

Technological and Consumer Shifts in the Music Industry

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Introduction

The music industry has long been a symbol of the damaging potential of the Internet. The rise of digital music caused widespread changes in the industry, radically transforming the primary means to record, distribute, store, and play music. Relationships among artists, record companies, and consumers changed as well. Even with the increase in internet music distribution channels, profits remained elusive. “The model is still broken.” industry analysts bemoaned (Satariano & Shaw, 2017). Numerous independent music streaming services were launched only to fail shortly after. Ignoring the dismal track record, rapper and businessman Jay Z decided to test a new approach by reimagining Tidal, a music streaming service with 500,000 subscribers (Sisario, 2015b). Considering the complex forces driving the streaming music industry, however, Tidal faced a difficult challenge positioning itself.

Jay Z acquired Tidal from the Swedish company Aspiro Group in March, 2015, and promptly turned to his friends in the music business to support it. Leading artists like Beyonce, Kanye West, Rihanna, Nicki Minaj, Madonna, Daft Punk, and others helped announce the launch of Jay Z’s newly reimagined Tidal service. In some ways, the service stayed the same as before, featuring paid subscriptions for content and better audio quality. However, Jay Z also sought to give the service a new mission and create a movement around a new approach to the streaming business. Jay Z and his partners focused on the payment model for artists who provide the music for streaming services. Branded as “the first ever artist-owned global music and entertainment platform” (Jurgensen, 2015), Tidal paid a higher royalty rate to rights holders than rival services. All music services pay a royalty rate, but Tidal espoused a self-proclaimed artist-first payout structure. The precise royalty rate; however, was not specified (Sisario, 2015b). This followed a larger concern in the industry over the economic viability and the fairness to content creators in a business built on largely offering music for free to attract a small group of paying customers (Sisario, 2015b).

Jay Z offer the following account of how he saw Tidal addressing these industry concerns:

We saw the movement and how everything was going and figured that this could possibly be the last music format that we see in this lifetime. We didn't like the direction music was going and thought maybe we could get in and strike an honest blow and if, you know, the very least we did was make people wake up and try to improve the free vs. paid system, and promote fair trade, then it would be a win for us anyway (Gervino, 2015).

The launch of Tidal was really a relaunch of the service. Aspiro Group initially created the Tidal streaming music service, and launched it in the US and UK in October, 2014. Tidal had a reputation as a service for audiophiles, and the company had developed partnerships with audio electronics companies such as Denon and Harman to support the service in their products. To support customers who appreciated better sound, the service featured music streaming at a much higher quality level than competing services. Unlike rivals, Tidal did not offer a free streaming option; subscribers paid \$20 per month to access its CD-quality streams (Waniata, 2014).

The Music Industry

Industry Performance

Overall Industry Performance

The music industry has been marked by frequent change. While navigating frequent changes in audio formats (see Table 1), industry revenues bore significant highs and lows (see Figure 1). According to data provided by the Recording Industry Association of America (RIAA; 2014), the industry had revenues of just over \$2 billion in 1973. After long period of relatively consistent growth, industry sales peaked in 1999 at \$14.585 billion. Since that year, industry sales declined until 2010, when sales stabilized around \$7 billion.

Table 1: Timeline of Audio Formats, 1906 to 2001

Year	Audio Formats	Description
1906	Amplitude Modulation (AM) radio	Earliest modulation method used to transmit voice and music by radio
1933	Frequency Modulation (FM) radio	Modulation method that transmits music and voice with less noise than AM radio
1948	Vinyl LPs	Analog, 33 $\frac{1}{3}$ RPM, 7", 10", and 12" vinyl discs
1949	Vinyl 45	Analog, 45 RPM, 7" vinyl discs
1963	Cassette	Analog, 1 $\frac{7}{8}$ in/s play speed, magnetically coated polyester-type plastic film wound between two spools held with a protective plastic cartridge, 3.96" x 2.50" x 0.15"
1965	8-Track	Analog, 3 $\frac{3}{4}$ in/s play speed, magnetically coated polyester-type plastic film wound between two spools held with a protective plastic cartridge, 5.25" x 4.00" x 0.80"

1982	Compact Disc (CD)	Digital, 500 RPM polycarbonate plastic disc with a center spindle hole, 4.72" external diameter, 0.59" Internal diameter, 0.04" thick
1998	MP-3	Digital, audio coding format for lossy data compression
2001	Free Lossless Audio Codec (FLAC)	Digital, audio coding format for lossless data compression

(Cornell University, 2003)

Performance Across Different Formats

In the past 25 years, the music industry has used a number of different distribution formats (see Figures 2 and 3). Sales of cassettes peaked in 1990 at \$3.730 billion with 529.6 million units delivered. The number of compact disks produced, the format that followed cassettes, reached its highest level in 1999 with just under a billion units delivered, and sales reached its pinnacle the following year at \$13.357 billion.

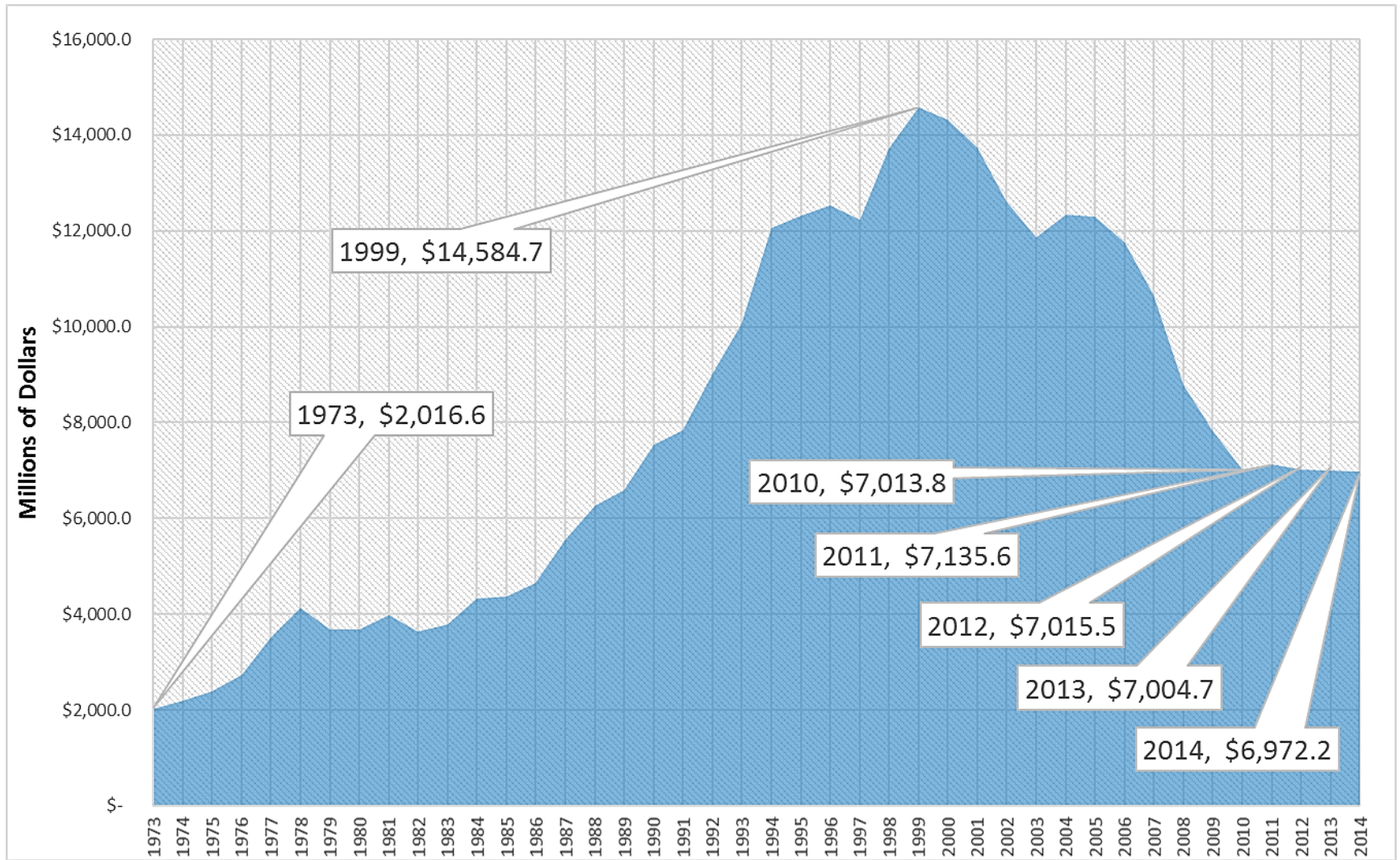
After the climax of CDs in 1999, a variety of new digital formats emerged for consumers to choose from. This transition made for an exceedingly complex portrayal of the state of the industry. Permanent digital downloads seemed to reach its apex in 2012 at \$2.828 billion in sales. Various forms of digital streaming and broadcasting continued to increase, and in 2014, sales from these distribution methods amounted to \$1.867 billion. Interestingly, the older vinyl LP format saw a resurgence, going from 1.9 million units in 2007 to 13.7 million units in 2014.

Changing Balance Between Physical and Digital Formats

In recent years, the balance across competing music formats was in transition. Not only were consumers switching away from physical to digital formats, but the composition of those digital formats was shifting as well (see Figure 4). In 2010, physical music formats of all types accounted for 52% of total retail value. Of the 45% attributed to digital formats, permanent digital downloads were 32%, streaming services contributed 7%, and mobile ringtones (a significant source of industry revenue going back to at least 2005) accounted for 6%. By 2014, physical formats had dropped to 32% of the total industry retail value, while digital formats rose to 65%. Within these digital formats, digital downloads grew to 37%, streaming to 27%, and ringtones dropped to 1%.

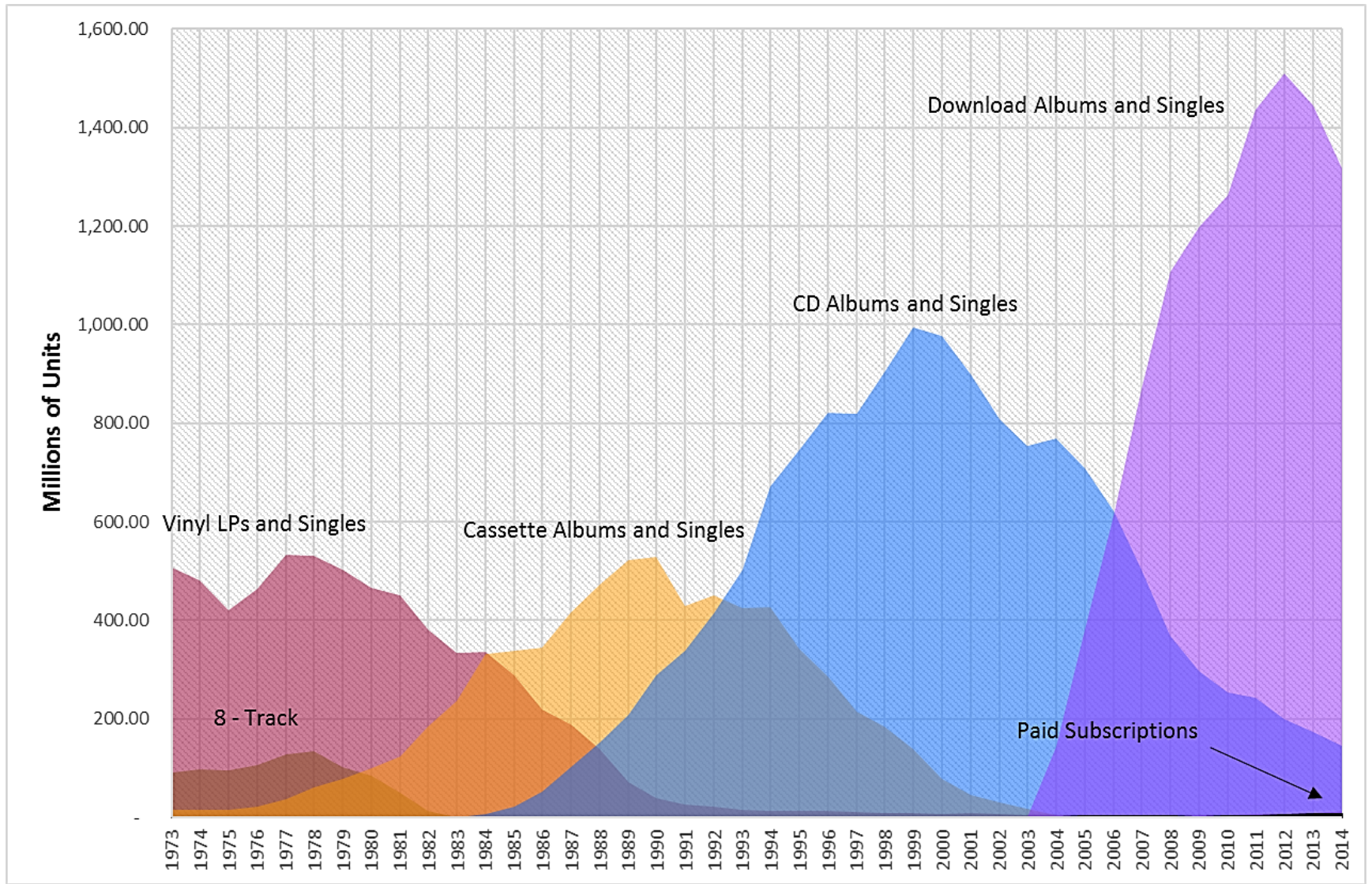
Since peaking in 2012, permanent digital downloads have declined 9.68% to \$2.577 billion in 2014 (see Figure 5). Ringtone sales also continued to decline, decreasing 60.16% between 2012 and 2014, ultimately dropping from \$166.9 to \$66.5 million. In contrast, consumers made a significant shift to streaming services. Even in 2014, streaming was still described as a novelty (Hayes, 2016). At a minimum, new entrants in the streaming business needed access to the most sought-after libraries, a reasonable royalty payout rate, and the technology infrastructure to accommodate listener traffic (Sisario, 2015b). Despite these barriers, this model could be lucrative. Streaming revenues increased 80.8% from 2012 to 2014, going from \$1.033 to \$1.867 billion. Further demonstrating the transformation of the music industry toward an emphasis on streaming, the number of paid subscribers grew an astounding 413% between 2010 and 2014, going from 1.5 to 7.7 million subscribers (see Figure 6).

Figure 1: Total US Recorded Music Revenues, 1973 to 2014



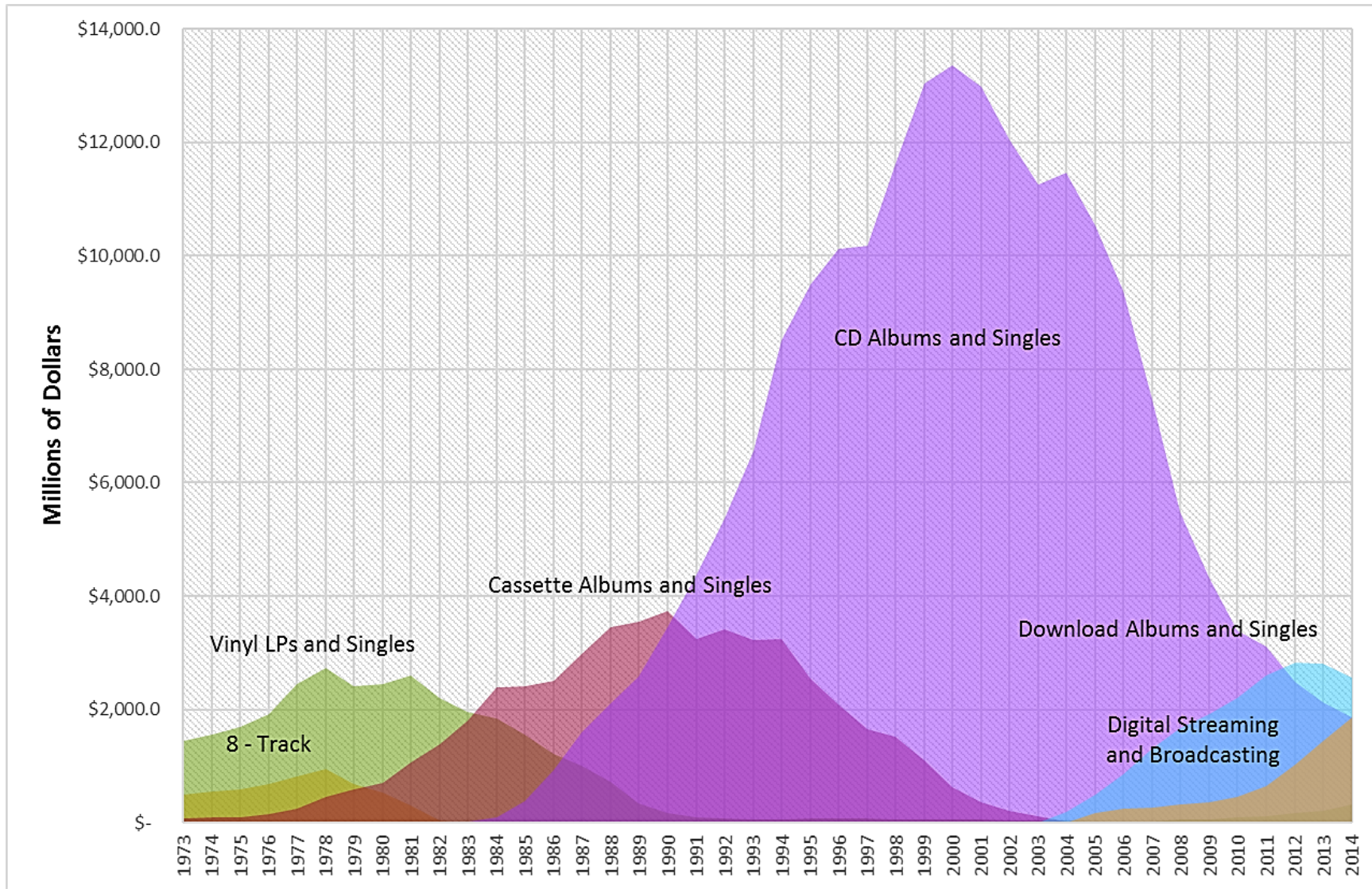
(RIAA, 2014)

Figure 2: Units Sold by Distribution Format, 1973 to 2014



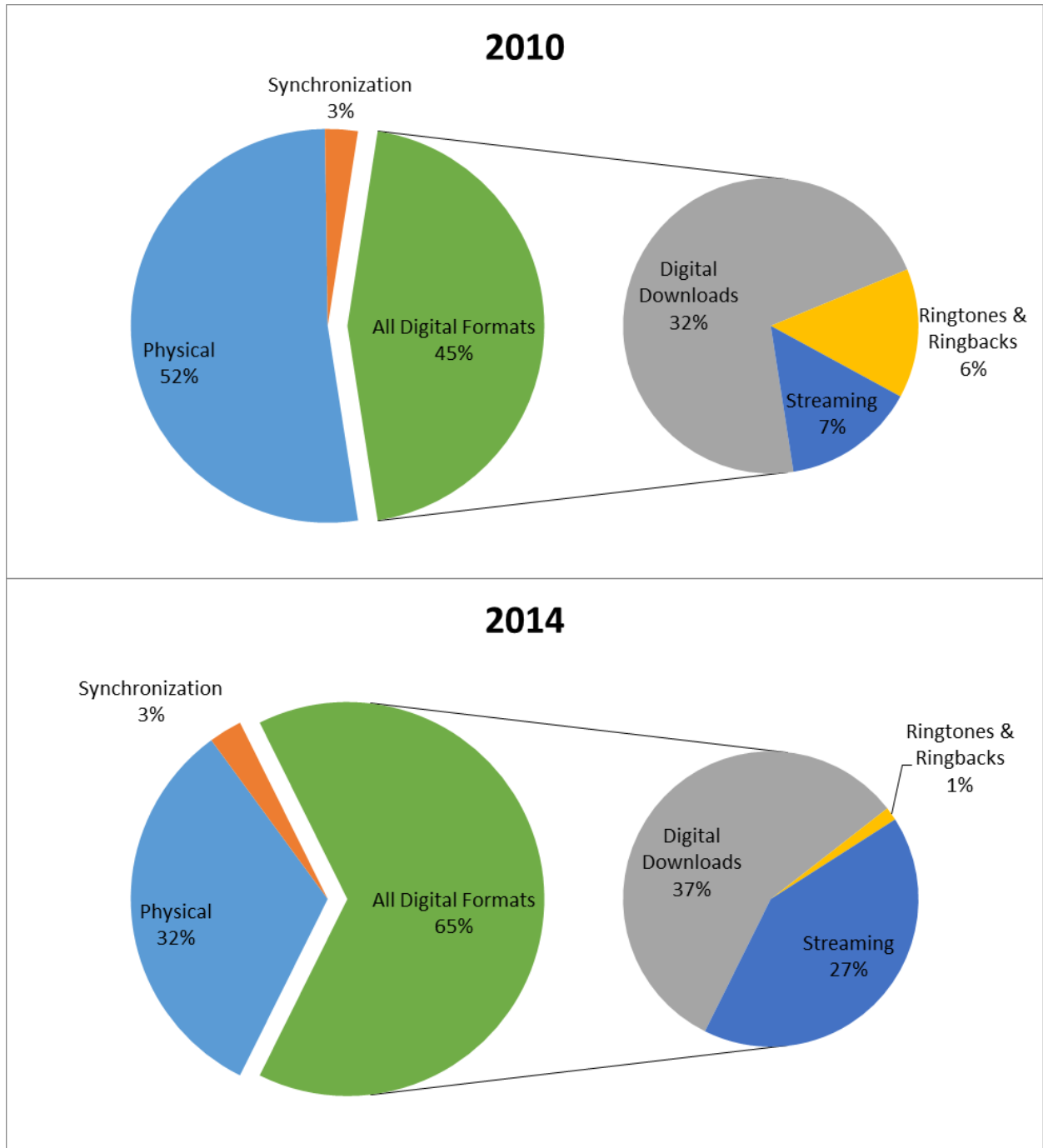
(RIAA, 2014)

Figure 3: US Recorded Music Revenues by Distribution Format, 1973 to 2014



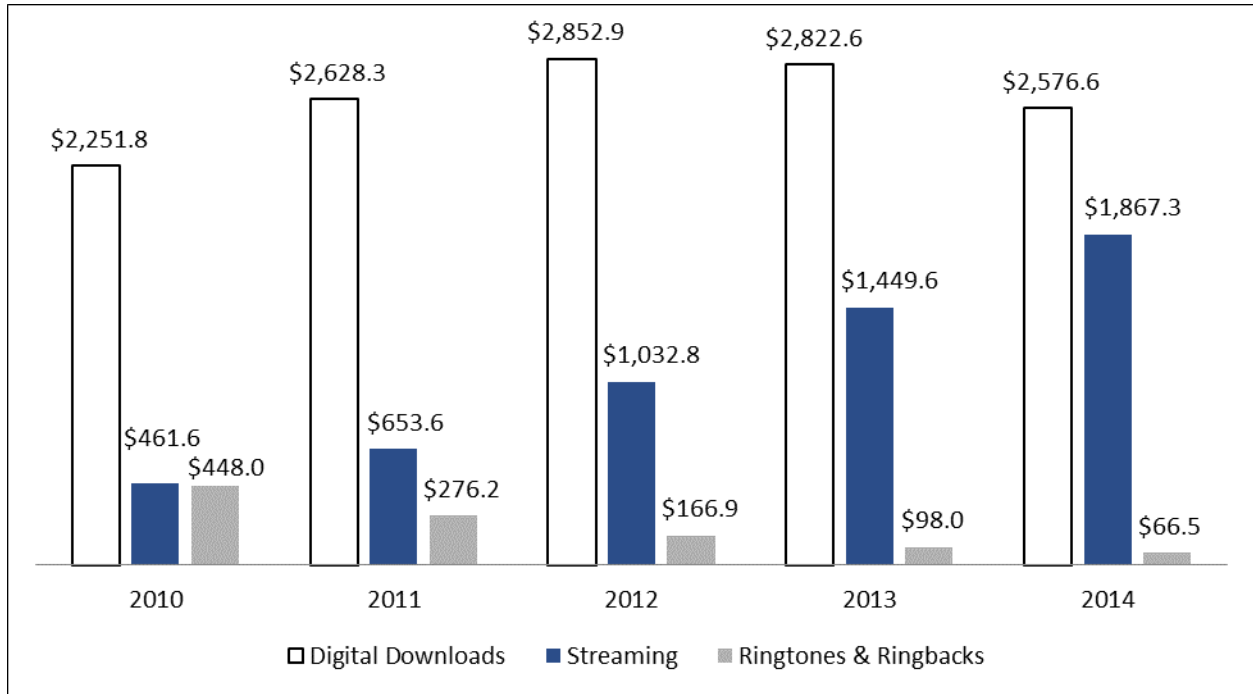
(RIAA, 2014)

**Figure 4: Music Consumption Across Different Distribution Formats
Based on Percentage of Total Retail Value, 2010 and 2014**



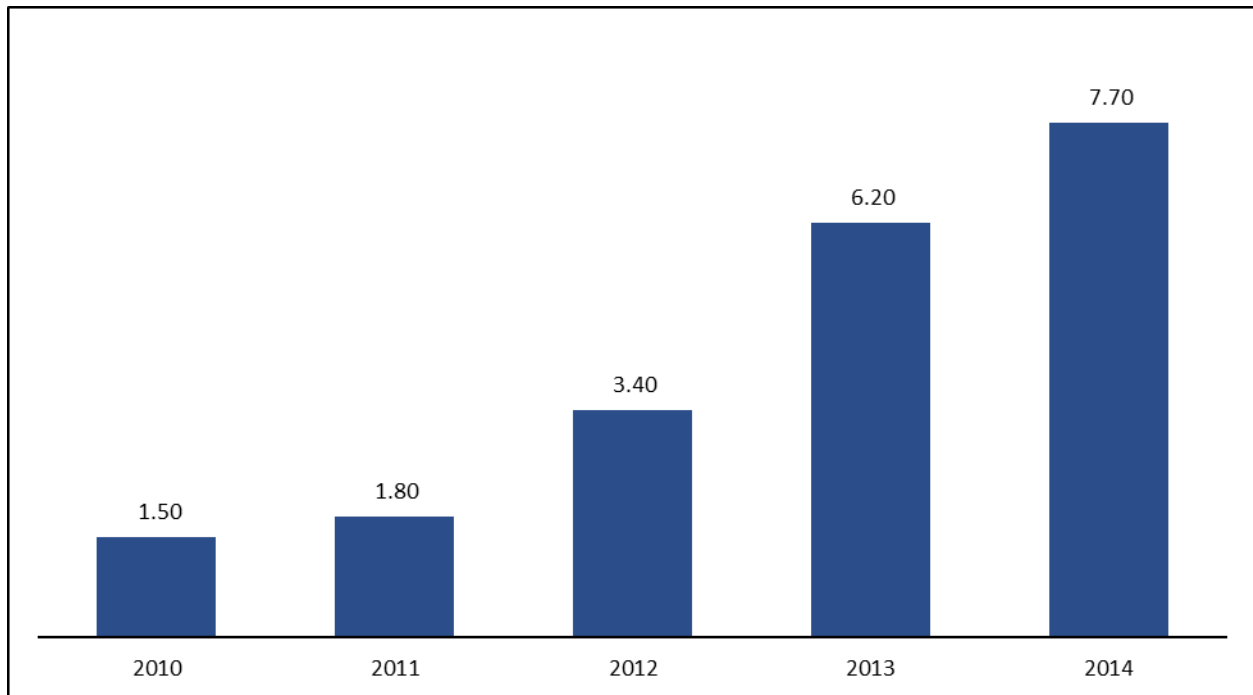
(RIAA, 2014)

Figure 5: Value of US Digital Music Sales in Millions of Dollars, 2010 to 2014



(RIAA, 2014)

Figure 6: Number of Paid Streaming Subscriptions in the US in Millions, 2010 to 2014



(RIAA, 2014)

Illegal free music remained a major obstacle to future growth of legitimate music markets (International Federation of the Phonographic [IFPI], 2013). Approximately 32% of global internet users regularly accessed unlicensed music sites (IFPI, 2014). This is particularly alarming considering that mobile access through smartphones has made the Internet more generally accessible than ever before. Furthermore, consumers increasingly demanded instant access to music and were less concerned with owning physical storage media. This was to the industry's benefit. The new streaming mentality helped disrupt illegal online music sharing. According to the IFPI (2014), many consumers preferred streaming to illegally downloading music.

Technological and Consumer Shifts

The "Traditional" CD Format

The rise of computers as the main medium to record, distribute, store, and play music led to significant changes in the music industry. Many consumers began to transfer their music from physical mediums such as CDs onto computers while at the same time, music distribution via the Internet increased considerably. In effect, this change in the music industry altered the balance of power among the industry players. Major music-only retail stores, which once had significant influence, went bankrupt and big box retail stores overtook this position in the market. In the US, between 2005 and 2009 alone, approximately 2,680 record stores closed and major labels had to announce massive layoffs and artist-roster cuts (Knopper, 2009). The term label is used to describe the publishing company that manages the artist's brand and trademarks. Typically, the label also coordinates the production, manufacture, distribution, marketing, promotion, and enforcement of copyright for all of the artist's sound recordings.

The "New" Format—Digital Downloads

While the computer and the Internet gained in popularity in music distribution and consumption, the sales of CDs experienced dramatic drops. Between 2000 and 2011 alone, the number of CDs sold in the US dropped from about 942,000 to about 241,000 units (RIAA, 2012).

Digital music downloads, in contrast, experienced tremendous growth. In 2005 alone, 366.9 million singles and 13.6 million albums were downloaded. By 2014, this number grew to 1.2 billion singles and 117.6 million albums (RIAA, 2014).

Despite this significant change, data from the IFPI (2015) suggested that the industry continued to follow a portfolio structure with revenues being generated from a variety of sources (e.g., digital downloads and physical formats). In 2014, however, for the first time equal revenues were generated from digital and physical formats with approximately 46% from each. In terms of digital revenues, 52% came from downloads and 32% from streaming, which could further be divided into ad-supported streaming (9%) and subscription-based streaming (23%). The 46% of revenues from physical formats came from CDs, reviving LPs, and other mediums (IFPI, 2015).

Executives at Electric and Musical Industries (EMI) observed the magnitude of industry change first-hand in 2006. EMI was the world's fourth biggest recorded music company. With the

intention of gaining insight into consumer habits, top management invited a group of teenagers to its London headquarters to talk about their listening preferences. After the focus group, the teenagers were offered several free CD to thank them for their time, however, none of the participants took any. This event revealed that the industry's main product, the CD, which had accounted for about 80% of sales, was fading rapidly ("From Major to Minor," 2008).

At the same time, however, the decline in CD sales had not been offset by digital sales (RIAA, 2014). Although paid digital downloads grew rapidly, they did not begin to make up for the loss of revenue from CDs. As such, it should be noted that the decline of CD sales was intensified through three vicious cycles. First, because the sales of CDs were slowing, big retailers cut CD shelf space, which further accelerated the decline. Second, given that major labels were cutting costs, artists received less marketing support to promote their CDs, which, in part, prompted them to search for alternatives to CDs and to major labels. Third, because major labels faced harsh conditions, wary label investors became unwilling to spend the money needed to enter the music distribution channels that were thriving ("From major to minor," 2008).

The "Newer" Format—Digital Streaming Services

Contemporary distribution allowed for digital growth in the music industry, mainly driven by streaming. This trend was spurred by the underlying evolution from traditional models of music ownership to new, fast-growing models of music access. Although downloads remained the main source of revenue, weighing in at 52% of sales, the value of this format fell by 2% in 2013 and 8% in 2014. This could be primarily attributed to the maturing of downloads in developed countries where sales dropped by double digits. In some emerging markets, however, downloads remained an area of growth (IFPI, 2015).

Several factors contributed to the general decline in downloads. Competition had been mounting from other entertainment products. Most notably, perhaps, was the rise in music streaming (Business Spectator, 2014). Changes in the structure of the technology had made it easier to access streaming music platforms. The shift was further supported by lifestyle and hardware trends favoring mobile devices. Many smartphone users did not require any additional hardware to access a streaming music platform. There was also a shift in spending patterns within the download ecosystem from music towards apps. According to RIAA (2014) data, in the US alone, revenue from paid subscriptions to streaming services rose from about \$462 million in 2010 to \$1.867 billion in 2014. During the same period, digital downloads remained relatively constant, ultimately showing only a slight increase from \$2,261 to \$2,576 million.

Streaming services have sought to meet consumer demand while generating fair and sufficient revenues for artists and labels. The streaming model has been divided into two main categories. First, with subscription-based streaming services, consumers pay a monthly subscription fee. These types of services provided consumers with additional value through features such as unlimited streaming, no advertisements, and availability of songs offline. Second, consumers could choose to use free, ad-supported streaming services. These services usually provided somewhat restricted functionality, such as a limited number of songs, advertising, and the requirement of a constant internet connection (IFPI, 2015).

The ad-supported model could be regarded as a freemium model. This means that it allows consumers to try out the streaming service for free with the intent of eventually converting them into paying subscribers. The streaming services themselves, however, have had differing views on the need for a freemium model and only some services offer a free version (IFPI, 2015).

The use of subscription-based models has varied significantly depending on location. For example, in Sweden and South Korea about 40% of all consumers used subscription-based models, whereas in countries like the US, Germany, and the UK, only around 15% of consumers used subscription based models. In Japan, only about 6% of consumers have paid for access to a music streaming service (IFPI, 2015).

According to IFPI (2015), there are several ways to promote subscription-based services. First, companies could increase bundling partnerships, for instance by integrating streaming subscriptions into phone billing. A second option was to educate consumers about the value of paid subscription and address the underlying problem of the perceived value gap. Finally, companies could offer a greater variety of payment options between free and premium offerings.

In the beginning of the streaming movement, access to vast libraries was the main selling point. More recently, however, services have expanded the value proposition to include curation and recommendations of songs as well as specialized playlists for specific customer groups. To this end, streaming services have been trying to differentiate themselves with better and more intelligent music recommendations or with professional music curation by music experts (IFPI, 2015).

Also, the pricing options for streaming services have become more diversified with a greater variety of packages being offered to consumers. Streaming services have offered promotions based on contract length as well as discounted family and student plans. Some streaming services have also experimented with offering a lower cost product that offers access to a limited product range for a reduced price. For example, one service in the UK offered access to 100 songs on 8 curated playlists for the equivalent of about \$1.50 per week. In emerging markets, streaming services pursued deals with telephone companies to target prepaid customers, who account for up to 70% of users in some areas. These partnerships allowed streaming services to offer plans for costs as low as \$1 per week (IFPI, 2015).

In general, there were several factors that drove the growth of streaming services. As noted above, the penetration of smartphones was a major catalyst. Mobile devices have become more affordable, which promotes adoption. In fact, a vibrant ecosystem has emerged supporting smartphones, including home sound systems and seamless vehicle integration. Furthermore, improvements in broadband and technology infrastructure provided the framework necessary for mobile access to streaming services (IFPI, 2015).

Competitive Models within the “Newer” Format

Rdio

Rdio was an online music streaming service that was launched in 2010 by Skype founders Niklas Zennström and Janus Friis. It was the first modern music streaming service to arrive in the US, offering over 7 million songs (Newton, 2015).

In its beginnings, in a very young smartphone era, the company offered a web-only streaming plan for \$5.00 per month and a compatible Blackberry app. Since Rdio was the first modern streaming service of its kind, securing labels for the service took a lot of time and efforts. In fact, the service was in development for over two years. In the long run, however, the prolonged startup time benefitted the app’s innovative design and features (Newton, 2015).

Already in 2010, when Rdio began to spread among early adopters, people were talking about the launch of Spotify in the US, which shaped the music streaming industry as a free on-demand ad-based streaming service. At that point, however, Rdio required users to have a paid subscription to access the service and only long after Spotify’s launch in the US, did Rdio offer a free option in 2013. Additionally, Rdio continuously struggled to make the case for its unique streaming service, which may be partially attributed to the fact that it never held a chief marketing officer for longer than a few months. Furthermore, former employees reported that Rdio sometimes focused on misguided initiatives and was often reluctant in setting priorities. One example was the lengthy development of a new queue feature that took several product cycles to complete. Competitors, on the other hand, offered a simple list of tracks as a queue, which seemed to satisfy most customers (Newton, 2015).

When in 2013, Spotify counted 24 million users, of whom 6 million had a paid subscription, Rdio still struggled to stand out as a paid-subscription only service (Newton, 2015). In the same year, Rdio partnered with Cumulus Media to offer a free ad-based option of its service (Cumulus Media, 2015). Rdio never disclosed how many paid subscribers it had.

Looking back at Rdio’s history, 2013 proved to be a difficult year for the company. In June 2013, just before Rdio partnered with Cumulus, Rdio CEO Drew Lerner stepped down as CEO and just one month later in July 2013, Malthe Sigurdsson, Rdio’s head of product quit. Later that year in November 2013, Rdio had to lay off about a third of its employees (Welch, 2013). Rdio filed for Chapter 11 bankruptcy in 2015, ultimately selling most of its intellectual property to Pandora for about \$75 million (Walker, 2015).

With the continuous launch of new streaming services, the market became increasingly competitive. Indeed, it was difficult for a stand-alone service to stay competitive if it couldn’t attract and retain customers on a large scale (Popper, 2015). In general, the business model of streaming services worked on thin margins and could only become profitable with a very large customer base. Even Spotify with more than 75 million users and 20 million paid subscriptions still wasn’t profitable in 2015 (Newton, 2015).

Spotify

Spotify was started in 2006 in Stockholm, Sweden. At the time, Sweden was the home of peer-to-peer-based Kazaa and The Pirate Bay, services that facilitated illegal file sharing. Initially, Spotify was also peer-to-peer (it did not store music on its own servers). Eventually, however, management adopted a streaming model interspersed with advertisements. This allowed some revenue to go to artists who agreed to have their music available on Spotify. The value proposition was that Spotify offered consumers a legal alternative that would allow them to listen to streamed music without infringing on copyrights, and at the same time, provide a revenue-generating platform for copyright holders. Also, a premium service was conceived that not only offered higher revenue potential for copyright holders, but also provided users with better quality streaming without advertisements. It took several years to convince copyright holders to sign on, however, the service ultimately launched revenue-generating platforms in Sweden, Norway, France, Spain, and the UK in 2008 (Bissonnetee & Brunelle, 2015).

Spotify's streaming service has long included a free ad-supported channel and a premium ad-free channel (\$9.99/month) with faster downloads. The company stated that it allocates approximately 70% of all revenue to the copyrights holders who then distribute earnings according to whatever arrangements have been made between artists, writers, studios, and others, or as dictated by local legal standards. Specifically, the 70% that is kept by rights holders is based on total revenue per song, which is calculated according to the frequency it is played relative to all other songs in Spotify's library (Bissonnetee & Brunelle, 2015).

An important contributor to Spotify's success has been its own social media capabilities. Users could develop playlists of songs that fit with their interests, moods, and preferences. These playlists could then be shared so that users can "discover" songs that are consistent with their musical taste. Likewise, users could integrate Facebook and Spotify, and in their Facebook news feed share details about their playlists and newly discovered songs. These social media features help drive the streaming of songs by new or yet-to-be-discovered artists, allowing these artists to gain exposure that they might not have received otherwise (Vroom & Boquet, 2014).

According to its 2014 financial report, Spotify offered its services in 58 countries, with over 60 million users. The 15 million customers who subscribed to the premium service contributed over 90% of revenues. To help drive its premium service, Spotify has made arrangements with mobile phone carriers and Internet service providers to bundle Spotify services. As a result of deals such as this, Spotify's average revenue per user per year (ARPU) for premium customers rose to \$73 in 2014. This fell short of the \$120 list price owing to the truncated revenue stream from part-year premium memberships. In contrast, the ARPU for those on the free service was between \$2-3 per year. To date, Spotify had not yet been able to turn a profit, with revenues being continually outstripped by expenses. In 2014, its revenues exceeded \$1.37 billion, and it posted a 45% growth rate from 2013. Its operating losses, however, were still \$226.14 million (Dredge, 2015).

Spotify and other companies have been criticized by some artists for the low royalties paid by streaming services. For some well-known artists, it has made more sense for them to withhold their songs from streaming services and generate revenue from sales of digital songs and albums.

Taylor Swift is one of the more prominent artists who has taken this approach. Such boycotts, however, have been quite rare, with most artists (and record labels) offering the full catalog via Spotify and other streaming services (Ingham, 2015).

Rhapsody

In 1999, a new streaming audio service was developed for use on TuneTo.com, a customizable Internet radio platform. In April 2001, TuneTo.com was acquired by Listen.com, a startup that had built a large online music library. The new streaming service officially launched on December 3, 2001 as Rhapsody music. Rhapsody was the first subscription-based on-demand online music streaming service. By 2002, Rhapsody had signed contracts with all of the major five record labels of the time, BMG Entertainment, EMI Recorded Music, Universal Music Group, Warner Music Group, and Sony Music Entertainment (AdWeek, 2001).

In an attempt to counter Apple's launch of the iTunes Store, Real Networks acquired Rhapsody in 2003. However, in 2010, 7 years after its acquisition, Rhapsody decided to leave its parent corporation Real Networks to become an independent company. This transition was supported by an assortment of similarly independent companies such as MTV Network, Viacom, and others. In 2011, after becoming independent, Rhapsody counted about 750,000 subscribers, and in November of that year, acquired the by then legal streaming service Napster from BestBuy ("Rhapsody," 2012).

In 2014, Rhapsody and T-Mobile announced a partnership to offer free and discounted internet radio service to its customers. This new service was called Rhapsody UnRadio and addressed some of the downsides of traditional Internet radio services like Pandora. To this end, UnRadio offered ad-free streaming, unlimited skips, and offline playback. UnRadio, however, did not provide completely on-demand service. UnRadio was available to T-Mobile customers for free and to non-T-Mobile customers for \$4.99 per month (Seifert, 2014).

Due to early start in Internet radio, Rhapsody had earned the title of the longest-running music subscription service in the US. To date it had a catalog of about 20 million songs and claimed close to 3.5 million paying subscribers (Roettgers, 2015). By the end of 2104, it was the second most popular streaming music service in the world behind Spotify.

Tidal's Challenge

Initial Entry to the U.S. Market

According to the Aspiro Group, Tidal had about 500,000 subscribers at the time of Jay Z's relaunch (Sisario, 2015b). By comparison, Spotify had 60 million users and 15 million paid subscribers (Sisario, 2015b). Pandora had 78 million users and 3.9 million paid subscribers (Sisario, 2015a). Paying subscribers of Sirius XM satellite radio, the world's largest radio network, numbered over 24 million ("Radio," 2014). Entirely free alternatives like YouTube, which has over a billion users, also threaten the adoption of paid streaming subscriptions (Hampp, 2015). Lastly, it should be noted that large digital-download offerings from Apple and Amazon still accounted for the majority of digital revenues at the time (RIAA, 2014). And

despite their ability to remain profitable in the face of declining digital downloads, Apple (Sisario & Chen, 2015) and Amazon (Sisario, 2014) were expected to launch streaming services soon.

Unlike other services, however, Tidal would be owned by the artists. To this end, Tidal tried to recruit a loyal contingency of artist by offering them a better compensation model along with shares in the company. In return, the artist provided special material and exclusive content to Tidal's subscribers. A number of the music industry's leading artists bought in, including Beyonce, Kanye West, Rihanna, Nicki Minaj, Madonna, Daft Punk, Alicia Keys, and Jason Aldean (Jurgensen, 2015). Given their interest Tidal's success, many of these artists promoted the service through social media (Gervino, 2015).

Even though Jay Z's focus was on an artist-first payment system for streaming music, which he described as a "social agitator," the fact remained that for the most part, record companies, rather than artists, have the rights to license music. Accordingly, it was hard for Tidal to get label-controlled musicians to agree on a standard for distribution, pricing, and marketing (Jurgensen, 2015). At the time of the relaunch, it was decided that Tidal would not offer a free version. Instead, users could choose between two subscription plans: \$10 to stream music in standard quality and \$20 to stream CD-quality music (Waniata, 2014).

For consumers, the draw of Tidal included its celerity brand image, access to exclusive content, and superior sound quality (Sisario, 2015b). The inability of average consumers to detect differences in audio quality, however, casted a shadow of doubt on Tidal's bid for differentiation in this area (Parrack, 2015). Considering the complex forces driving the streaming music industry, Tidal faced a difficult challenge to position itself.

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