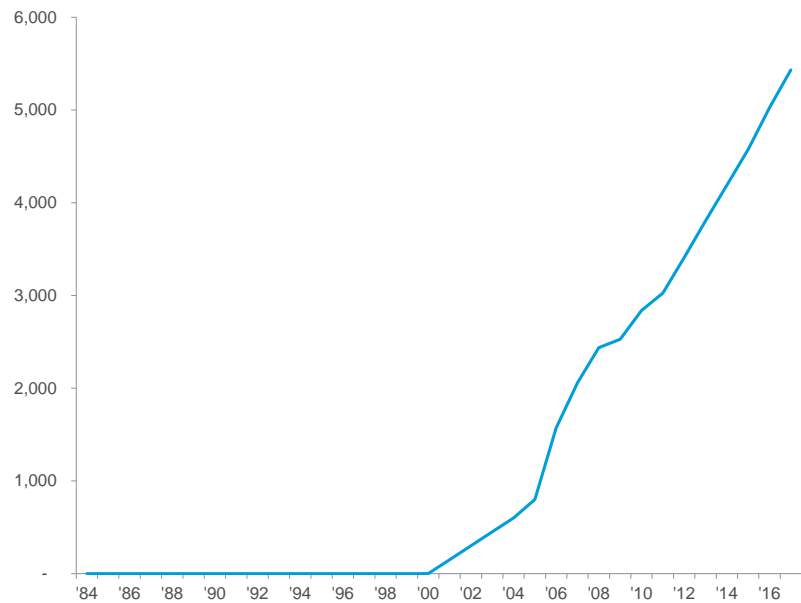
SiriusXM installs satellite radio receivers in about 75% of all U.S. cars. And, new car buyers typically receive a free trial. About 40% of new car owners who get a free trial eventually become a paying subscriber (once the free trial ends six to nine months after the car sale occurs). And, monthly churn is quite low, around 2% (or less) per month.

At the end of 2017, SiriusXM had 28 million paying subs and 5 million subs on a trial. With 250 million cars in the U.S., it suggests about 11% of car owners are willing to pay about \$14 a month for audio entertainment in the car. We believe there are four reasons ~30 million consumers ascribe \$14 of value per month to the service:

- First, Sirius offers nearly 200 channels of curated content. The channels focus on a specific genre (Country, Heavy Metal, EDM, Jazz, Kids), a time period (50s, 60s, 70s) and specific bands (Springsteen, Grateful Dead). This gives consumers greater breadth — and depth — than terrestrial radio.
- Second, the vast majority of Sirius' channels are commercial free. Given healthy ad loads on terrestrial radio — typically 15 minutes an hour — this is a key advantage over terrestrial radio.
- Third, Sirius has a deep bench of non-music content. This includes exclusive access to popular personalities, like Howard Stern. It also features audio feeds for news programs (like BBC, CNBC, Bloomberg, or NPR). Subscribers also receive live broadcasts from major sports leagues (NFL, MLB, NBA, NASCAR, NHL, and the PGA).
- Fourth, since the audio signal is delivered via satellite, consumers don't have to use a portion of their wireless data plan to consume audio content (assuming the consumer hasn't adopted an unlimited plan). This helps consumers save money.

Collectively, these benefits have allowed Sirius to post healthy revenue growth over the last 17 years. Indeed, as of 2017, the firm generated nearly \$5.5 billion of revenue.

Figure 44. SiriusXM Satellite Radio Revenue (\$ millions)



Source: Citi Research, SiriusXM

So, how much does Sirius pay to the music industry? Well, about 15 years ago, the U.S. passed the Copyright Royalty and Distribution Reform Act of 2004. That law gave statutory authority to the Copyright Royalty Board (CRB). The CRB is a three-judge panel that sets the royalty rates for a number of music platforms, including satellite radio. The CRB uses SoundExchange to collect — and distribute — payments to the record labels.

Every few years, music label lawyers will present evidence to the CRB suggesting that the majority of a service's revenue — like Sirius — should accrue to the record labels. In parallel, Sirius and other music platforms will present evidence to the CRB that suggests most of the value consumers ascribe to their service is not tethered to music.

Sirius typically claims that the lion's share of consumer utility is tied to: (1) non-music content; (2) Sirius' closed, proprietary satellite network with a ground-based repeater network; and (3) its relationship with auto manufacturers making the service easy to use (since the service is integrated into the car's dashboard). This means consumers don't have to use their smartphone or tether the phone to the car's speaker system (via Bluetooth).

The three-judge CRB panel weighs the evidence from both parties — Sirius and the music labels — and establishes what it deems a 'fair' royalty payment. Back in 2006, the CRB suggested Sirius should pay 6% of applicable revenue (which excludes things like hardware revenues and charges Sirius passes onto consumers to pay for royalties).

But, as of 2018, the CRB has asked Sirius to make payments equaling 15.5% of applicable revenues (or 13.2% of reported revenue). That means Sirius paid about \$510 million to the music industry in 2017 and will likely pay over \$750 million in 2018.

Figure 45. Sirius' Recorded Music Payments (\$ millions; percent; \$ per month; millions of subs)

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Sirius revenue	2,437	2,527	2,839	3,025	3,410	3,806	4,188	4,577	5,024	5,432
- Non-applicable revenue	150	188	360	356	365	432	533	630	689	799
= Applicable CRB revenue	2,287	2,339	2,479	2,669	3,045	3,374	3,655	3,947	4,335	4,633
x CRB rate	6.0%	6.5%	7.0%	7.5%	8.0%	9.0%	9.5%	10.0%	10.8%	11.0%
= CRB payments	137	152	174	200	244	304	347	395	468	510
/ SiriusXM subs	18.37	18.53	19.39	20.9	22.79	24.89	26.28	28.33	30.49	31.86
= CRB payment per sub	7.47	8.20	8.95	9.58	10.69	12.20	13.21	13.93	15.36	16.00
/ Months	12	12	12	12	12	12	12	12	12	12
= CRB payment per sub per month	0.62	0.68	0.75	0.80	0.89	1.02	1.10	1.16	1.28	1.33
/ Total Sirius ARPU	11.06	11.36	12.20	12.06	12.47	12.74	13.28	13.46	13.73	14.21
= Share of reported revenue	5.6%	6.0%	6.1%	6.6%	7.1%	8.0%	8.3%	8.6%	9.3%	9.4%

Source: Citi Research, Company Reports, CRB

But, these CRB payments only include Recorded Music royalties. Sirius also makes separate payments – which are privately negotiated – to the labels for Music Publishing rights. In aggregate, Sirius pays Music Publishers about 3% of total revenues. That's equivalent to about \$150 million a year in royalties.

C. Non-Interactive Streaming: Pandora

Pandora started about 17 years ago. The aim was simple: provide consumers with a personalized online radio service. Pandora is powered by The Music Genome Project, which analyzes the vast majority of music tracks and assigns each song 450 musical attributes. These attributes are used to create a personalized radio station. Today, Pandora is the most popular non-interactive radio streaming service in the U.S.

The company's core service — Pandora Radio — is a free, ad-supported non-interactive music offering. But, in February, 2018, Pandora launched an on-demand service. This on-demand offer — Pandora Premium — costs \$9.99 per month or \$14.99 per month for the family plan. The company also offers Pandora Plus, an on-line radio service with added functionality – like unlimited skips and replays – and with no ads. This service costs \$4.99 per month.

Figure 46. Pandora's Ad-Supported Non-Interactive Online Radio Economics (\$ millions)

	2016	2017
Ad-Supported users	77	69
x Avg hours per week	5	5
x Weeks in year	52	52
= Total ad-supported listening hours	19,170	16,410
x Per thousand factor	1,000	1,000
x RPM	56	56
= Advertising Revenue	1,065	1,071
= Total ad-supported listening hours	19,170	16,410
x per thousand factor	1,000	1,000
x LPM (licensing costs/1000 listening hours)	32	36
= Ad-Supported Content Costs	621	586

Source: Citi Research, Company Reports

In 2017, Pandora had ~75 million users. About 70 million use the free ad-supported service and 5 million use one of the paid services. The total number of users declined 8% (or by 6.3 million) in 2017, likely due to competition from Spotify, Apple Music and Amazon Music. The number of users on its free ad-supported service declined at a faster rate as its paid user base grew, suggesting some cannibalization.

Pandora's ad revenue is determined by: (1) the average number of users of its free Pandora Radio service; (2) the average minutes of use per user; (3) the average ad-load; and (4) the average cost per 1,000 minutes (CPM). For simplicity, most investors combine ad-load and CPM to calculate average RPM (ad revenue per 1,000 minutes). In 2017, average usage was 39 minutes per day, down 5% versus 2016. But, the average RPM was \$65, up 17% versus 2016.

Pandora also generates subscription revenue from its Pandora Plus and Pandora Premium services. In 2017, the company generated \$314 million in subscription revenue from 5.1 million subscribers (akin to \$5.31 in monthly average revenue per user (ARPU)).

Pandora records its content costs — including licensing and revenue sharing with the music industry — in Cost of Revenue (Content Acquisition Costs). These costs include licensing fees paid for streaming music with the costs established via direct agreements with the music industry or via the CRB. (Pandora does not disclose the breakdown, only the aggregated costs).

Pandora's license agreements with the labels generally requires the company to pay either a per-performance fee based on the number of songs streamed, a percentage of revenue associated with the service provided, or a per-subscriber minimum. Some of the agreements also commit Pandora to a minimum guarantee, and some of those guarantees require advance payments. If Pandora has not entered into a direct license agreement with the copyright owner of a particular song, the company pays using the applicable rates set by the CRB (which are valid through 2020.)

Pandora doesn't break out contract costs with the labels versus CRB costs. And, it doesn't disclose what portion of its contracts is based on revenue sharing or minimum guarantees. But, it does provide a breakdown of total content costs between its ad-supported, non-interactive service and its premium, on-demand, interactive service.

In 2017, total content costs for its non-interactive service was \$586 million or \$35.70 LPM (licensing costs per thousand listening hours). LPM was \$36.35 in the first quarter of 2018, and was up 9% versus 1Q17.

Content costs for Pandora's on-demand, interactive service were \$213 million in 2017, which represented 68% of subscription revenue, \$3.50 per subscriber per month, and \$50.72 LPM.

D. Interactive Streaming: Apple, Spotify and Tencent

Interactive streaming is the fastest growing segment among consumers' various music outlays. And, the U.S. is the largest market for music streaming with 30 million paying subs. RIAA, an industry trade group, suggests this growth was up 50% in the first half of 2017 versus the first half of 2016. For perspective, Netflix boasts 118 million subscribers at the end of 2017 — with ~46% of the subs from the U.S. And Netflix's sub growth in 2017 was up 25% versus 2016.

Interactive streaming services typically cost \$10 a month and give consumers access to 10 to 40 million songs (depending on the service). There are dozens of players. But, Spotify and Apple have the most market share in the U.S.

Figure 47. Interactive Streaming Services (\$ per month; millions of songs; kbps; 000s)

	Spotify	Apple Music	Tidal	Deezer	Pandora	iHeart	Google Play	YouTube Music	Amazon Unlimited
U.S. monthly price	9.99	9.99	10.00	9.99	9.99	5.99	9.99	9.99	9.99
Library size (mil)	30+	40+	25+	40+	30+	10+	35+	30+	10+
Stream quality (kbps)	320	256	320	320	192	128	320	320	256
Encoding	Ogg Vorbis	AAC	AAC	FLAC	AAC	na	FLAC	na	VBR
Offline songs (000)	3K	Yes	Mobile only	Yes	Pandora Plus	Yes	Mobile only	Yes	Yes

Source: Citi Research, Company Websites

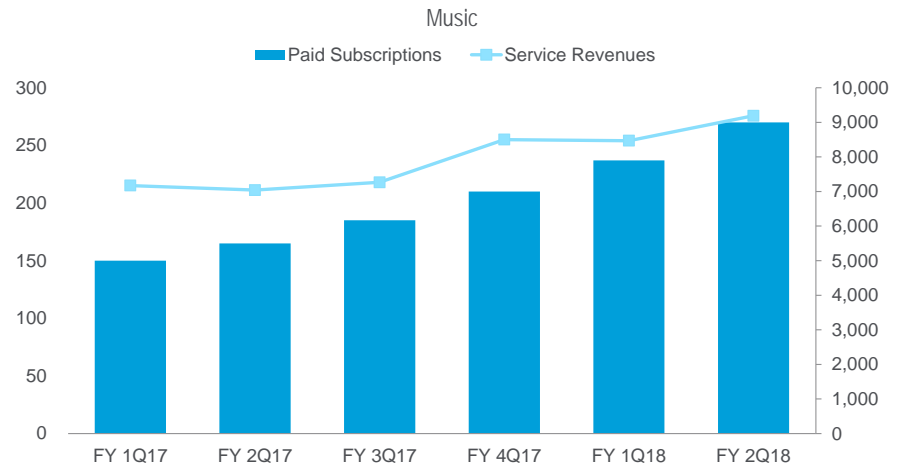
The number of subscribers to both Apple and Spotify is often aided by individuals on family plans and users with discounted subscriptions that come bundled with other services. Apple Music also comes preloaded on its iOS devices.

Apple Music

Of the two largest players, let's start with Apple. Apple's music strategy has evolved over time. There were a few key milestones:

- Apple launched iTunes in '03 with 200,000 songs via its App Store. This ability to buy a song – versus an entire album – was a key innovation that helped structurally change the music industry. And, the ability to store vast amounts of music on a small device was another key innovation. During its first week, iTunes saw over 1 million downloads of paid music.
- In 2015, Apple launched Apple Music, a monthly paid subscription for unlimited music consumption without ads. These efforts have gradually evolved into other original content such as videos and live music stations and DJs.
- Today, Apple music has over 45 million songs and over 40 million paid subs. Monthly costs are \$5 for students, \$10 for individuals and \$15 for family subscriptions. The service is ad free. And, it can be used on the go, in the car, at home and of course on Apple Watch. Users can create custom playlists as well as use social and friend recommendations.
- Apple had over 36 million paid music subscribers at the end of 2017, up 80% versus 2016. Apple's 36 million music subs represent 15% of its total subscriber base of ~240 million paid subs, which grew ~58% from 2016 to 2017. Non-music subscriptions include other services like iCloud storage and other paid subscriptions within App Store.

Figure 48. Apple Paid Subscribers vs Services Revenues (\$ millions, millions of subscribers)



Source: Citi Research, Company Reports

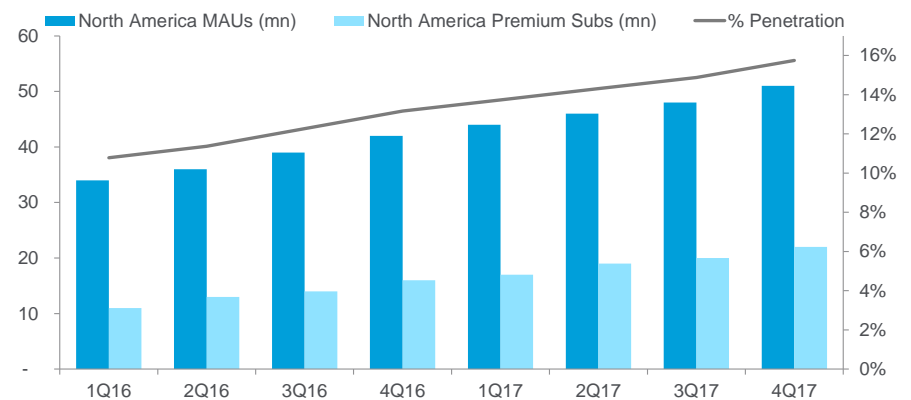
Spotify

Spotify was originally launched in Sweden in 2008 and introduced to the U.S. in 2011 and to Canada in 2014. The firm is one of the most popular online music streaming service providers and disrupted the music industry with the introduction of a new mode of music distribution.

Spotify has significantly grown its North America user base over the past few years. Its total monthly active users (MAU) in North America grew by 50% from 34 million in the first quarter of 2016 to 51 million in the fourth quarter of 2017. And, its paid premium subs doubled from 11 million to 22 million in the same time period (representing a 43% premium penetration ratio).

Currently, Spotify's North America's user base represents 16% penetration of the total Internet population in the U.S. and Canada. North America is Spotify's second largest market, behind Europe (58 million MAU as of the fourth quarter of 2017). North America accounts for 33% of Spotify's total user base (157 million MAU as of the fourth quarter of 2017).

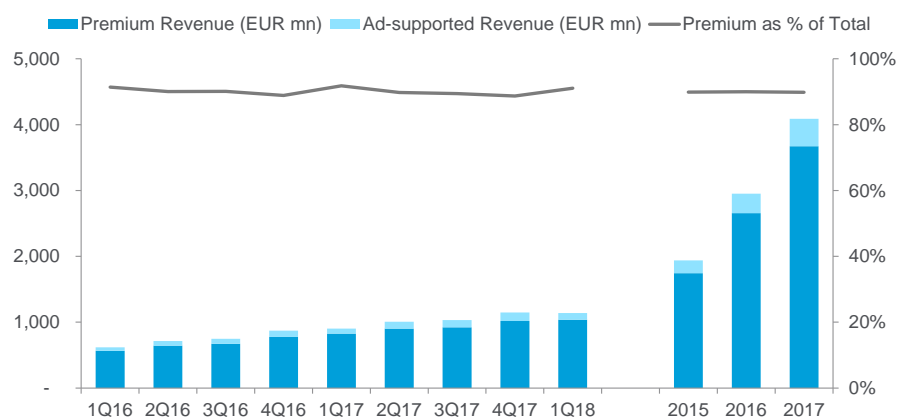
Figure 49. Spotify's North America Users Penetration of Internet Users in Region (million, pct)



Source: Citi Research, Company Filings

Spotify generates revenue in two ways: (1) ad revenues from ad-supported users and (2) subscription revenues from premium subs. Revenue from premium subs remained consistent at 90% over the past three years. Ad-supported revenue accounts for the remaining 10% of revenue.

Figure 50. Premium Subscription Accounts as % of Spotify Revenue (€ millions; percent)



Source: Citi Research, Company Reports

Spotify pays two types of music licensing fees: (1) fees related to Sound Recording licenses, which cover the recording rights, and (2) fees related to Musical Composition License Agreements, which is paid to song rights holders (Music Publishing).

Spotify has directly negotiated rights agreements with the major record labels, including Universal, Sony (which owns a 5% stake in the company), and Warner Music. In 2017, prior to the IPO, Spotify renegotiated with all these major record labels to lower the overall royalty payments down from 55% to 52%, which was subject for future renegotiations.

Spotify doesn't disclose region-specific revenue breakdowns nor specific cost of revenues. But, these costs consist predominantly of royalty and distribution costs related to content. On a global and blended level, Spotify is paying over 80% of revenues as cost of revenues, while gross profit margins remain in the low teens in 2015-2016 and the 20% range in 2017. Content costs as a percent of revenue for the premium subscription business was 78% in 2017 (and 74% in 1Q18), whereas they were 90% and 87%, respectively, for the free, ad-supported business.

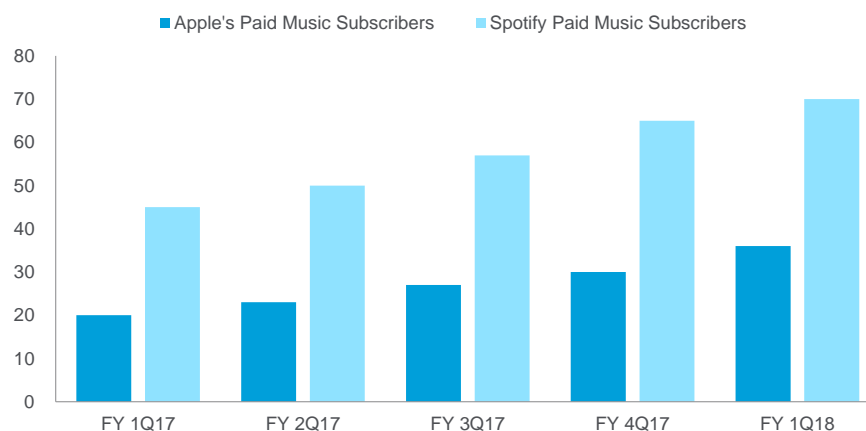
Figure 51. Spotify's Cost Structures (€ millions; percent)

EUR in millions	2015	2016	2017
Revenues			
Premium	2,040	3,107	4,297
Ad-supported	229	345	486
Total Revenue	2,269	3,452	4,783
% y/y		52%	39%
Cost of revenue			
Premium	1,739	2,597	3,354
Ad-supported	265	386	436
Total cost of revenue	2,004	2,983	3,790
% of revenue	88%	86%	79%
Gross profit			
Premium	301	510	943
Ad-supported	(36)	(41)	50
Total gross profit	264	469	993
% margin	12%	14%	21%
EBIT	(275)	(408)	(442)
% margin	-12%	-12%	-9%
EBITDA	(240)	(364)	(379)
% margin	-11%	-11%	-8%

Source: Citi Research, Company Reports

Finally, we compare Apple vs. Spotify. Spotify has more market share, with 50% more subscribers than Apple.

Figure 52. Apple vs. Spotify Subscribers (millions)



Source: Citi Research; Company Reports

While Apple only has half as many subs as Spotify, the gap is notable because Apple Music was launched in 2015, ~9 years after Spotify's launch. Moreover, a recent Wall Street Journal (WSJ) report suggests Apple Music's U.S. subs are growing at 5%, about 2.5x faster than Spotify 2% growth. According to the WSJ, Apple Music could surpass Spotify for the number one spot in 2018.

Tencent Music

Tencent Music Entertainment Group (TME) was formed following Tencent's acquisition of China Music Corporation (CMC) in July, 2016. TME now consists of QQ Music, KuGou Music, and Kuwo Music. TME aims to become a leading music service provider and content distributor in China, building an ecosystem for artists to connect with their fans. It is an industry pioneer pushing for music copyright protection with a paying subscription streaming model.

- **QQ Music** – QQ Music is a fan-oriented music platform appealing to younger users. QQ Music has 238 million MAU as of May, 2018. Per Tencent's disclosures, as of the third quarter of 2017, QQ Music had 800 million total registered user accounts with subscription fees for VIP privileges and premium content ranging from Rmb8-15 per month.
- **KuGou Music** – KuGou Music is a one-stop pan-entertainment music platform addressing the mass market. KuGou has 241 million MAU as of May, 2018. Tencent has not disclosed KuGou's registered user accounts, but like QQ Music, it offers subscription fees ranging from Rmb8-15 per month (~\$1-\$2 per month).
- **Kuwo Music** – Kuwo Music focuses more on specific music genres and offers a more personalized approach. Kuwo has 126 million MAU as of May 2018. It also offers subscription fees ranging from Rmb8-15 per month.
- **WeSing** – WeSing is an online karaoke app aiming to become a social music platform. According to Mr. Dennis Hau (VP of TME), WeSing has a total of 460 million registered users and more than 4.6 million registered users who are actively performing on WeSing.
- **Kugou Live** – Kugou Live is a live streaming service for some unique artist performances.

According to a Tencent's disclosures (May 2017), TME provides over 17 million songs to 600 million MAU and has about 15 million subs. (More recent reports suggest MAU has grown to 700 million.) This compares with Spotify's 71 million paying subs and 159 million MAU as of year-end 2017.

According to Spotify's prospectus, its long-term investment consists of a non-controlling equity interest of 9% in TME (or about 8.5 million ordinary shares) valued at about €910 million (or ~\$1.2 billion).

Given that the majority of record labels are controlled by few record suppliers, music licensing rights have been easier to manage in China (compared to video content). Tencent signed licensing agreements with more than 200 record labels domestically and globally. Major contracts include:

- **Warner Music Group** – In late 2014, Tencent announced a distribution and licensing partnership with Warner Music Group (WMG).
- **Sony Music** – In October, 2016, Tencent renewed its strategic distribution partnership with Sony Music.

- TME and UMG – In May, 2017, TME and Universal Music Group (UMG) entered into a strategic licensing agreement, under which: (1) TME will distribute music from UMG's roster of record labels and global recording stars on its streaming platforms QQ Music, KuGou and Kuwo and (2) TME will also be UMG's master distribution and licensing partner to exclusively sub-license UMG's content to third-party music service providers in China.

Over the past 18 months, there's been a legal dispute between TME and NetEase Music and Alibaba's Xiami Music. However, in September, 2017, the Copyright Management Division of National Copyright Administration of China met with leading music firms to avoid exclusive license rights. Instead, they encouraged sub-licensing of music copyright.

Following these government comments, in September, 2017, TME and Ali's Xiami reached an agreement that TME will sub-license music from Sony Music, Warner Music and Universal Music to Alibaba. In tandem, Alibaba will share its exclusive content from Rock Records with TME.

In February, 2018, the National Copyright Administration issued a statement noting that NetEase Cloud Music and TME had reached a copyright agreement to share music rights. The agreement enables NetEase to obtain copy-rights in Seed Music Limited, Huayi Brothers Media and Canxing Cultural (previously exclusively licensed by Tencent), which we believe come with a sub-licensing fee to Tencent.

According to 3rd party app tracker Jiguang, DAU for QQ Music, Kugou and Kuwo were 76.9 million, 59.6 million and 19.9 million as of December, 2017. As such, all three firms are larger than NetEase Cloud at 16.2 million. We estimate TME has a combined market share of over 70%, making it China's leading music streaming service.

Compared to TME's 17 million songs, NetEase Cloud announced in July, 2016, it had 10 million songs in its library, similar to the size of Ali's catalog of songs.

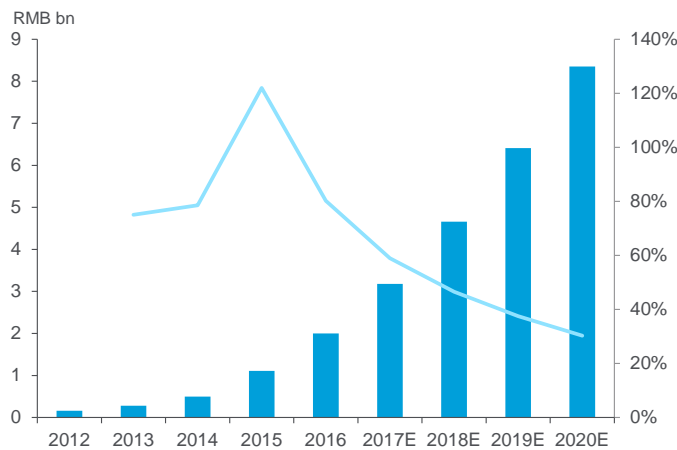
Looking forward, given all big three music platforms will have a relatively similar amount of licensed songs, the future winners in music streaming will depend of how different platforms provide integrated music entertainment services with artist interaction and fan building, nurturing rising singers and allowing young Chinese audiences to enjoy music entertainment.

We believe the industry will grow faster and deeper with music streaming subscriptions, payments for downloads of digital record copies, live broadcasting tipping and potentially online/offline integration with actual concert tickets, online broadcasting and supplementary artist accessories and commercial sponsorship.

According to iResearch, industry-wide revenues for digital music subscriptions reached Rmb3.2 billion (\$470m) in 2017. And, revenues are expected to grow to Rmb8.4bn by 2020, representing a CAGR of 38%. Per CNNIC, Internet user penetration data, music app penetration has been relatively stable at 66-68%, suggesting user stickiness and traction with music apps are high, which we believe supports monetization opportunities. We expect integrated monetization business models will evolve over time.

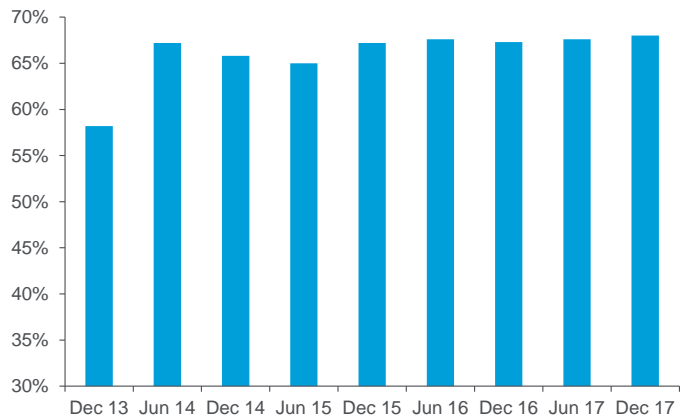
According to a news report from iimedia (Jan 2018), TME achieved profitability in 2H16 with about Rmb5 billion in revenue, and it is expected to generate about Rmb9bn revs in 2017 with net profit of Rmb1.6 billion (\$240m). We are not able to confirm these figures with the company.

Figure 53. China Digital Music Revenue and Growth (Rmb bn; percent)



Source: Citi Research, iResearch

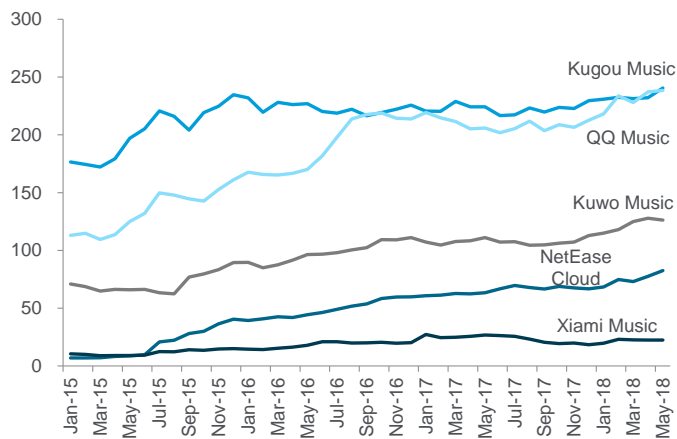
Figure 54. Penetration Rate of Music Applications in China (percent)



Source: Citi Research, CNNC

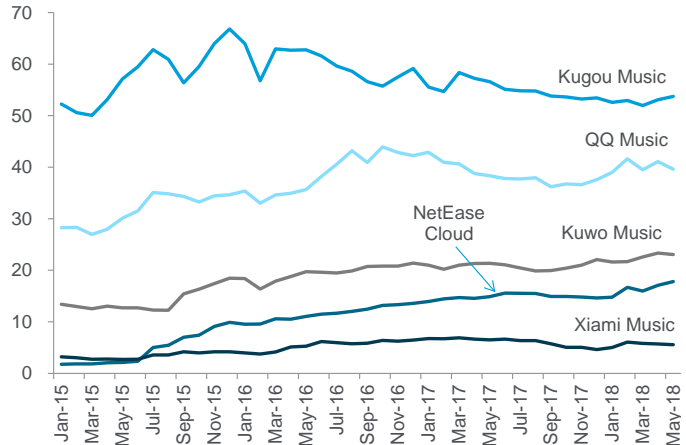
Looking at QuestMobile data, we note there is a slightly higher overlap between QQ and Kugou with 27 million users. Only 1.9 million users — collectively — use Kuwo, Kugou and QQ. On the other hand, the overlap between Kugou and NetEase is about 9.6 million or 4% of Kugou's active users.

Figure 55. MAU of Major Music Apps in China (millions)



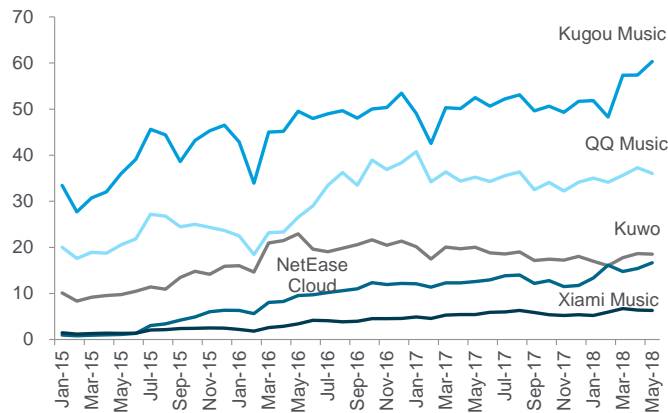
Source: Citi Research, QuestMobile

Figure 56. DAU of Major Music Apps in China (millions)



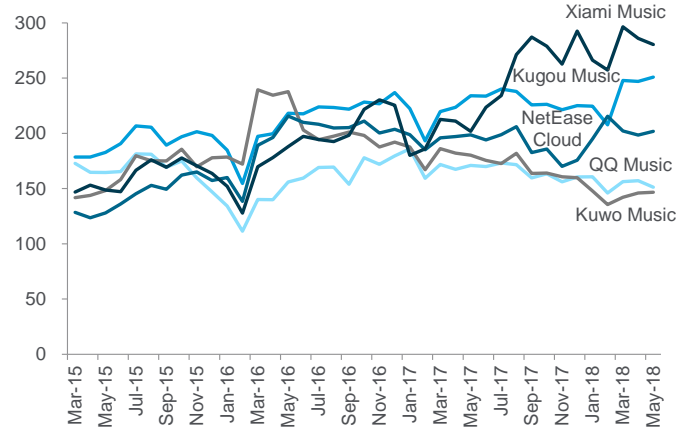
Source: Citi Research, QuestMobile

Figure 57. Total Time Spent of Major Music Apps in China (billion mins)



Source: Citi Research, QuestMobile

Figure 58. Avg Time Spent on Major Music Apps in China (mins/month)



Source: Citi Research, QuestMobile

E. Interactive Video: YouTube

Listening to music on a site like YouTube or, more precisely, watching it — is more complex than any other music business model. The reason is simple: anyone can upload music content onto YouTube. This means:

- A consumer can watch an official music video made by an artist or band. (Vevo is the entity that manages most music videos on YouTube for the major record labels including Sony, Universal, and Warner.)
- A consumer can watch a fledgling (or perhaps established) artist perform a cover version of a song. For example, your uncle might record himself playing Stairway to Heaven (by Led Zeppelin) and upload it to YouTube.
- Music can be added in the background of any type of user generated content to make it more compelling.

The way music is used in a YouTube video is further complicated by this: all videos with musical content actually have three distinct copyrights: (1) the copyright for the video itself, (2) the copyright tied to the sound recording (Recorded Music) and (3) the copyright tied to the musical composition (Music Publishing). Each copyright has unique rules:

- First, when users upload video content onto YouTube, they have granted YouTube the rights to the video copyright. This means Google never faces the risk of violating copyrights for the video itself. In effect, they have a safe harbor and cannot be sued. But, as we'll see, before ads can be placed on the video, the content must get through Google's Content ID system.
- Second, if a user records a cover song, technically the artist making the video (perhaps your uncle) needs to obtain the composition copyright from the record label (or artist) that owns the rights to the song.
- Third, for official music videos and for videos that simply add music to user generated content, the user needs to obtain the copyright for both the sound recording and the composition from the copyright owner.

Figure 59. Interplay Between Copyrights and Type of Music Video on YouTube

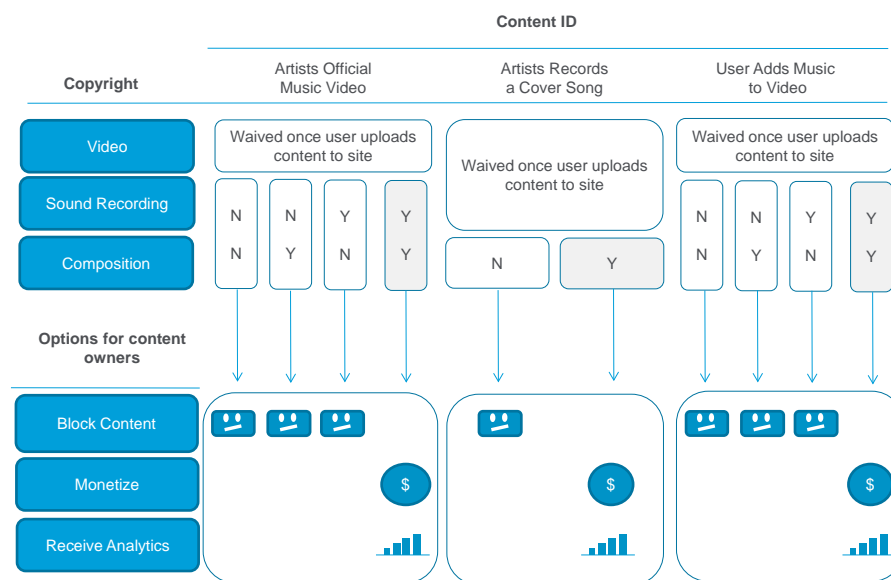
Copyright	Type of Music Video		
	Artists Official Music Video	Artists Records a Cover Song	User Adds Music to Video
Video	Waived once user uploads content to site	Waived once user uploads content to site	Waived once user uploads content to site
Sound Recording	Copyright needed by YouTube	Copyright needed by YouTube	Copyright needed by YouTube
Composition	Copyright needed by YouTube	Copyright needed by YouTube	Copyright needed by YouTube

Source: Citi Research, Audium

The question for Google, therefore, was complex. How can YouTube keep track of the composition and sound recording copyrights for all the videos that are uploaded on YouTube?

To help, Google created a technology platform called Content ID. With Content ID copyright owners send digital fingerprints of their content – the sound recording or composition – to Google. Google then scans all videos and looks for a match. If the content does match, each copyright owner has three choices: (1) block the content's use; (2) monetize the content with ads; or (3) simply collect analytic data. If both the sound recording and composition copyright owners have selected 'monetize' will the content have ads on it. Otherwise, the content will not have ads or will be blocked.

Figure 60. Google's Content ID Platform



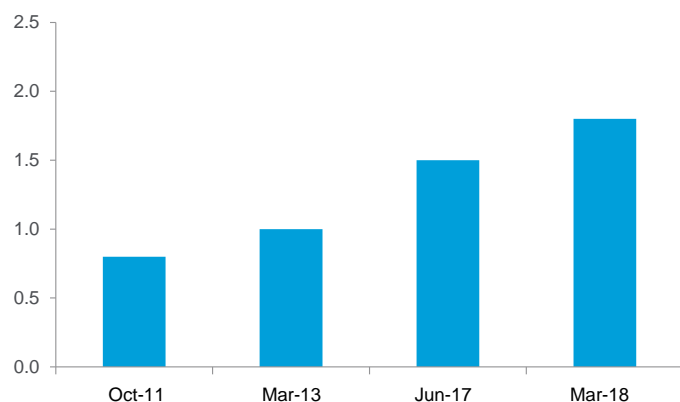
Source: Citi Research; Google; Audium

If the copyright owners for both the sound recording and the composition elect to monetize the content, the ads will be placed on the video. Interestingly, the creator of the video does not collect any portion of the ad revenue. The ad revenues are split between the sound recording copyright owner and the composition copyright owners. (Using our example, your uncle that recorded Stairway to Heaven will not generate any revenue from YouTube.)

It is worth noting that since YouTube can have ads on videos (versus an audio stream like Spotify) they are not subject to the compulsory license rate set by the Copyright Royalty Board (CRB). This means YouTube has to negotiate rates directly with the owners of the copyrights.

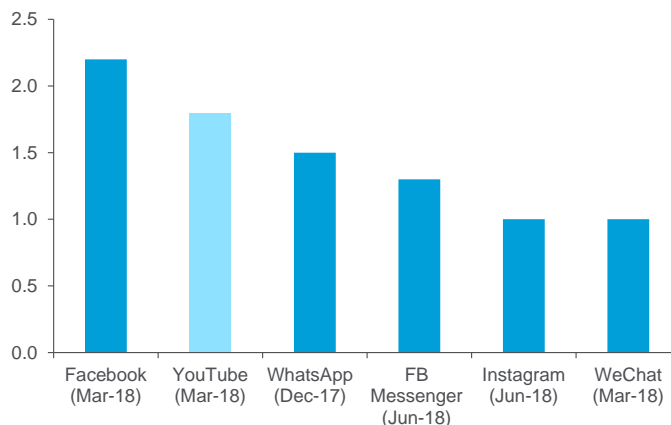
With that bit of background, let's shift to the size of YouTube's business. YouTube has one of the largest and most popular online platforms with a global user base of 1.8 billion. Only Facebook's user base is of similar size. While there is no official disclosed number of music users on the platform, we estimate there were about 800 million music users on YouTube in 2016 and 1 billion in 2017.

Figure 61. YouTube Monthly Active User Growth in Recent Years (billions)



Source: Citi Research, Company Reports

Figure 62. YouTube Platform User Base vs. Other Social Platforms (billions)



Source: Citi Research, Company Reports

We estimate that YouTube generated \$16.7 billion in total ad revenue globally in 2017, and 18% of that revenue was music-related. For the estimated \$2.9 billion in music-related revenues in 2017, we estimate that YouTube shared 55% with the global music industry, representing a total payout of \$1.6 billion. We further estimate that half of that was in the U.S. This implies the average monetized music video was played ~130 times per month. If the average music video is three minutes in length, that equates to an average of 13 minutes per day per YouTube music user.

Figure 63. YouTube Revenue Shared with Music Industry (\$ millions; percent)

\$ in millions	2013	2014	2015	2016	2017
Total YouTube Advertising Revenue, global	2,728	3,989	7,889	11,944	16,662
x Percent that is music-related	14%	15%	15%	16%	18%
= YouTube music-related ad revenue	377	579	1,202	1,911	2,933
x Percent share with music industry	55%	55%	55%	55%	55%
= YouTube revenue shared with music industry	207	318	661	1,051	1,613
Music's share of YouTube's total COR	20%	21%	22%	23%	25%
Shared ad revenue per 1000 plays (1)				3.00	3.00
/ Per 1000 plays (1)				1,000	1,000
= Shared ad revenue per music video play (1)				0.003	0.003
YouTube revenue shared with music industry				1,051	1,613
x Percent from U.S. (est.)				50%	50%
= YouTube U.S. revenue shared with music industry				526	806
/ Shared revenue per music video play (1)				0.003	0.003
= Monetized music video plays (U.S.)				175,175	268,813
Monetized music video plays (U.S.)				175,175	268,813
/ Number of music users (U.S.)				136	170
= Avg monetized music video plays per user (1)				1288	1581
/ Months in period				12	12
= Avg monetized music video plays per user per month (1)				107	132

Source: Citi Research; Industry and Press Reports

In addition to its free, ad-supported music content on the core YouTube platform, the company is also pursuing a paid, on-demand music offering. YouTube hired Lyor Cohen, a former Warner Music executive, to head its global music business in 2016. And, it recently launched its own music streaming services called YouTube Music to rival offerings from Spotify, Apple Music and others. YouTube Music follows a similar pricing strategy to its rivals. And, it is currently available in 12 international markets (mostly Western Europe). As YouTube Music is still in its very early stage of global roll-out, its eventual success vis-a-vis competition from Spotify and Apple Music is yet to be fully tested.

Business #3: Attend a Concert

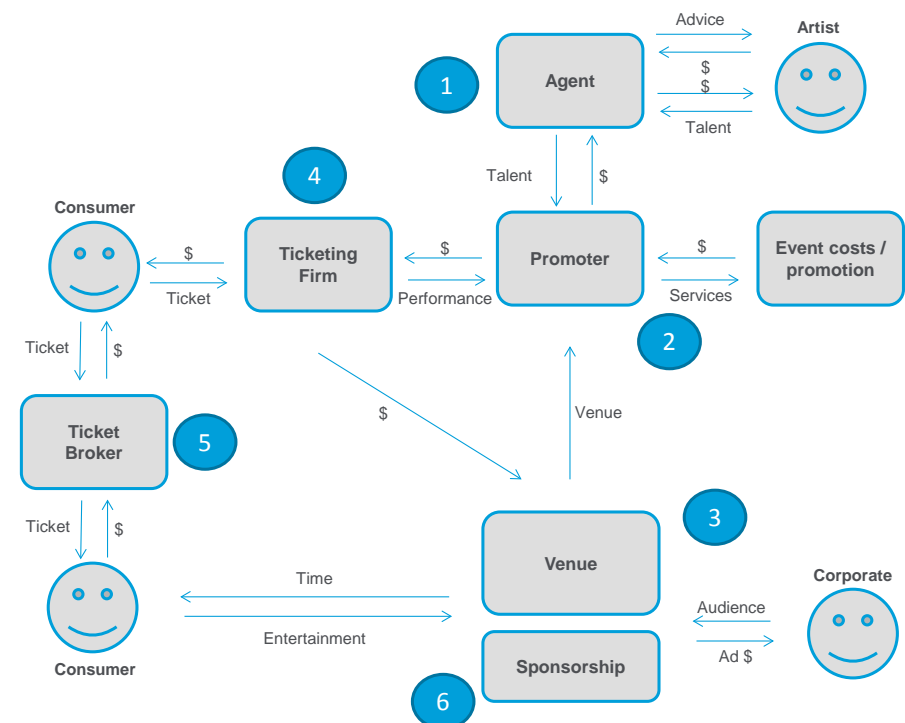
So far, we've reviewed two ways a consumer can enjoy music. First, they can purchase music. These revenues are declining. Second, consumers can listen to music on several platforms: terrestrial radio, non-interactive streaming (Pandora) and interactive streaming (Spotify and Apple) or via video streaming (YouTube). Those revenues are all growing.

But, there is a third way consumers can enjoy music. They can attend a concert or festival. This is one of the faster growing segments of the music business (see Figure 5). But, the live music business is complex. So, let's review the value chain. There are seven key areas:

- First, an artist hires a manager. The manager acts as the CEO of a performer's business activities. That includes tour dates, record deals and public appearances.
- Second, many artists also hire an agent whose role is more limited and typically focuses on concerts. Legally agents are the only entities that can sign contracts. Managers act as advisors to the artist (but cannot sign contracts).
- Third, the artist's manager will hire a promoter. The promoter receives revenues from gross ticket receipts and pays the performer, the venue and markets the event.

- Fourth, the promoter will pick a venue to host the event. The venue owner will receive payments for facility use and generate income from concessions and parking. Venues also receive money from ticketing platforms for the right to install a ticketing platform at a specific venue.
- Fifth, the venue partners with a ticketing firm to provide ticketing services. The ticketing firm is responsible for distributing the primary ticket inventory via the Internet, retail outlets and call centers. (In the U.S., venues typically have one ticketing firm. Outside the U.S., venues usually use several ticketing firms.)
- Sixth, once the primary ticket is sold to a consumer, it may be resold in the secondary ticket market. Secondary ticket brokers include firms like StubHub or Ticketmaster.
- Seventh, corporate entities can advertise at events. Most, but not all, of these fees are collected by the firm that owns the venue or festival.

Figure 64. Live Music Value Chain



Source: Citi Research

So, let's look at the revenues from the top ten concerts during 2017. Three things are clear:

- First, most artists visit about 50 cities per tour. And, they'll perform about one to two shows per city.
- Second, the number of sold tickets per show varies dramatically. U2 sold about 55,000 tickets per show. But, Ed Sheeran sold less than 15,000 tickets per show.

- Third, average ticket prices don't vary significantly among acts. It typically runs ~\$100 per ticket with classic artists like the Rolling Stones or Paul McCartney garnering higher than average prices. (Baby Boomers, it seems, have lots of disposable income.) In aggregate, a top 10 tour will generate, on average, ~\$180 million in revenues.

Figure 65. Top 10 Global Concerts in 2017 (number; 000s; \$ per ticket; \$ millions)

	Guns & U2	Roses	Coldplay	Bruno Mars	Metallica	Depeche Mode	Paul McCartney	Ed Sheeran	Rolling Stones	Garth Brooks	Top 10 Avg
Cities	38	74	40	92	39	66	27	86	12	27	50
x Shows per city	1.3	1.1	1.4	1.3	1.2	1.1	1.3	1.3	1.2	3.4	1.5
= Shows	50	81	54	121	45	73	36	111	14	93	68
x Tickets per show (000)	54.3	33.1	45.5	16.8	34.8	24.7	25.1	13.7	53.9	15.4	32
= Tickets (000s)	2713	2679	2458	2030	1565	1801	903	1526	755	1432	1,786
x Ticket price	116	109	97	99	98	78	146	81	159	71	105
= Gross (\$ mil)	316	293	238	200	153	141	132	124	120	101	182

Source: Source: Citi Research; Pollstar

If we widen the aperture to the top 100 global concerts – versus the top 10 – a few more things become clear:

- First, live music is a fragmented market. Indeed, the top 100 global concerts comprise less than 30% of the \$20 billion in global concert revenues.
- Second, the revenues per tour drop off dramatically. That is, while a top 10 tour generates on average ~\$180 million of ticket sales, tours #91 to #100 generate, on average, only ~\$20 million of ticket sales.
- Third, the steep drop in revenue per tour has little to do with variance in the average ticket price. Rather, it's driven by the number of tickets sold per show and fewer cities per tour. (Less popular bands focus on the largest markets.)

Figure 66. Top 100 Global Concerts in 2017 (number; '000s, \$ per ticket, \$ millions)

	Top 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	81 to 90	91 to 100	+ All Other	Total Global
Cities	50	50	53	46	43	41	48	49	24	32		
x Shows per city	1.5	1.3	3.1	2.0	3.1	2.0	1.1	4.3	7.1	1.4		
= Shows	68	60	148	83	126	68	56	60	39	39		
x Tickets per show (000)	32	16	13	12	10	11	9	12	8	9		
= Tickets (000s)	1,786	831	760	712	560	544	430	460	285	312		
x Ticket price	105	101	85	84	81	76	76	69	143	78		
= Avg Gross per artist (\$ m)	182	82	62	54	44	36	32	28	24	21		
x Artists	10	10	10	10	10	10	10	10	10	10		
= Total gross (\$mil)	1,818	819	620	536	438	356	316	281	243	207	14,546	20,179

Source: Citi Research. Pollstar

The data suggests the 'average' economics of a concert can be very misleading. The variance by tour is simply too large. But, nonetheless, we'll use some rules of thumb to give a sense of how the ticket costs are allocated.

Typically, the cost of the concert — things like the opening act, tour managers, transportation, set designers, site coordinators, stage managers, lighting directors, sound engineers, carpenters, pyrotechnics, catering, wardrobe crew, stylists, security and physicians — comprise one-third of the ticket cost, or about \$27 per ticket. These costs are typically incurred by the promoter.

The manager and agent (collectively) receive about 25% of the artist's revenue. That's about \$20 per ticket. The venue costs about 8% of the revenue, or \$6 per ticket. And, the promoter receives about 3% of the ticket cost, or \$2 per ticket.

Collectively, this suggests about 30% of the ticket cost is left for the artist, or about \$25 per ticket. In the U.S., this suggests artists collect about \$2.5 billion a year from concerts in the U.S.

Figure 67. U.S. Concert Costs (percent; \$ millions; millions; \$ per ticket)

	Mix	2017			Tickets sold	Ticket Price	Global Total
		US	Int'l	Global	(mil)	(\$ per)	(\$ mil)
Ticket price	100%	8,000	12,179	20,179	249	81	20,179
- Concert cost	33%	2,640	4,019	6,659		27	
- Manager	15%	1,200	1,827	3,027		12	
- Venue	8%	640	974	1,614		6	
- Promoter	3%	240	365	605		2	
- Agent	10%	800	1,218	2,018		8	
= Artists	31%	2,480	3,775	6,255		25	

Source: Citi Research, Musicfeed, Live Nation, Billboard

While Figure 67 summarizes the allocation of a ticket's cost among the major players, in reality, most major acts structure an agreement that includes a minimum guarantee plus a share of the net profits of a show. For less popular mid-level acts, they sign what's called a 'versus deal' (since the artist gets a guarantee versus a percentage of the profits, whichever is higher).

Let's walk through a hypothetical concert for a major act with a minimum guarantee plus a share of the show's profits. Let's assume the following:

- First, the range of likely ticket sales varies between \$250,000 and \$1 million per show.
- Second, the promoter agrees to spend ~40% of the top-line on the event (including site rental, personnel, equipment rental, advertising, security and medical).
- Third, the artist gets a minimum payment — untethered to the show's actual ticket sales — of \$37,000.
- Fourth, the artist and promoter agree to split the net profits 85% and 15%.
- Fifth, the artist's manager and agent collect (together) 25% of the show's gross sales.

Under this example, the artist would collect 25% of the gross ticket sales. And, the manager and agent would also collect 25% of the gross ticket sales. But, the promoter's share of the gross ticket sales would vary considerably. In fact, if the show generated too little revenue, the promoter could actually lose money on the event (after the artist is paid the minimum guarantee). Conversely, if the show did very well, the promoter might collect 5% of the gross ticket sales.

Figure 68. Hypothetical Concert Splits (\$ per show; percent)

	Low		High	
Gross ticket sales	250,000	500,000	750,000	1,000,000
- Promoter expenses (concert cost + venue)	102,500	205,000	307,500	410,000
= Net profits	147,500	295,000	442,500	590,000
x Artist share (balance to promoter)	85%	85%	85%	85%
= Artists revenue	125,375	250,750	376,125	501,500
- Artist min guarantee	37,500	37,500	37,500	37,500
= Payable to artist at concert end	87,875	213,250	338,625	464,000
memo: promoter expense share of gross	41%	41%	41%	41%
Artist min guarantee	37,500	37,500	37,500	37,500
+ Artist share of net profits	87,875	213,250	338,625	464,000
= Total artist share	125,375	250,750	376,125	501,500
/ Gross ticket sales	250,000	500,000	750,000	1,000,000
= Artist share of gross ticket sales	50%	50%	50%	50%
Manager fee (15% of gross)	37,500	75,000	112,500	150,000
+ Agent fee (10% of gross)	25,000	50,000	75,000	100,000
= Managerial support costs	62,500	125,000	187,500	250,000
/ Gross ticket sales	250,000	500,000	750,000	1,000,000
= Share to manager and agent	25%	25%	25%	25%
Artists share	125,375	250,750	376,125	501,500
- Support costs	62,500	125,000	187,500	250,000
= Artists net profit	62,875	125,750	188,625	251,500
/ Gross ticket sales	250,000	500,000	750,000	1,000,000
= Share to artist	25%	25%	25%	25%
Net profits	147,500	295,000	442,500	590,000
x Promoter share	15%	15%	15%	15%
= Promoter revenue	22,125	44,250	66,375	88,500
- Artists min guarantee	37,500	37,500	37,500	37,500
= Promoter net profit	(15,375)	6,750	28,875	51,000
/ Gross ticket sales	250,000	500,000	750,000	1,000,000
= Share to promoter	-6.2%	1.4%	3.9%	5.1%

Source: Citi Research; All You Need to Know About the Music Business

Typically, a promoter has a particular geographic focus. But, Live Nation is one of the only firms with a semi-global footprint. As such, they were the largest concert promoter — by far — in 2017. But, globally, Live Nation only sold about one-fifth of all tickets (52 million / 249 million). The concert business, it seems, is still quite fragmented.

Figure 69. Top Global Concert Promoters in 2017 (millions of tickets)

Rank	(mil)	Promoter
1	52.5	Live Nation
2	14.4	AEG
3	4.0	OCESA / CIE (Mexico)
4	3.2	Feld Entertainment
5	2.4	SJM (UK)
6	2.3	Signia Live (Mexico)
7	1.8	T4F (South America)
8	1.6	MCD (Ireland)
9	1.6	FKP Scorpio (Germany)
10	1.5	MSG Live
11	1.5	Another Planet
12	1.4	Caesars
13	1.3	Evenko (Canada)
14	1.3	Premier Productions
15	1.3	Move Concerts (South America)

Source: Citi Research, Pollstar

If we look at Live Nation's income statement, a few more things are clear:

- First, the firm has grown the top-line and EBITDA (or what Live Nation calls Adjusted Operating Income — AOI) at a nearly double-digit rate between 2009 and 2017.
- Second, the firm's AOI margins typically run from 7% to 10%.

Figure 70. Live Nation Revenues and AOI (\$ millions; percent)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	CAGR 2009-2017
Division revenue	5,142	5,091	5,449	5,892	6,612	6,973	7,373	8,502	10,481	9%
- Eliminations	14	26	65	73	84	107	127	146	144	34%
= Reported revenue	5,128	5,065	5,384	5,819	6,528	6,866	7,246	8,356	10,337	9%
x AOI margin	7%	8%	10%	9%	9%	9%	9%	9%	7%	0%
= Division AOI	373	399	520	540	585	638	671	762	764	9%
- Corp and other	60	60	70	75	80	83	93	122	139	11%
= Reported AOI	313	339	450	465	505	555	578	640	625	9%

Source: Citi Research, Live Nation

If we dig into Live Nation's three reporting segments — Concerts, Ticketing and Sponsorships — you'll notice that while the top-line growth rates are similar, the segment margins vary significantly. Concerts run at 2% EBITDA margins, Ticketing runs at 20% margins and Sponsorships run at 65% margins. Why are there such stark differences in profitability?

Figure 71. Live Nation Revenues and AOI by Division (\$ millions; percent)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	CAGR 2009-2017
Concerts revenue	3,956	3,801	3,899	4,270	4,919	5,116	5,399	6,296	7,892	9%
x AOI margin	2%	2%	2%	2%	2%	2%	2%	2%	2%	6%
= Concerts AOI	60	65	77	69	92	99	95	149	185	15%
Ticketing revenue	1,025	1,128	1,319	1,374	1,408	1,557	1,640	1,828	2,144	10%
x AOI margin	20%	20%	21%	21%	21%	21%	21%	20%	14%	-4%
= Ticketing AOI	205	226	278	295	298	326	346	365	298	5%
Sponsorship revenue	161	162	231	248	285	300	334	378	445	14%
x AOI margin	67%	67%	71%	71%	68%	71%	69%	66%	63%	-1%
= Sponsorship AOI	108	109	165	176	195	213	230	248	281	13%

Source: Citi Research; Live Nation

The answer has a few elements:

- First, in Concerts, Live Nation reports the ticket's retail price as revenue. All costs related to the event — venue costs, manager and agent fees and the artist's profits — run through the P&L as expenses. In effect, Live Nation is the promoter. And, as we showed in Figure 67, the promoter collects ~3% of the ticket's face value. And, a promoter can also lose money on an unsuccessful concert (see Figure 68). As such, it's not surprising that Live Nation reports 2% margins in this segment.
- Second, in Ticketing, Live Nation only reports the ticketing fee as its top-line. Ticketmaster pays royalties to the venue owner. And, the firm also incurs costs to sell the tickets (call centers, websites and credit card fees).
- Third, in the Sponsorship segment, Live Nation is selling venue naming rights (where it owns the venue), onsite venue signage, online advertising and exclusive partnership rights. The costs in this segment are typically related to sales and marketing. But, there are few variable costs in this segment.

Mapping Artist's Revenue

So far, we've reviewed the music industry's revenues. We've summarized the key legal underpinnings behind royalties. We then summarized the economics of each business: music sales, various ways consumers listen to music and the concert business. Now we're in a position to see how much of this revenue actually flows to the artist.

To begin, we add up all the revenues from the music business. These are the same figures we reviewed in Figure 4. We then remove: (1) retailer mark-up for music sales (digital or physical); (2) the cost to put on a concert including venue rental; (3) the costs of running the various distribution platforms like Sirius, Spotify and AM/FM radio; and (4) the EBITDA from these distribution platforms.

The funds that remain are allocated to the record labels, the artists and the various staff that support the artist (personal managers, record producers, concert promoters). In 2017, out of \$43 billion of potential revenues, only \$18.2 billion was available for the labels, artists and the artists' support staff.

Figure 72. 2017 Portion of Music Revenues Available to Labels, Artists, and Staff (\$ millions)

	Revenue	Retail Mark-up	Concert & Venue Cost	Non Royalty Platform Cost	Distribution Platform EBITDA	Funds to Labels Artists or Partners
Physical purchase	1,569	314	0	0	0	1,255
+ Digital purchase	1,531	306	0	0	0	1,225
= Total purchase	3,100	620	0	0	0	2,480
+ Satellite subscription	5,432	0	0	2,655	2,116	661
+ Digital subscription	4,092	0	0	1,174	(276)	3,194
+ Concert	8,000	0	3,280	0	-	4,720
= Consumer outlays	20,624	620	3,280	3,829	1,840	11,055
+ Audio ads (radio station and web delivery)	14,984	0	0	9,772	4,351	861
+ Audio ads (pure web players)	1,147	0	0	431	253	463
+ Video Ads (YouTube)	806	0	0	282	161	363
= Total B2C music revenues	37,561	620	3,280	14,314	6,605	12,743
+ Music Publishing (B2B)	2,312	0	0	0	0	2,312
+ Licensing, Artist Services & Expanded Rights (B2B)	3,148	0	0	0	0	3,148
= Total music revenues	43,020	620	3,280	14,314	6,605	18,202

Source: Citi Research; RIAA; Company Reports

Next, we remove the fees from the royalty collection entities (HFA, PROs, SoundExchange), costs for the artist's manager, record producer, concert promoter, concert agents and record labels. The balance is available to the artist. In 2017, we estimate about \$5.0 billion flowed to the artist, ~12% of total revenues.

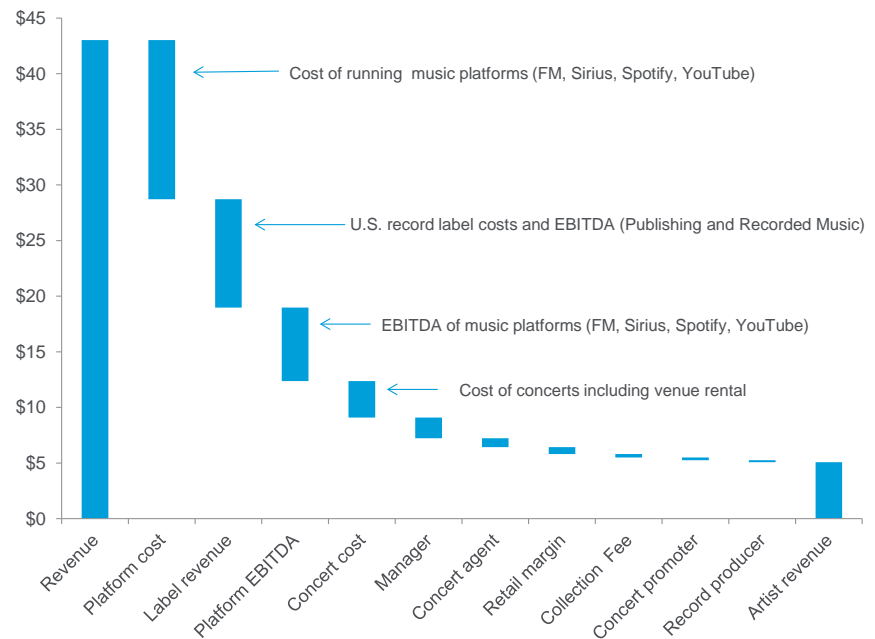
Figure 73. 2017 Portion of Music Revenues Available to Artists (\$ millions)

	Funds to Labels Artists or Partners	Fees to SoundEx, PROs HFA	Artist Partners						
			Mgr	Prd	Pro	Agt	Lab	Artist	
Physical purchase	1,255	35							
+ Digital purchase	1,225	34							
= Total purchase	2,480	69	362	60	-	-	1,868	121	
+ Satellite subscription	661	66	89	15	-	-	461	30	
+ Digital subscription	3,194	-	479	80	-	-	2,476	160	
+ Concert	4,720	-	708	-	240	800	-	2,972	
= Consumer outlays	11,055	136	1,638	155	240	800	4,805	3,282	
+ Audio ads (radio station and web delivery)	861	86	116	19	-	-	601	39	
+ Audio ads (pure web players)	463	46	63	10	-	-	323	21	
+ Video Ads (YouTube)	363	36	49	8	-	-	253	16	
= Total B2C music revenues	12,743	304	1,866	193	240	800	5,982	3,358	
+ Music Publishing (B2B)	2,312	-	-	-	-	-	1,387	925	
+ Licensing, Artist Services & Expanded Rights (B2B)	3,148	-	-	-	-	-	2,361	787	
= Total music revenues	18,202	304	1,866	193	240	800	9,729	5,069	
memo: share of revenue to artists							1.22	11.8%	

Source: Citi Research; RIAA; Company Reports

If we graphically depict this data, a few things stand out. First, the cost of running the various distribution platforms — FM radio, Sirius, Spotify, Pandora, YouTube — takes the largest portion of the revenue. Second, the record label's costs and EBITDA take the next largest portion. Third, the EBITDA from the various distribution platforms is the third largest use of funds. The remaining items — concert costs, managers, agents, gross profit margins on music sales — are all relatively small.

Figure 74. 2017 Allocation of Music Revenues (\$ billions)

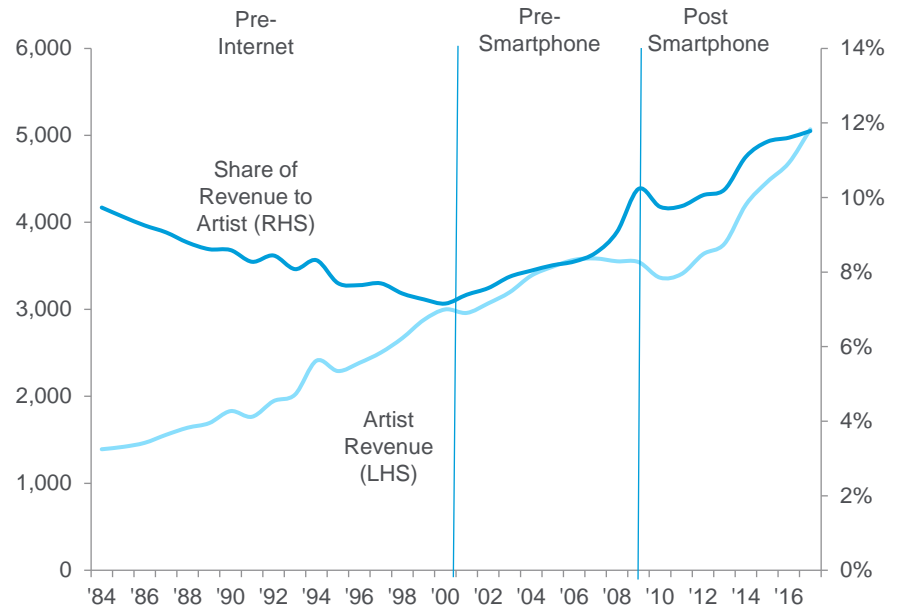


Source: Citi Research, RIAA, Company Reports

If we plot the artist's revenue (and share of industry revenues) over time, a few trends emerge:

- First, the rise of the Internet and the decline in physical music sales caused artist revenue — in absolute terms — to almost stagnate between 2000 and 2009. But, with the rise of subscription services and the growth in concert popularity, artist revenue is now on the upswing.
- Second, the share of revenue that flowed to the artists was on a modest downward trajectory until the artists began to tour more frequently. Now, it's on the upswing. Recall, record labels often do not participate in the concert business.
- Third, while the artist's share of total revenues is rising, the absolute level of value capture is quite small. In most forms of entertainment, the artist captures the lion's share of the spoils. But, because the music industry has so many intermediaries — and because the consumption of music is so fragmented across various platforms — the artist captures very little of the aggregate revenues. Over the last 20 years, the artist's share of the industry's revenues has hovered between 7% and 12%.

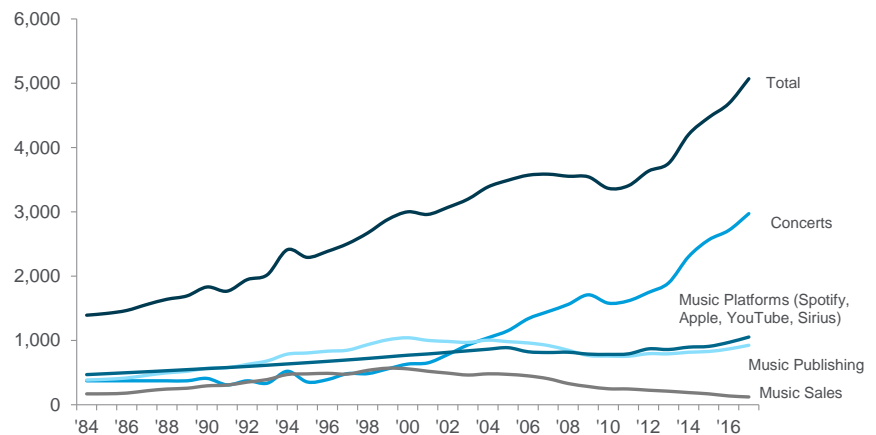
Figure 75. Artist Revenues and Artists' Share of Revenue (\$ millions; percent)



Source: Citi Research, Company Reports

If we divide artists' incomes into four groups — Concerts, Music Platforms (Spotify, Apple, YouTube, Sirius, FM radio), Music Publishing, and Music Sales (CD, digital downloads) — it's clear that concerts have, by a wide margin, contributed most significantly to the growth in an artist's income. That's because music labels don't directly participate in concert economics. But, they do participate in the revenues collected by the various music platforms (like Spotify, Apple, Sirius and YouTube).

Figure 76. Drivers of Artists' Profits from '86 to '17 (\$ millions)



Source: Citi Research, RIAA, Company Reports

Implications

So far, we've reviewed quite a bit. And, hopefully, you have a better sense of how the music industry works. In this chapter, we shift from analyzing past trends and take a speculative look into what the future might hold for the structure of the music industry.

To set the stage, let's look at the current roles in the industry — managers, record labels, distribution platforms, and concerts — and the ten (or so) publicly listed firms. What's clear is this: vertical integration is fairly limited. Record labels are record labels. Music distributors are music distributors. And, concert firms are concert firms.

Figure 77. Current Music Industry Structure

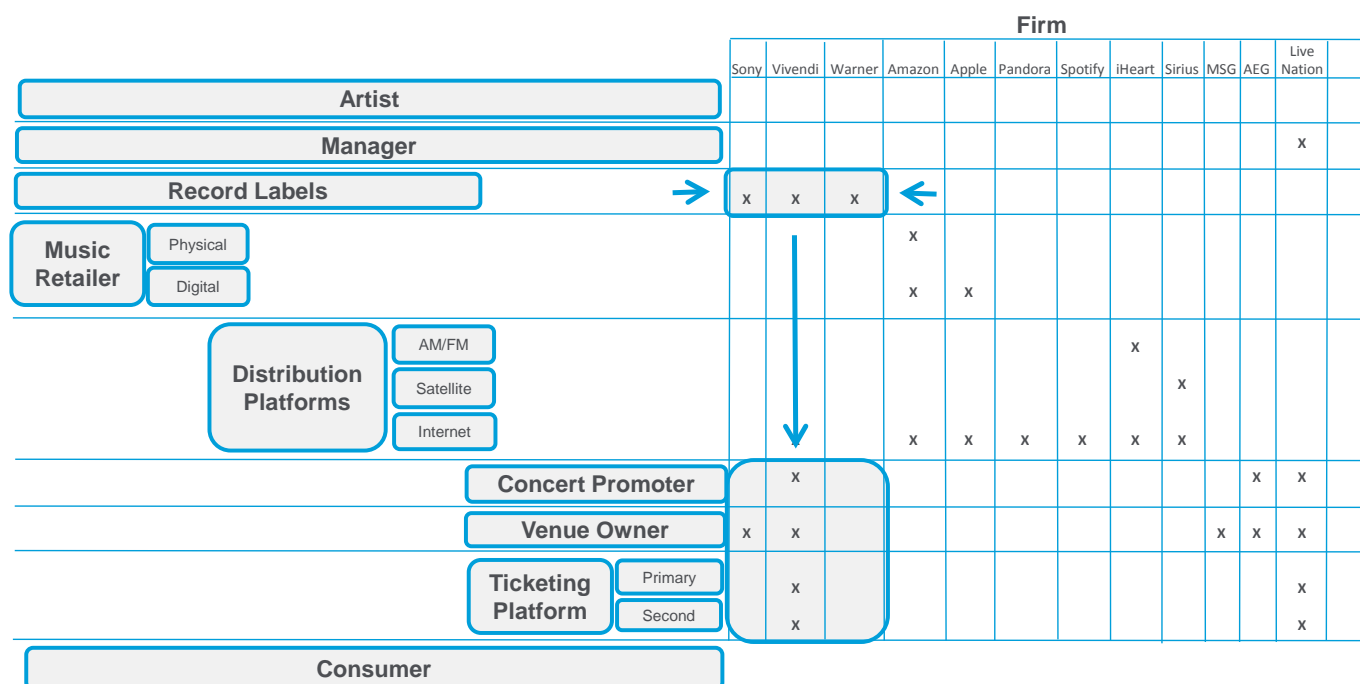
	Firm												
	Labels			Distributors						Concerts			
	Sony	Vivendi	Warner	Amazon	Apple	Pandora	Spotify	iHeart	Sirius	MSG	AEG	Live Nation	eBay
Artist													
Manager												x	
Record Labels	x	x	x										
Music Retailer				x									
Physical				x									
Digital				x	x								
Distribution Platforms								x					
AM/FM													
Satellite									x				
Internet		x		x	x	x	x	x	x				
Concert Promoter		x									x	x	
Venue Owner	x	x								x	x	x	
Ticketing Platform		x										x	
Primary		x										x	
Second		x										x	x
Consumer													

Source: Citi Research

With that backdrop, let's lay out a few predictions:

- First, physical music sales will continue to falter. Increasingly, consumers will just rent music.
- Second, live music events — including concerts and festivals — will continue to grow.
- Third, while some of the services provided by the record labels will be commoditized, we are not convinced all artists will adopt a DIY model. Reflecting this, record labels will continue to play a role. How expansive this is — and whether it has to be played by the traditional incumbents — is up for debate. In response, we expect the traditional labels to 'follow the money' with their diversification strategies and the most likely route is to move further into live events, including concert promotion, ticketing, and even owning venues, a route already being taken by some of the groups. Further consolidation of the existing recorded music and music publishing landscape, also makes sense.

Figure 78. Potential Expansion by Labels into Live Events While Consolidating the Core



Source: Citi Research

- Fourth, paid subscription services are unlikely to generate sizable profits as stand-alone businesses. Low entry barriers and rivals willing to subsidize the service will likely keep margins slim. This will prompt these firms to migrate to other segments of the value chain.
- Fifth, we expect new entrants in distribution to use technology (e.g., blockchain) to increase the transparency and efficiency of the industry, which is likely to be a key differentiator vis-à-vis the artists. Just because Tidal didn't work out quite as well as planned, the impetus behind it — to create a more 'sustainable and equitable model for artists' — we think will continue to be a key driver of industry innovation.
- Sixth, artists — both song writers and performers — will capture a larger share of the ecosystem's revenues. This will be driven by continued shifts in revenue toward concerts (where labels play a very small role). And, it will be driven by new entrants into the record label role (most likely web-based distributors).

Figure 79. Potential Expansion by Internet Music Distributors into Record Label Role

		Firm												
		Sony	Vivendi	Warner	Amazon	Apple	Pandora	Spotify	iHeart	Sirius	MSG	AEG	Live Nation	eBay
Artist														
Manager													x	
Record Labels		x	x	x										
Music Retailer	Physical				x									
	Digital				x	x								
Distribution Platforms	AM/FM								x					
	Satellite													
	Internet		x		x	x	x		x	x				
Concert Promoter			x									x	x	
Venue Owner		x	x								x	x	x	
Ticketing Platform	Primary		x										x	
	Second		x										x	x
Consumer														

Source: Citi Research

- Seventh, satellite services will continue to have an advantage over pure-play web models. Although a bit counterintuitive, this will be driven by satellite's lower cost structure (due to the disparity in royalty payments dictated by the CRB).
- Eighth, we would not be surprised to see some consolidation among the various distribution platforms.
- Ninth, while terrestrial radio is unlikely to ever grow again, the players' local sales forces could be quite valuable for web-based music distribution firms.

Figure 80. Potential Consolidation Among Distribution Platforms

				Firm												
				Sony	Vivendi	Warner	Amazon	Apple	Pandora	Spotify	iHeart	Sirius	MSG	AEG	Live Nation	
Artist																
Manager															X	
Record Labels				X	X	X										
Music Retailer	Physical						X									
	Digital						X	X								
Distribution Platforms		AM/FM				➔					X					
		Satellite										X				
		Internet														
					X		X	X	X	X	X	X				
Concert Promoter					X									X	X	
Venue Owner				X	X								X	X	X	
Ticketing Platform	Primary				X											X
	Second				X											X
Consumer																

Source: Citi Research

- Tenth, the last potential move would be for an existing distribution platform to move into the concert business. This would create a vertically integrated music firm touching virtually all segments of the value chain (with the exception of physical music sales and music labels).

Figure 81. Potential Vertical Integration on Music Value Chain

Firm												
	Labels			Distributors						Concerts		
	Sony	Vivendi	Warner	Amazon	Apple	Pandora	Spotify	iHeart	Sirius	MSG	AEG	Live Nation
Artist												
Manager												X
Record Labels	X	X	X									
Music Retailer				X								
Physical												
Digital				X	X							
Distribution Platforms												
								X				
									X			
AM/FM												
Satellite												
Internet												
Concert Promoter		X									X	X
Venue Owner	X	X								X	X	X
Ticketing Platform		X										X
		X										X
Consumer												

Source: Citi Research

Expert Views

Expert Views

In this section we include transcripts from three separate discussions we have had with prominent industry experts on the music industry focusing on their view of the landscape and opportunities and challenges for various stakeholders going forward.

If there is a thread that runs through each of these conversations it is on how artists might be able to better monetize what they do:

- Jennifer Breithaupt is the Global Consumer CMO of Citi and she has been a pioneer in the marketing industry with respect to using music and access to artists as a core part of Citi's marketing activities. Her commentary on the level of engagement driven by music and the willingness of artists to explore relationships with big corporates like Citi speaks of the significant opportunity for artists from strategic brand partnerships over time, in our view.
- Kevin Brown is CEO and Founder of GigRev, a business that helps artists create their own digital communities via a white label mobile app. More direct-to-consumer/direct-to-fan interaction is one of the key ways we think artists can increase their take of industry revenues by disintermediating legacy gatekeepers not only on the record label side but in all areas of artists' interactions with their fans.
- Bjorn Niclas is co-founder of Choon, a digital music streaming service which is based on blockchain technology. Here the key focus is not only on using blockchain technology to increase the proportion of revenue retained by artists but also to significantly improve payment terms and transparency in the industry.

Obviously these three conversations won't necessarily capture the full range of views held by people in the industry, but what they highlight is that while the industry is unbelievably complex there are moves to increase transparency, something that is necessarily disruptive but also very exciting.

It is also clear that the future is potentially bright for artists willing to embrace new ways of generating revenue and also for the companies that might help them do this.

With that overview, let's look at the detail...

A Conversation with Jennifer Breithaupt

Global Consumer Chief Marketing Officer at Citi



Jennifer Breithaupt, Citi's Global Consumer CMO, is responsible for crafting distinctive, impactful campaigns that differentiate the bank's industry leading consumer products and services and enhancing Citi's brand positioning. Over the last decade, Jennifer has built Citi's entertainment platform into one of the largest consumer access platforms of any brand.

Jennifer's curation goes far beyond traditional tour sponsorships and has also included album release parties and intimate preshow experiences with some of the biggest artists in music. Additionally, Jennifer has oversight of Citi's key alliance with Live Nation – including a recent expansion of the partnership into key Asia markets – and is responsible for strategic development and execution of all branded entertainment properties and initiatives (Citi Concert Series on TODAY).

Recently, Jennifer was named Billboard's Branding Executive of the Year and has been included within the publication's coveted Power 100 list since 2015.

What is your role at Citi?

As Global Consumer Chief Marketing Officer at Citi, I oversee a team focused on crafting distinctive, impactful campaigns that differentiate our industry leading card products and drive long-term brand loyalty with millions of cardmembers across the globe.

Music is core to Citi's DNA and plays a leading role in both our campaigns and card offerings. Since the mid-2000s, we've worked with artists to offer credit and debit cardmembers access to thousands of events annually (over 12,000 in 2017 alone) – including half of the Top 100 tours. This year, we're proud to be teaming up with artists such as Jay-Z, Beyoncé, U2, Billy Joel, Metallica, Phil Collins, and Khalid and of course, music is starring in our current advertising campaign, Welcome What's Next.

What are the key criteria you use to benchmark how successfully your department is performing?

We are consistently striving to enhance engagement with our customers so while we look at metrics such as tickets sold, associated revenue and percent of entertainment spend, our overwhelming success metrics revolve around deepening our relationships with customers and fostering long-term loyalty. With regards to the latter, we look at how perception of the brand changes after consumers experience a Citi event and the extent to which they are acting as brand advocates through word of mouth and social etc.

How important is it for brands to create proprietary content / experiences to share with consumers? How has this evolved over time?

As the attention span of consumers continues to decrease within our always-on, digitized landscape, it's become increasingly difficult for brands to break through. Innovative content and experiential marketing activations are ways in which brands can connect with consumers in a much more impactful manner that encourages brand affinity.

How engaging is music relative to other forms of content?

Not only is music a universal language but it's an immensely powerful means of connecting with consumers at an emotional level.

According to recent research from Citi, more than 40% of Americans surveyed said that a picture is most likely to cause them to have a physical reaction (e.g., a smile, tears, laughter), followed by a song (31%). Also, an impressive 80% of respondents agreed that they are "more likely to remember" and "more likely to pay attention" to a commercial "if their favorite song is in it." Further, 39% agree (54% for millennials) that they are "more likely to purchase" a product being promoted in a commercial if their favorite song is in it.

In the future do you see brands working with artists in place of media channels?

It's not an either/or but rather a combination of partnerships that will differ depending on the brand and the type of consumer they're trying to connect with.

Can you give an example of how Citi works with the music industry and even artists directly? When did music first become part of your strategy? Can you give us a sense of how effective it is relative to other types of content/partnership?

We launched our entertainment access platform, Private Pass, over a decade ago as a means to differentiate our brand. In the first year, we launched it with handwritten invitations to 50 events and since then, have been growing it into one of the largest consumer access platforms of any brand. Last year, we offered card members access to over 12,000 events with the world's biggest artists and had the most successful year to date with year-over-year double-digit growth in ticket sales and revenue.

Who are the main partners for you in navigating this landscape? Is it the ad agencies, the record labels or promoters, or can you go direct?

We have a longstanding relationship with Live Nation and also work with artist management, labels, producers, and promoters directly as we've established many close relationships over the years.

How receptive are artists to forming partnerships with brands and how has this evolved?

In the past few years, as the music industry has continued to undergo a significant transformation — band/brand partnerships have not only increased in frequency but become much more integrated and creative. Traditional endorsement deals have evolved into mutually beneficial partnerships that connect artists with even broader audiences over and above their central fan base and provide brands with the opportunity to connect with customers on a deeper level in a manner that is culturally relevant. At Citi, we're very conscious of only engaging in partnerships that are authentic and relevant — both to the artist and us — and work collaboratively with the artist to bring the campaign to life.

To what extent are platforms like Spotify a potential new route to engagement with consumers and how might this work?

Platforms like Spotify help to round out our existing music offerings and deepen engagement within the music vertical. Citi has tested several programs in partnership with various platforms over the past few years and continues to seek out new opportunities.

A Conversation with Kevin Brown

CEO and Founder of GigRev



Kevin Brown is CEO and founder of GigRev.com a software company that provides white label digital fan communities for artists. Prior to GigRev, Kevin was an artist manager for bands including The Australian Pink Floyd and The Beautiful South and before that CEO and founder of Affiliate Window Ltd, an affiliate marketing business which was sold to Axel Springer in 2009 and integrated into Zanox and now trades under the name Awin.com.

Can you give a bit of background on your experience in the music industry before GigRev?

I started working with Simply Red when I was 19 and had the experience of a group, who started off as nobodies and suddenly get to the top of the charts with an infrastructure of four people that didn't know what they were doing, including me. We were looking at this crazy world and thinking 'how did we get here?' Of course, anyone who does get into that situation is often just thrown into it, if they're lucky. People forget, but as an artist, you either get nowhere or you're suddenly at the top of the charts and everything is crazy.

And this explains why so much of the industry is outsourced. If you need to organize a world tour and you don't know what you are doing – which most people don't – you need to get access to people that do know what they are doing, which is typically the record labels and promoters. And of course this is a lot easier for the management who take 20% of a larger pot.

But what this experience showed to me was that this is a world where fans are very willing to pay for experiences. This was further reinforced with my experience working with the Take That fan club which had 100,000 people paying £10 a year for a photocopied magazine. What this highlighted was that what fans are really paying for, is access to the artist — for the experience of it.

After that I ran a business that organized fan club holidays to live events. Again, the heart of this was the fan experience. People were willing to pay a lot more. Fans were not just buying a ticket, they were buying an experience because they want to be part of it.

How has the landscape changed for artists now versus, say, 15-20 years ago?

If we go back to the end of the last century, everything relied on album sales and this meant the major record labels were dominant. They had the infrastructure to print and distribute vinyl and CDs, they employed the public relations (PR) people to do the advertising. They did a whole host of things that the managers couldn't do directly.

More often than not, the managers would go direct to a record label. Do a deal for, say, £1 million, take their 20% and then leave the label to get on with it, often but not always to the detriment of the artists.

But what has basically happened over time is the labels have been gradually outsourcing much of what was originally their core business. They have sold manufacturing. They got rid of the PR departments. Many of their best people became consultants and hired themselves back to the labels. And as a consequence the big labels have somewhat inadvertently created their own competition because for smaller labels, or even artists themselves, all of these services can be procured direct.

So if Simply Red were starting out again now, how would this impact them? Is it easier or more difficult for artists to make money than it was?

It is now much more polarized. It is a lot more difficult today to break a new artist; getting the first 200 people to a gig. In the old days the record label provided the cash flow. They were like a bank loan that didn't need to be repaid if it didn't work. They took all the risk.

And to be clear, more often than not, if you threw enough money at it, one in ten had a good chance of working. One example that comes to mind is the Manic Street Preachers where their first album was neither a commercial nor critical success but continued support from the record label carried them through. They are a band that still fill arenas in the U.K. and have a healthy career because of this.

Today, labels are much less likely to back a new artist in the same way and without that initial capital support, artists have to grow organically and the problem with this is that it is a nearly always a slow burn.

And here there is an interesting problem: it is not an industry where you can learn as you go along. You need to know how everything works when you are at the start of the career. It's all very well accumulating knowledge as you go along, but by the time you are 50 and understand how the industry works you are too old to be the popstar you needed to be at 18.

And even if you do get a break and you don't get ripped off, the revenue that an artist can earn through standard channels is tiny. No one knows the exact figures, but even if you are a fully independent artist, you are likely to earn around \$15,000-\$20,000 per million plays on a streaming service and that gets split between the writers, which may not even be the artist themselves of course. And here it is important to remember that 99% of all plays on Spotify go to 10% of songs. This means 90% of artists get little or nothing.

And if you are on an "old industry" label, you can expect to only get \$1,700 per million plays, because the label is taking the lion's share of the economics.

I was with a major band from the 1980s last week who were signed to Universal and currently get 10 million plays a month on streaming services and it generates £1,500 of income, which then has to be split four ways between the band/songwriters.

This has forced new artists to be a lot more innovative. A good example of this is the U.K. Grime scene. One artist I was talking to makes most of his money from influencer marketing on Instagram. He makes virtually no money from selling music, but rather does it from sponsored posts to his ~1 million followers on social media.

So, coming back to the question about whether it is easier or more difficult for the artist to make money, the key is to reach those first few thousand people, which is all about the music. It's the music that will make it happen.

Once you have done that, then you've got an opportunity to monetize those people but you will be facing the odds if you simply put your music on Spotify. You may get discovered but you still need tens of millions of plays to earn a living and loyalty of fans is not the same as plays. It's about creating a community and monetizing this. At a basic level, this might be by selling them merchandise — don't underestimate the economics of selling them a T-shirt or a CD — or by curating live experiences.

How has the rise of access models like Spotify/Apple changed the landscape?

I think Spotify and other streaming services have absolutely taken the place of radio. But the important thing to remember is that radio is linear, whereas streaming isn't.

What that meant was that when you listened to radio and heard a song you liked, as a consumer you had two choices: you could listen to the radio continuously until they played it again, which could take some time, or you could go and buy the song. Both routes created some money for the artist, but with the latter being much more remunerative.

The problem with streaming services is that the basic revenue model is the same as radio, i.e., the amount of revenue per play per listener for the artist/label on a streaming service is roughly the same as for radio (indeed this is the way it was designed), but because it is non-linear and the user can listen to the same song over and over again, it means the user no longer has any reason to go and buy the song, which was how the artist made most of their money.

Basically Spotify is radio but it is no longer priming any other purchases, which given spend in this industry is highly concentrated — one research house (Midia Research) estimated that 71% of industry revenue comes from 16% of fans — is clearly bad news.

Super fans used to listen to radio and then buy the music. This is what streaming has killed. Now super fans listen to the music on streaming services and want to spend more money on music, but there is no way to actually spend it.

Going 'direct-to-consumer' is one of the avenues open for artists and this is where GigRev comes in — can you give us a bit of background on the GigRev model and your plans for the business longer-term?

In a world that very few artists can play Wembley Stadium anymore, it's about playing smaller venues and maximizing the profit you can make from those gigs.

Also it is important to remember that music is very compartmentalized. Take the Grime scene in the U.K. again: it appeals to a very narrow age range. You can be two years older or younger than somebody else and have a completely different taste in music. I missed Punk by about two years for example and instead grew up to artists like U2 — post punk.

When you have these tiny little worlds out there, then it doesn't necessarily mean that artists are going to be getting hundreds of millions of plays.

There are, of course, exceptions. Take Ed Sheeran. He has been very clever at adapting his music to be "Spotify-friendly" and is reaping the benefits in hundreds of millions of plays. As well as individual artists, we can also make generalizations about genres. Hip Hop, for example, is much more global in nature and this, too, works much better on streaming services as it works worldwide. Rock doesn't work in the same way. It's much more regional but with loyal fans. Take for example the Arctic Monkeys: they don't work in every country of the world, because people don't necessarily relate to the lyrics in every country (or, indeed, understand them).

And this is the nub: for smaller artists the challenge is to figure out how to have a small group of fans and monetize those fans. And I think this is where fan communities come in. Historically we would have called them fan clubs, but now it is about creating a community and convincing the fans to support you in every

possible way. This might be by offering the opportunity to buy merchandise, to get access to premium content or behind-the-scenes footage of a gig. And this is what GigRev does: it is a white label mobile app that allows artists to build a direct-to-consumer subscription model. Each app is tailored specifically to the artist and gives fans access to live-streamed events, archive content and e-commerce functionality and the model is based on a revenue share.

The benefit of this from the perspective of the artist is not only that they are creating incremental revenue direct from their fan community but also that they are in control of the data. Originally social media platforms like Facebook were a tool for engagement with existing and future fans; now the platforms are often treating the artists as if they were businesses, demanding payment in return for interaction with the artists' own fans with, once again, limited scope for a downstream monetization event (i.e., a revenue generating sale). This is another compelling reason for artists to go 'direct-to-consumer'.

The important thing about GigRev is that it is white label. The app has the artist's name on it. This means they are in complete control.

The challenge is convincing artists to take the plunge and build that community. It's very 'chicken and egg'. What we're saying to artists is that 'what you did for free on Facebook or Instagram, real fans are willing to pay for'. Once the app is up and running and they put some content in there — e.g., an acoustic performance which they probably would have put on Facebook before — and this generates some premium subscriptions, this is often enough to convince artists that this is an avenue worth pursuing.

Of course, this is not to the exclusion of 'traditional' platforms. We have one artist who recorded a 25-minute acoustic set, put one of the songs on Instagram and Facebook and said to his fans 'if you want to watch the rest, download the app'. What is interesting in this case is that 15%-20% of the followers on Facebook then downloaded the app.

Even if you don't monetize a relationship via subscription revenue, at least you have a direct relationship with those fans via access to their data — something social networks will never allow you to own.

Presuming direct-to-consumer gets broadly adopted by artists in the music industry, who are the main winners and losers?

To my mind it might not take much to break the streaming system because it's mispriced. The music industry was keen to come up with a plan to kill Napster and came up with a price point at \$9.99 that is simply too cheap. The industry got it completely and utterly wrong.

Tidal came along and tried to reprice it at \$19.99 but that hasn't worked because consumers don't see value, despite the best efforts of Jay-Z and Beyoncé.

If, however, Beyoncé or Jay-Z put their music into their own apps, maybe at a cheaper price point, this could work. And what it would create is windowing for music content, which would in reality bring the music industry into line with other content industries, e.g., film/TV content.

Of course the streaming services as they exist today would just be for back catalogue, which is fine but possibly not consistent with how they see themselves today.

How has the role of the traditional gatekeepers of the industry — the labels and the promoters — evolved over time? Will they be as important in the future as they were in the past?

On the label side, the ties that bind are weakening. Music fans identify with artists, not labels. Fans don't decide to be a fan of a particular artist just because they are on a particular label. An artist app is just an album, and once a direct connection between an artist and a fan is established, it is not clear what value the labels add.

The experience of Chance the Rapper is instructive. He has been quite vocal about not needing a record label having established all of his own infrastructure without label support.

This is an insight into the future: what is the point of a record label? They won't take the risk at the beginning because they are risk averse. But also nobody wants them by the time you're established because you can't possibly ever get back to a situation of earning what you could by dealing with your fans directly.

On the promoter side, if the artist has the data on who their fans are, which is data that is currently closely guarded by the promoter, then their position as a traditional gatekeeper could also be eroded. The model will be more difficult to disrupt in markets like the U.S., where the relationship between promoters and venues/festivals is a little more vertically integrated, but there could be scope for artists to do more themselves and keep more of the economics.

We have talked about monetization direct from subscriptions — are there other revenue streams that could become more meaningful in a 'direct-to-consumer' world?

As we have discussed, first of all there is the data. But once you have got up-to-date data, there is an enormous opportunity in VIP packages, services like 'meet and greet'. All of the revenue from this comes back to the artists.

There is also an opportunity to make money through album sales but over your own platforms, via the app or even physically using the infrastructure sold by the traditional labels on an outsourced basis.

Of all the innovation happening in the music industry right now, what for you is the most exciting and disruptive?

I think in an industry of direct-to-fan platforms, the Kobalt's of this world as collection agencies are quite interesting but there is still an evolution to come in this market.

I am also excited about platforms like Patreon. Patreon is a platform whereby you can donate to artists, with some artists generating meaningful incomes whilst pursuing their calling (for example, Amanda Palmer who has over 11,000 patrons on the platform). The key point here is that consumers are not paying per se, they're donating to support artists — this is a really, really big difference from just buying stuff. Consumers don't want to support Spotify or Netflix, they want to support the artists.

A Conversation with Bjorn Niclas

Co-founder of Choon



Bjorn Niclas is Co-Founder of Choon. A serial music tech entrepreneur and successful angel investor, he has fifteen years of experience in the electronic-music space. His companies include live streaming, talent buying, artist management, and event production, and hundreds of thousands of people have attended events produced by him over the last decade.

Can you give a bit of background on your experience in the music industry prior to founding Choon?

I have been working in the industry for about 15 years. I started out as a DJ many years ago playing in clubs around the world. It was at this stage I met my co-founder here at Choon, Gareth Emery — I did the opening set at one of his gigs just as his career was taking off in a massive way. After that I moved into tour management and artist management and produced live events.

With this background I have seen all the different sides of the music industry. I have been involved in music production and recorded music sales, managed live events and dealt with all manner of people within the industry from fellow artists to booking agents. I've seen it all. During my later years in the business I co-founded a music tech startup that aimed at various live-streaming solutions for concerts and nightclubs and home use.

From the perspective of an artist, how does the industry look today? Is it more difficult to make money than in the past?

Currently artists are at the end of the line. They get the smallest piece of the pie even though they are the ones creating the content. In any other industry you typically see much better returns and margins. If you own a factory for example and you're selling a consumer product, you will add a markup when you sell to a distributor or wholesaler who in turn will add a markup when dealing with a retailer who is selling to the end consumer. Everyone in the chain gets a fair share of the profit cycle. The point is that the original creator has a say in the pricing of the product and transparency on who is making what.

The music industry is very different. The whole industry relies on content from the artists but the artist gets very little and this has gotten worse. My co-founder, record producer and touring DJ Gareth Emery whom I worked with for years, used to make decent money selling CD albums back in the day. At that stage buying music was an experience in itself — you could spend whole afternoons in a listening booth at a record store discovering and consuming music. The move to MP3s was not quite as lucrative but artists could still make decent money selling individual downloads in the iTunes store.

The rise of the streaming model has been very disadvantageous to artists but there is a misconception that there is not enough money being generated. The truth is that there is a ton of money being generated — it's just not making its way down to the artists as it gets funneled through various intermediaries such as record labels, publishers, and various performance and copyright collections societies.

And this speaks to the history of the music industry. The music industry was created back in the days of sheet music and jukeboxes and it was designed to be somewhat complex. This allowed all the various intermediaries to take a part of the revenue generated.

The industry is still shrouded in secrecy and this enables services like Spotify, for example, to pay artists very little despite generating a lot of money. Someone very smart once said, 'where there is mystery, there is margin' — a chance to extract profit — which I think summarizes the music industry really well.

It feels like a core part of the proposition at Choon is that you can say to artists that you know what you're doing and that you have been through it yourself. Is this is a key part of building trust with artists?

Yes. I certainly think it is extremely important that if you're trying to disrupt an industry, that you know that industry you're trying to disrupt inside and out.

We are not the first blockchain-based music company out there, but we are certainly the biggest and fastest growing one, despite being live for just three months.

Our team of founders and advisors come from within the music industry and this gives us an edge. Most companies in this space start with a technology proposition and try and fit it to the industry; we did it the other way round. We worked really hard to put together what we believe is the dream team to tackle the problem at hand — the best guys from the music industry and the best guys from the technology and blockchain side.

There is a general recognition that the market is broken based on how little money the streaming services pay artists but coming up with a fix that doesn't take into account how the underlying mechanics work is, in our view, the wrong approach.

This explains why it has been a challenging space for music startups, but also why we are so optimistic about our proposition.

A lot of people talk about how user friendly streaming platforms are for consumers — how easy are they to interact with for artists?

Although streaming services don't pay artists a lot for their content this doesn't mean they don't provide any value. It's just that the value comes in the form of using the platform to interact with your fan base and growing it. Spotify, for example, couldn't be an easier platform to use in this regard and they do a very good job serving connecting fans with content/artists they may be interested in.

And this is where we are today. Most independent artists simply accept they won't make much money streaming their content on the traditional streaming services but what they do get is access to listeners. It is a necessary marketing tool that you have to use in order to hopefully gain more fans.

Can you talk about how Choon potentially disrupts the landscape artists?

The three founding pillars of Choon for the artist rest on solving the three biggest problems in the industry for artists. This is (1) increasing the amount artists get paid for their streams; (2) reducing the time artists have to wait before they get paid; and (3) providing full transparency on what should have been paid in the first place.

And this is exactly what Choon does: we generate more money for the artists with stream earnings being paid in a speculative cryptocurrency economy, we get the money to the artist quicker (Choon pays every day versus, for example, Spotify who can take over a year or more to pay artists), and we get the money to the artist in a more transparent way (every artists' streams and earnings are fully transparent to everyone and stored on the Ethereum blockchain).

The facts about how little the established streaming services pay artists are well known. There are countless of articles online on that very subject. But less well known is that it can take the streaming services up to a year and a half to actually get the payments into the hands of artists and when they do get it, it will be accompanied by hundreds of pages of numbers and data points impossible to decipher making it very difficult to understand in a transparent way what is actually owed.

So, the first challenge in setting up Choon was trying to work out how we can generate more revenue for the artists for their streams and this is one of the parts we use blockchain for. We have created our own token economy, so artists are getting compensated for their streams in our own crypto currency called 'Notes'. And this is of course a speculative economy with its own risks and potential rewards. As we scale the company, as we scale users, artists, and listeners, so will the overall utility of the token. This will be particularly attractive for independent artists who are often on the least favorable contract terms with the major streaming services (a contrast to the terms enjoyed by the major record labels).

The second advantage of the blockchain is that we can pay the artists daily. Every day artists on the platform get a statement of how many streams there were on the platform that day and how many Note tokens were paid out. Our Real Time Royalty Network keeps instant track of all micro transactions and streams on the site and every stake holder who are owed streaming revenue based on the underlying Smart Record Contract are individually paid out to their digital wallets. This happens daily.

It is fully transparent so anyone can go on and see anybody else's earnings as well as their own. We believe that having a fair and transparent model is really how it needs to be and what has been missing from the legacy music industry for way too long. This is pretty much the opposite of the legacy music industry which is known for being extremely secretive. On traditional platforms there is no way for me as an artist to know how many streams or earnings on Spotify I have relative to, say, Ed Sheeran.

On the typical streaming services, when you get a statement, you just have to hope that it is correct. You are not going to hire a forensic accountant to audit a service like Spotify for your \$200 payout.

And what is the Choon proposition for the consumer?

For the consumer we have built a platform where the consumer can participate in the ecosystem of Choon. For example, in a world first, we have functionality that allows listeners to create monetized playlists and receive a commission on the stream revenue based on rates set by the artists. A feature like this closes the gap between artists and fans. They are all participating in this economy or ecosystem where Note tokens go back and forth between the artists and the fans.

We also have a feature that allows fans to 'tip' artists. This is important because consumers are very aware that artists are not getting paid — it's not a secret. When fans and listeners understand that they can directly impact the artists they are supporting, it really changes the dynamic, it changes the behavior we are seeing.

Do you think blockchain will be a game changer in the music industry?

Well we certainly believe so and we see that for us it's a big differentiator. We are focused on the independent artist category — artists that own the rights to their music and who have not yet signed away their rights to the typical legacy institutions. For these artists, using blockchain for faster royalty and more accurate payments and transparency is working extremely well.

For the rest of the music industry in general, there is no reason why it wouldn't work well for the record labels and publishers etc., but is there an incentive for them to use it? Where there is mystery there is margin and a fully transparent system may not be in their best interests. They make a ton of money running an ecosystem shrouded in secrecy with multiple different players and overly complicated label, publishing, and royalty collecting deals that can have 100 page contracts.

Will Choon be able to scale without access to artists affiliated with the major record labels?

The independent artist category is the fastest growing category in music streaming according to the latest WINTEL report. It's now also over a billion dollar business and growing fast. It always used to be the case that getting a major record label deal was a key priority for many artists, but now we see rights ownership is quickly becoming the latest focus and trend.

If you go back a little bit in time, there was a huge need for a record label. They could provide you with access to amazingly expensive studio facilities so you could record your music to professional standards. Today we can produce content of comparable quality on a \$500 laptop. In the past record labels could get you on radio or physically distribute CDs/vinyl. These days, with the rise of the Internet and access to fans via social media, this reliance is fading.

There has been a big upswing in the number of artists who have realized that owning your own content is much more valuable longer term than selling the rights to your music for a 'quick buck' via an upfront typical label deal. You see guys like Chance the Rapper, one of the biggest independent artists in the world, who still owns all of the rights to his music and is a leading figure advocating the importance of maintaining rights for up and coming artists.

And just because someone has done a deal with a record label in the past doesn't mean they can't go independent at a later stage. We have a great artist on Choon, Darude who signed a major record deal 18 years ago with the platinum hit record "Sandstorm" but recently got out of this deal and put his music immediately on Choon. Another former major record label artist that took back control of her catalogue and joined Choon is British artist TĀLĀ, who is also a big advocate in maintaining the rights to your music and creative control.

What challenges do you envision scaling Choon? What are the key milestones for success?

We started building the platform in early February and by May 1st we launched the fully working music streaming platform with the Notes token digital royalty distribution capabilities on the back end (our Real Time Royalty Network). All the development and engineering work was done by our two technical co-founders Matt Hall and John Watkinson, who pretty much built everything in house in about four months which is truly an amazing achievement.

In terms of usage, we launched the platform with 500 artists who had signed up to the beta and about 700 pieces of music. Today, three months later, with zero marketing we have over 10,000 artists and over 15,000 pieces of music on the platform. We're pretty much growing 25% week-over-week which is really encouraging to see.

We have achieved a lot with very little and we don't see any particular challenges scaling the technology part of the company. The challenge will be getting more artists to commit to the platform and upload their music and getting listeners engaged. However, I'm not too worried about that part either — we have some great strategies in place for artist on boarding and also various listener growth hacks.

The benefits for the whole ecosystem of artist and listeners could be very significant. Remember, with more scale comes more utility for the Notes token. There are parts of the music industry that are dying, music instrument stores going out of business, parents not putting their kids in music schools etc., but if we can help artists get enough money to buy that keyboard they always dreamed of buying or provide enough additional income for them to quit their second job to have more time to focus on making music, that would be a massive achievement and that's something the entire team is working very hard for.

In a world where the relationship between artists and their fans is more direct in nature, what does this mean for the other historic gatekeepers of the industry, e.g., labels and promoters etc.?

There is less and less need for intermediate players. When you can use technology to bridge the gap between artists and fans, that just means that instead of using five different organizations to do it, I can just do it myself, for free, and instantly with a global reach.

It is free to use Facebook, it is free to use Instagram and Twitter and now Choon. As an artist you have all these tools available to you that you can use yourself. In this sense, it is a great time to be an artist as these tools weren't available several years ago. And because of this, the need for some of the historical gatekeepers like the labels and publishers will become less and less.

Again, Chance the Rapper is a perfect example, getting to that massive of a size and still owning all the content basically erases all of the intermediaries who would otherwise be leeching off his earnings.

Of all the innovation happening in the industry right now, outside of Choon, what for you is the most exciting and disruptive?

We are looking into the opportunity to build future partnerships that would expand our 'Note' token economy. One company we have seen is a startup called GoBlockParty which is a blockchain-based ticketing company. They are basically doing events and concert tickets using blockchain and this eliminates fake tickets and bots buying up huge amounts of tickets for resale to scalpers. More broadly, anything that helps get more mainstream adoption of our token economy would be interesting.

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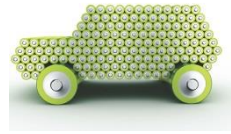


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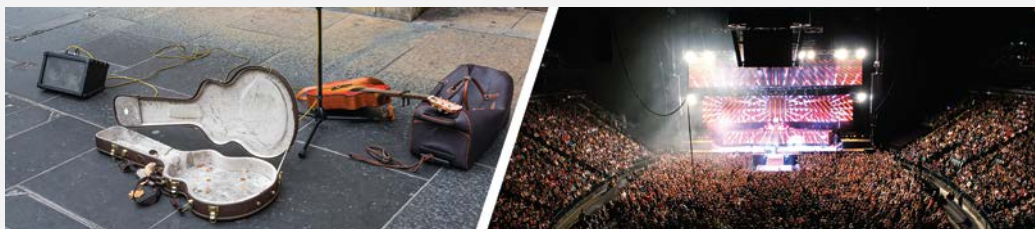
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Key Insights regarding the future of the Music Industry



SHIFTING WEALTH

In 2017, out of \$43 billion in potential revenue, we estimate that only \$5.0 billion flowed back to the artist, ~12% of total revenues. / Artists will capture a larger share of the music ecosystem's revenues driven by continued shifts in revenue towards concerts and new entrants into the record label role.



TECHNOLOGY

Music purchases rose rapidly from 1984 to 2000 as CDs replaced vinyl and cassettes but after 2000 CD sales began to contract with no obvious medium to replace it. / Increasingly consumers are 'renting' rather than buying music prompting artists to tour more often, driving significant growth in concerts and festivals.



INNOVATION

Layered in between the musician who is making the music and the consumer who is listening to the music, is an amorphous blob which is the music industry. / As technology has shifted consumer consumption from physical music to a mix of subscription, satellite, and streaming the structure of the music industry which has been static for years is likely to evolve.



