IN THE UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

MELISSA FERRICK, et al., Plaintiff, vs. SPOTIFY USA INC., et al., Defendants.	No. 1:16-cv-08412 (AJN)

CORRECTED

EXHIBIT B-I TO THE DECLARATION OF JOAO DOS SANTOS IN SUPPORT OF PLAINTIFFS' MOTION FOR FINAL APPROVAL

VOLUME 6 of 7

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1 "Spotify: A Global Streaming Leader"

2 "Spotify Showing Momentum Ahead of Possible Listing"

3 "Exclusive Report: Spotify Artist Payments Are Declining in 2017, Data Shows"

4 "Spotify Research Report: The Rock Star of Streaming Services"

5 TuneCore Blog: How We're Getting Your Mechanicals From Streams"

6 "Spotify Hit With $150 Million Class Action Over Unpaid Royalties"

7 "Publishers Said to Be Missing as Much as 25 Percent of Streaming Royalties"

8 "Independent labels claimed 35% market share in the US last year … by ownership"

9 "Understanding and Measuring the Illiquidity Risk Premium"

10 "Pandora Media Corp – Spotify Sub Leap Evidence of Expanding Market For On-Demand"

11 "US' Music Streaming Royalties Explained"

12 Consolidated Financial Statements as of December 31, 2016 and Independent Auditor's Report

13 "Exclusive Report: Spotify Artist Payments Are Declining in 2017, Data Shows"

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A Primer for Valuation of Music Catalogs

Entertainment Law & Finance Newsletter

September 1, 2014 Monday

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LJN
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Body

Interest in the value of intellectual property created and held by musicians has been increasing in recent years. Some artists approaching retirement age look to cash out of their music assets by selling their holdings to a growing pool of interested buyers. Interested buyers include alternative investment managers, such as private equity and hedge fund advisors, looking for assets that can offer their investors a stable stream of income. Other artists are trying to take advantage of estate and gift regulations to minimize the taxes paid by their estates.

The rights to a music catalog can be held outright by the artists, within a pass-through legal entity, such as a limited liability company or partnership, or within a corporate entity or trust. How are these music assets valued?

MUSIC CATALOG

To accurately value an artist's music catalog, a review of the following documents is a good starting point:

List of song/composition titles with their respective publication dates;

Tax returns of the person or entity receiving the royalties for five to seven years preceding the valuation date;

Annual royalty statements as collected and documented by performing rights organizations for five to seven years preceding the valuation date;

Relevant agreements (e.g., licensing, publishing, etc.); and

Record contracts, including details of any advances.

If past royalties have not been accurately captured and paid, the worth of the copyrights held within the music catalog may be undervalued.

Upon collection of all available data, it is analyzed to parse the **music catalog**'s earnings by year, song, publication date, royalty type and the region in which the **royalties** were earned. Once the data is deconstructed, the appropriate **valuation** methodologies are considered.

The three generally recognized approaches for valuation are the cost, market and income approaches.

The "cost approach" is based on the notion that the value of an asset is approximated by quantifying the market value of the tangible and intangible assets, net of liabilities. Since the value of a music catalog is tied to its future earnings potential, the cost approach is generally not appropriate to measure the value of a music catalog.

The "market approach" uses a comparison of ratios of publicly traded or privately held assets in similar industries and financial positions as the subject asset. In connection with the valuation of a music catalog, the market approach theory is used to develop a range of market multiples applicable to the music catalog's royalty stream. This range of market multiples can then be used as a valuation input under the income approach.

The "income approach" estimates the value of a music catalog based on the annual royalty stream the music catalog is expected to generate in the future. If earnings are expected to remain stable into perpetuity, the annual income stream is capitalized (capitalization of earnings). If earnings are expected to change substantially from year to year or the holding period of the asset can be reasonably estimated, the discounted-cash-flow method is applied as further described below.

The capitalization-of-earnings, using market multiples found under the market approach, and discounted-cash-flow-methods under the income approach are often employed to arrive at the value of a **music catalog**. Under both methods, representative or future expected **royalty** earnings must be **determined**.

A **music catalog**'s earnings can change based upon unpredictable popularity. What is considered "in" during one year can become stale and unappealing in a subsequent year. Ideally, a five-to-seven-year look-back of historical data is reviewed to map out the trend of historical **royalty** streams. This can help provide guidance in **determining** future expectations.

The number of songs driving **royalty** income is an important consideration as well. A **music catalog** that derives a substantial portion of total royalties from one song may not be as attractive as a music catalog that generates earnings from multiple songs.

Once these elements are considered, a representative future earnings expectation is determined and then used in the capitalization-of-earnings, discounted-cash-flow methods, or both.

Capitalization-of-earnings methodology is based on the premise that the value of an asset is equal to the present value of the income stream enjoyed by its owners in the future. The multiple to be applied to the representative earnings power, to a certain degree, is subjective and a matter of judgment. The applicable multiple depends on a number of factors, including the remaining copyright life of the compositions, the existence of catalog "standards," statutory increases in mechanical rates, new recording configurations, international expansion of intellectual property rights, new avenues of exploitation at home and/or abroad, and the trend of earnings.

Multiples for music catalogs currently can range between five and 15. However, multiples can be lower in the event that the composer does not exclusively own all of the publishing rights or higher in the event of a bidding war. Once the multiple is chosen, it is applied to the representative earnings power to arrive at a value for the music catalog.

For example, if the representative future royalties are expected to be $200,000 annually and the selected multiple is 8, the catalog would be valued at $1,600,000 ($200,000 x 8) using this method.

The discounted-cash-flow method is based on the economic principle of expectation. That is, the value of an asset to a hypothetical buyer or a hypothetical seller is estimated by projecting the present value of the future economic benefits or cash flows. The present value of future cash flows is calculated through the application of a market-derived discount rate to establish a value of the assets. The discounted-cash-flow method also considers the life of the asset. As such, the future benefit stream discounted back to the valuation date, at a rate reflecting risk, should approximate the value of the asset.

Furthermore, once the expiration of the copyright for each song is determined, a diminution factor should be considered. The diminution factor considers the applicable growth or decline of future earnings, and a discount rate associates the risks of achieving the projected level of earnings. To develop a diminution factor and discount rate, consideration is given to:

Historical trends in royalty earnings;

The makeup of the music catalog, including the number of songs and concentration of earnings;

Popularity of the songs in the music catalog as of the valuation date;

That copyright termination rights increase the risk that a decedent's heirs may be able to exercise their right to revert ownership of the music catalog from a third-party owner to themselves; and

The size of the music catalog.

Once the diminution factor is established, it is used to decrease the projected annual royalty stream. A discount rate is applied to measure the present value of the projected annual royalties. The sum of the present value of the cash flows for the discrete projection period is considered to be representative of the value of the music catalog.
For example, if the remaining life of the copyright is 10 years, the expected royalties in year one are $200,000, the diminution factor is 5% annually and a 10% discount rate is applied, the value of the catalog would be as shown in the table below.

	Expected	**Present**
Year	**Royalties**	**Value @ 10%**
1	$ 200,000	181,818
2	190,000	157,025
3	180,500	135,612
4	171,475	117,120
5	162,901	101,149
6	154,756	87,356
7	147,018	75,444
8	139,667	65,156
9	132,684	56,271
10	126,050	48,598
	Total PV	$ 1,025,548

Mandeep Sihota, CFA, ASA, is a principal based in New York City in the Valuation and Forensic Services Practice of Citrin Cooperman (www.citrincooperman.com), a leading accounting and advisory firm. She provides services related to **music catalog** valuations, intellectual property valuations and economic damages. She leads the valuation services team, and manages the preparation and delivery of **valuations** of businesses, private equity and incomegenerating assets such as **royalty** assets and derivatives.

Load-Date: September 1, 2014

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REUTERS

#ART

APRIL 23, 2009 / 2:27 PM / 9 YEARS AGO

Music publishing's steady cash lures investors

<a href="/journalists/yinka-adegoke">Yinka Adegoke

By Yinka Adegoke - Analysis

NEW YORK (Reuters) - Skeptics might believe the music industry's best days are behind it, but some institutional investors are snapping up catalogs of published songs that provide steady, recurring cash flows.

Pension funds and private equity firms have recently invested in some high-profile music assets, sparking concern by some industry executives that these nonstrategic investors could push up the prices of the best song catalogs.

Dutch fund ABP, the world's third-largest state pension fund, this week bought the legendary Rodgers & Hammerstein catalog of songs from musicals including "The Sound of Music" and "The King and I." Industry executives estimate the deal to be worth around $200 million.

ABP's move came less than two weeks after private equity firm Pegasus Capital paid an estimated $55 million for Spirit Music Group, a song publisher with rights to some of the works of artists ranging from Frank Sinatra to Madonna.

"These funds have got a lot more cash than any music company and that will keep the prices of these catalogs above market rates," said an executive who requested anonymity because his

company had kicked the tires at Rodgers & Hammerstein.

Music publishers make money by exploiting the rights of their song catalogs. They get paid every time a song is played on the radio, in TV shows, in movies, at the theater, in video games and in advertisements to name a few outlets.

Song catalogs do not necessarily promise huge returns on investment, but rather regular cash flow from a business with relatively low capital expenditure compared with the more volatile venture capital-like model of record labels, which hope for hit songs to make most of their profits.

For example, at Warner Music Group's WMG.N publishing unit Warner/Chappell, revenue grew steadily at a rate of 7.6 percent between 2006 and 2008. During that same period, Warner Music's recorded music revenue rose, then fell, then rose again with the average being a decline of 1.9 percent a year.

"Publishers have a huge diversity of revenues," said Roger Faxon, chief executive of EMI Publishing. "At EMI, even as CDs sales shrink we continue to see our revenues grow every year."

NOT AS EASY AS IT LOOKS

ABP is unfazed by the troubles that have faced other music investors such as private equity firm Terra Firma TERA.UL which this year had to write down half the value of its 2.6 billion euro ($3.42 billion) acquisition of EMI Group in 2007. Warner Music was taken public by Chief Executive Edgar Bronfman Jr in 2005 with backing from private equity firms, and its shares trade at less than $5 today, a far cry from its $17 float price. The private equity investors, however, made their money back through a dividend payment.

With U.S. CD sales down by nearly a third last year, the recorded music industry continues to struggle with piracy and the move by consumers to digital songs.

That has not deterred ABP from the financial potential of song publishing. The pension fund set up a 5 billion euro ($6.57 billion) innovative asset unit last year to take direct holdings in new types of alternative investments.

In partnership with CP Masters run by Andre de Raaff, ABP has bought song catalogs from Vivendi's (VIV.PA) Universal Music Group and the classical music catalog of Boosey & Hawkes in just over a year. It now has more than 200,000 pieces of music with annual revenue of over 100 million euros.

"Intellectual property like music publishing rights offers stable cash flows protected against inflation," said Rein Kronenberg, senior counsel at ABP's asset management unit.

"This diversifies our risk," said Kronenberg, whose fund had 217 billion euros at the start of 2008. "Publishing has a smaller correlation with traditional asset classes like listed securities."

But managing the rights to millions of songs and thousands of songwriters is not as easy as it looks, said Marty Bandier, chief executive of Sony/ATV, a publisher jointly owned by Sony Corp (6758.T) and pop star Michael Jackson.

"What any financial investor does with publishing assets is crucial because you need to market and promote those songs on a 24-7 basis," Bandier told Reuters. "We're still buyers in this market and when these investors decide they want to sell we'll be here to pick those songs up."

Song catalogs are sometimes valued at a multiple of earnings before interest, taxes, depreciation and amortization (EBITDA), usually between eight and 12 times, said executives. On that basis, Warner/Chappell would be worth more than $1 billion, whereas its parent Warner Music's market capitalization is currently only about $726 million.

However, most catalogs are valued on a net publisher share (NPS) basis, which is the gross publishing revenue collected after paying royalties to songwriters. Executives said catalogs like the Rodgers & Hammerstein's are valued between seven to 14 times NPS.

Editing by Tiffany Wu and Steve Orlofsky

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#BUSINESS NEWS

MAY 12, 2017 / 7:42 AM / 6 MONTHS AGO

Spotify, valued at $13 billion, to launch direct listing on NYSE: sources

Lauren Hirsch, Pallavi Dewan

(Reuters) - Music streaming service Spotify, most recently valued at $13 billion, will be the first major company to carry out a direct listing on the New York Stock Exchange when it goes public later this year or early next year, two sources familiar with the situation said on Friday.

The logo of online music streaming service Spotify is reflected in an audio music CD in this February 18, 2014 illustration picture. REUTERS/Vincent Kessler/File Photo

The move would be the biggest test yet for the direct listing process, which for companies willing to list shares without raising capital eliminates the need for a Wall Street bank or broker to underwrite an initial public offering (IPO) along with many associated fees.

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If successful, it could change the way companies approach selling shares to the public.

The Swedish technology firm is working with investment banks Morgan Stanley, Goldman Sachs Group Inc and Allen & Co to advise them on the process, the sources said.

Spotify, the New York Stock Exchange, Morgan Stanley and Goldman declined comment. Allen & Co did not immediately respond to a request for comment.

In a traditional IPO, investment bank underwriters sell new shares of a company to the public at a price they determine based on investor feedback. The underwriters leading this process

are backed by an IPO syndicate, sometimes comprising more than a dozen banks, which share the responsibility of selling and allocating shares to investors.

In a direct listing, a company does not raise money by offering new shares for sale, but instead makes existing shares immediately available to the public, meaning employees and investors can buy and sell as they wish. That dispenses with the need for banks to market and sell the company's shares.

Spotify's decision to side-step underwriters could be a hit to investment banks that rely on fees from marquee listings.

Proceeds from IPOs fell 40 percent last year from 2015. Technology IPOs, often a large chunk of the market, were down 56 percent, according to Thomson Reuters data.

Last year Spotify raised $1 billion in convertible debt from private equity firm TPG Capital Management LP and hedge fund Dragoneer Investment Group. The round came with a provision allowing TPG and Dragoneer to convert their debt into equity at a discount of 20 percent or more to the offering share price of an IPO, depending on when the company goes public.

It was unclear how that stipulation would be handled in a direct listing.

RISKS, VOLATILITY

Direct listings are not without risk. Investment banks seek to set an IPO price that fits demand while leaving room for the company's shares to rise further in the market. Without this guidance, a company's stock price is more exposed to gyrations.

There is also no "lock-up" period to prevent early-stage investors and employees from selling shares in the months following a listing. Without that, a stock could experience heavy turnover and price fluctuations just as the company is getting its public market footing.

Direct listings also do not eliminate all Wall Street costs. Investment banks still advise companies on how to get their financials in order and articulate why they are a good investment, even if they do not get involved in building materials to show investors at so-called roadshows.

Examples of companies of Spotify's size that have directly listed are scant, though Freddie Mac did so in 1989.

A direct listing for a large company such as Spotify may be hard to replicate, industry sources said. Companies less well-known would likely need bankers to market shares, while Spotify can rely on consumer familiarity and media exposure.

Spotify, which has yet to post a profit as it expands in markets worldwide and builds new offices in New York, lost 173 million euros ($189 million) in 2015, according to the latest figures disclosed by its Luxembourg-based holding company.

In recent months, it has sought to build up its service by striking deals with music labels. In April, it announced a licensing deal with Universal Music Group Inc that could make the streaming platform more attractive to its top-selling artists, including Taylor Swift, Adele, Lady Gaga, Coldplay and Kanye West, by letting them release albums exclusively to premium users.

Spotify hopes to strike deals with Warner Music Group and Sony Music in the run-up to the IPO, one of the sources said.

($1 = 0.9160 euros)

Reporting by Pallavi Dewan in Bengaluru and Lauren Hirsch in New York; Additional reporting by Liana Baker in New York and Sophie Sassard in London.; Editing by Sai Sachin Ravikumar, Bill Rigby and Meredith Mazzilli

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Inside Spotify's Financials: Is There a Path to Profitability Or an IPO?

6/22/2017 by Ed Christman

Toru Yamanaka/AFP/Getty Images

Daniel Ek, Spotify Co-Founder/CEO

Whether Spotify's just-released financial results pave the way for the digital service to do an initial public offering of stock anytime soon is still anybody's guess; yet, despite the much larger than expected net loss, there's good news for the streaming service.

For one, the company is still growing at a fast clip with sales up €1 billion ($1.054 billion) to €2.93 billion ($3.09 billion) from the previous year's total of €1.93 million ($2.1 billion). As of March, the streaming service had some 50 million paying subscribers -- up from 40 million from the previous Sept. -- and a 140 million active users. But as its revenue base gets bigger, a slower growth rate comes into play as its 52.1 percent in growth for 2016 is less, percentage-wise than the 77.8 percent growth rate produced for 2015 versus its 2014 revenues of €1.084 billion ($1.14 billion).

While its net loss of €539.2 million ($568 million) was more than double the €231.8 million ($244 million) it had in the prior year, if you overlook the non-cash charge of €245 million ($258 million) to write down the discount on the €1 billion in notes (due in 2021, because Spotify didn't

plan on doing a public offering within one year of that April 2016 financing), the adjusted net loss was €294.2 million ($310 million), according to one analyst. That's a 27.1 percent increase in red ink, to be sure, from 2015's $231.4 million net loss, but not as bad as the non-adjusted loss for 2016 would lead you to believe.

If the overall reported net loss is discouraging news, at least earnings before interest, taxes, depreciation and amortization held nearly steady at €161.2 million ($169.2 million) in red ink in 2016, versus the €170.7 million ($180 million) in a loss of EBITDA in the prior year, *Billboard* calculates.

Also good news, the company's operating loss as a percentage of revenue has steadily decreased. In 2016, Spotify's operating loss was €349.4 million ($368 million), which was 11.9% of revenue versus the prior year when it was €236.3 million ($238.2 million), or 12.3 percent of revenue. In 2014 it was even higher at €191.1 million ($201.3 million), or 17.6 percent of revenue.

Those decreases in operating loss, however, appear to have more to do with the rise in revenue then they do cost control; or whether Spotify can achieve economies of scale with sales and marketing and general and administrative expenses.

While product development costs held steady as a percentage of revenue in 2016 at €206.85 million ($217.9 million), or 7.1 percent of revenue, the same ratio as in 2015; general and administrative revenue grew to €175.2 million ($184.6 million), or 6 percent of revenue, from 2015's expenditure of €105.9 million ($111.6 million), or 5.5 percent of revenue; and worse, sales and marketing costs totaled €417.9 million ($440.3 million), or 14.3 percent of revenue, from €258.7 million ($272.6 million), or 13.4 percent or revenue.

> READ MORE
> Spotify Officially Hits 50 Million Paid Subscribers

In contrast, in 2015 Spotify begun to achieve scale when all three of the above expenditures as a percentage of revenue were smaller ratios than in 2014. Its unclear why that experience wasn't repeated in 2016, except in product development where the company says it has continued to spend heavily.

Without economies of scale kicking in, Spotify will be hard pressed to point toward a path to profitability. Yet, it so far appears to be trying a different path: Instead of getting its own internal costs under control -- employee wages and benefits continue to rise, even if at a slower pace -- Spotify has begun negotiating with music rights owners for lower royalties.

Spotify doesn't break out exactly what's in its cost of goods, but in addition to royalty payments to rights owners it also includes things like customer service costs, credit card and payment processing fees for subscription and salaries of certain employees.

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Overall, its cost of goods in 2016 was €2.48 billion ($2.61 billion), or 84.6 percent of revenue. According to industry sources, the on-demand digital service model typically carries a cost of about 70 percent of revenue for royalty payments, of which 60 percent of revenue pays for licensing master recording and 10.5 percent of revenue for publishing royalties. Yet, those percentages are what's known as the headline rate; each set of licenses -- master recording and publishing -- are actually set by as many as three or four formulas and whichever one produces the biggest revenue pool is the one used to calculate royalties.

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2017 Streaming Wars: Will Spotify, Apple Music or Amazon Dominate?

In addition to the royalty pool that comes from 10.5% of revenue, publishing royalties can also be calculated by counting 50 cents per subscriber; or 21% of revenue paid to the labels, at least in 2017. (The Copyright Royalty Board just held a rate trial, which will determine royalties for the 2018-2022 period, so the cited percentages and amount per subscriber may change next year.)

Consequently, sources tell *Billboard*, the other publishing revenue pool formulas have often produced a publishing royalty rate of 12.5 percent of revenue from on-demand services like Spotify. Likewise that may also be happening with the other formulas used to determine the label royalties. That means instead of paying 60 percent for label royalty costs, Spotify might actually be paying something like 62 percent, and with publishing added in, a total of 74.5 percent. But since Spotify doesn't show its actual royalty payment costs in its financials, it's hard to estimate considering everything else added in, too.

Nevertheless, in its latest licensing endeavors Spotify has been negotiating lower royalty rates -- some sources suggest by asking as much as five percentage points off 2016 levels. For their part, the record labels need Spotify -- and all digital services -- to be profitable and to maintain the growth they have enjoyed since streaming has taken off with consumers. As a result, label executives say they are willing to accommodate the streaming service in its pursuit of lower royalties, as long as they can build in assurances in licensing contracts that if and when Spotify finally reaches profitability, the labels share in the upside.

But whatever break in royalties Spotify may achieve -- so far it has signed deals with the Universal Music Group and Merlin -- which won't be visible until its 2017 financial results are released a year from now.

Thanks to its debt offering, Spotify now has nearly a €1.6 billion ($1.713 billion) war chest (i.e. €796 million or $838.6 million) in cash and €830 million ($874.5 million) in short-term investments, and can cruise for at least another four years without doing a public stock offering if it doesn't make any more big acquisitions and it keeps EBITDA loss and business investment spending in check at about €200 million a year while continuing to pursue growth.

READ MORE

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Spotify Wants You to Create Playlists on Facebook Messenger

Sure, four times €200 million ($210.7 million) is €800 million ($842.85 million) and that is only half of Spotify's coffers, but in 2021, the five-year $1 billion in notes mature.

Those notes will not only have to be paid back then, but interest payments during that term will be costly. The notes pay 5% interest the first two years and then rise by 100 basis points every six months afterward. If Spotify doesn't do a public offering before the notes mature, it will have paid some $350 million in interest, during that time, *Billboard* estimates. So its war chest of €800 million will have been further depleted to about €467.4 million ($492.4 million) in cash, but with $1 billion in notes coming due.

On the other hand, if it does a stock offering at some point before the notes mature, the 20% discount for converting the notes to stock will expire after 12 months from when they were issued. Now, the debt service grows by 250 basis points every six months. So that means as of April 1, 2017, it grew to 22.5 percent and if there is no public offering by Sept. 1, 2017, it will mean a 25 percent discount; and by April 1, 2018, 27.S percent. So if Spotify waits until it releases its 2017 financials next June, the conversion discount will be 27.5 percent.

At the $8.5 billion valuation Spotify carried in 2015, that would mean the note holders would get a 16.227 percent stake (a 27.5 percent discount off of $8.5 billion would be $6.1625 billion; and dividing $1 billion in convertible notes into $6.1625 billion gives you the stake of 16.3 percent, which when applied against the original valuation comes out to stock worth $1.379 billion). That means it would cost Spotify $379 million in value. At the same point in time and at the same discount, it works out to the same equity value cost for Spotify at the $13 billion mark, a valuation that company management hopes a public offering would bring, according to press reports.

So the trade-off in waiting until after it releases its financials next year is paying about $100 million in interest (for 2 years) in total, and an equity transfer to the bondholders of an additional $379 million in value. If Spotify's investment bankers -- Goldman Sachs, Morgan Stanley and Allen & Company, according to the New York Times -- determines that its results need to show a path to profitability in order to achieve a higher desired valuation, the process will take longer and become more costly, with interest payments and the conversion discounting increasing.

To be sure, there is probably a demand for a Spotify IPO right now, even without the path to profitability evident. But at what valuation? That is the crux of the dilemma facing Spotify. Without the clear path to profitability, analysts speculate the valuation would be lower than desired by Spotify management and shareholders, since Spotify's investment bank and its consortium of underwriters would be setting the valuation.

But some analysts -- and some newspaper reports -- have publicly speculated that instead of doing a public offering, Spotify could just do a listing on one of the stock exchanges. That strategy gambles that the market would set a higher valuation now than one set by the underwriters.

In a listing, it would have to reach an agreement with current shareholders not to trade for a certain period of time, analysts say, but when the trades do finally occur, the market is setting the valuation, not an investment bank.

On the down side, without the incremental float (the sale of even more shares than what's already been distributed) that a public offering would bring, each transaction could lead to a volatile stock price because liquidity would be constrained. But an early listing would be one way to get a break on what it would have to pay in interest and give up in equity value -- while coming to market with a hopefully higher desired valuation, instead of playing the waiting game that going through an IPO might entail. Then, the underwriters could always shepherd a secondary offering to market.

While Wall Street speculates on if the latest results help Spotify proceed with a public offering and if so when and at what price, the company has changed the multiple on which a valuation could be based in its latest financial results. According to its financial results released last week, in 2015 it used a revenue multiple of 2.5-4.5 times revenue. So for that year, when revenue was €1.928 million, the company's stock valuation ranged from €4.8 billion ($5.06 billion) to €8.7 billion ($9.17 billion).

But for 2016, Spotify lowered the multiples to 2-3.5 times revenue, which at 2016 revenue of €2.933 billion, puts the valuation ranges at €5.9 billion ($6.22 billion) to €10.3 billion ($10.85 billion). So maybe expectations cited in press reports of a hoped for $13 billion valuation have been pulled back a bit?

Presented by:

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GLOBAL

Global Music Investing 2.0

More options = more subs

We are raising our 2016 global music growth forecasts to 5% (was 4%, already top of consensus range). New streaming services just launched (e.g. Amazon Music Unlimited, Pandora Plus) should stimulate consumer demand further, while the introduction of lower price points/advanced functionalities (e.g. Amazon Echo, Google Home) will also increase free-to-pay conversion. Our top picks for global music investing are Vivendi, Sony, Amazon and Loen Entertainment.

Upside to our above-consensus estimates

Aggregated bottom-up country data for H1 2016 suggest that global recorded music sales are growing nearly 100-200bps faster compared to the 3% achieved in FY 2015. Top down, we also notice a number of structural improvements in the streaming offer, which will support faster growth in the medium term (we forecast an acceleration to 7% in2017):

- Better *price segmentation* (new $3.99, £4.99 mid tier) and *additional functionalities* (e.g. smart speakers) will inevitably attract new subscribers to paid streaming and reduce churn, in our view.
- Piracy is firmly under control with *stream ripping* (see Appendix) limited to personal usage, and regulation is progressing in favour of copyright protection to address the so-called value-gap (YouTube payments may increase).

Growth ahead of profitability

All players in the value chain are focused on growing the size of the market as we enter the steeper segment of the consumer adoption S-curve. The majors are willing to invest more on A&R to discover new talent and pay higher royalties to artists in exchange for wider contracts (Fig 4). Global tech companies are developing new hardware and promoting music subscriptions. Finally, distributors are spending heavily on marketing.

Top picks

- Among the content owners our preferred stocks are **Vivendi (VIV FP, €18.43, Outperform, TP: €24.50)** (nearly 60% of its 2015 operating profit from music) and **Sony (6758 JP, ¥3,361, Outperform, TP: ¥3,820)** (20% of OP from music in 2015). Together they account for 56% of recorded music and 51% of music publishing global markets (2015), which gives both strong bargaining power in the upcoming renegotiations with distributors (e.g. Spotify).
- Among the tech/internet giants, **Amazon (AMZN US, US$776.32, Outperform, TP: US$935.00)** has the most sophisticated pricing strategy and a good hardware integration (Echo). Apple seems to be slowing slightly against faster growing Spotify, and YouTube is facing potential regulatory headwind (e.g. value gap) and new competition from SoundCloud.
- Of the local distributors we pick **Loen (016170 KS, Won67,400, Outperform, TP: Won113,000)** for its undisputed market position and demonstrated pricing power. Pandora is a good take-over candidate, as widely reported in the press, but the latest results highlight a difficult transition to streaming. With or without a digital boost from M&A (read: Pandora), Sirius XM's future in the car is secured at least through '20, but it lacks broader upside. QQ Music and KKBOX are relatively small within Tencent and KDDI, respectively.

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Fig 1 Global Music landscape – Content owners and major digital retailers/distributors (2015)

Record labels

	Universal Music (Vivendi)	Sony Music	Warner Music
Music revenues:	$5,670m	$5,150m (including ~US$1.4bn at Sony Music Entertainment Japan)	$2,966m
% of group revenues	*47%*	*8%*	*100%*
Music EBIT margin:	12.2%	~11% (14.1% incl. Orchard Media val. gain)	4.3%
Rec/pub revs split:	85% / 15%	Recorded Music: 69%, Music Publishing: 12%, Visual Media & Platform: 19%	84% / 16%
Global share of Recorded:	33.5%	22.6%	17.1%
Global share of Publishing:	23.1%	28.3% (Sony/ATV with 2.16m songs catalogue + 2.05m in the EMI catalogue)	12.4%
Ownership:	Vivendi (VIV FP) owns 100%	Sony (6758 JP) owns 100% of SME and SMEJ	Private (Len Blavatnik's Access Ind. owns 100%)
Macquarie rating:	Outperform (VIV FP)	Outperform (6758 JP)	n/a
Macquarie analyst	Giasone Salati	Damian Thong	n/a

Global distribution

	Spotify	Apple Music/ iTunes	Amazon Prime Music/ Fire	YouTube (Alphabet)
Music revenues:	$2,214m	$3,212m	$1,542m	$1,875m
% of group revenues	*100%*	*1%*	*1%*	*3%*
Geography:	Global	Global	Global	Global
Free streaming users:	75m	none	none	800m
Pay streaming subs:	40m	17m	20m users out of 46m+ Prime subs	n/a
Premium tier price:	$9.99	$9.99 ($14.99 Family pack)	$99/ year (Amazon Prime)	$9.99
Other products:	Podcasts, TV programme clips	Downloads, Online radio, Music videos	Free delivery, Prime Video, etc.	User generated content, Music videos
Ownership:	Private (Vivendi owns 5%, Sony 6%, Warner 2.5%, Merlin 1%)	Apple (AAPL US) owns 100%	Amazon (AMZN US) owns 100%	Alphabet (GOOGL US) owns 100%
Macquarie rating:	n/a (planning IPO as early as 2017 - WSJ)	Outperform (AAPL US)	Outperform (AMZN US)	Outperform (GOOGL US)
Macquarie analyst	n/a	Ben Schachter	Ben Schachter	Ben Schachter

Local distribution

	Sirius XM	Pandora	MelOn (LOEN)	KKBOX (KDDI)
Music revenues:	$4,570m	$1,164m	$316m	$90m
% of group revenues	*47%*	*100%*	*100.0%*	*0.2%*
Geography:	US, Canada	US	South Korea	Taiwan, Hong Kong, Singapore, Malaysia, Thailand and Japan
Free streaming users	none	78m	(20m+ IDs only 1min free sample songs)	8m
Pay streaming subs	30m (satellite radio)	4m	4m	2m
Premium tier price:	$15.9/m streaming OR $10.9-19.9/m sat radio	$4.99/ month (Pandora One)	$6.7/ month	$3/ month
Other products:	News, Sports channels	Ticketfly	Paid downloads	Downloads, concert ticketing
Ownership:	Public (John Malone's Liberty Media owns 64%)	Public	LOEN (016170-KR) owns 100%	private (76% KDDI, GIC, 11% HTC, ChungHwa has 30% in Taiwan subsidiary)
Macquarie rating:	Outperform (SIRI US)	Outperform (P US)	Outperform (016170-KR)	Outperform (9433 JP)
Macquarie analyst	Amy Yong	Amy Yong	Kwang Cho	Nathan Ramler

Source: Macquarie Research, Factset, Company data, November 2016

New entrants stimulate consumers' demand

We argue that the imminent re-launch of two major streaming platforms such as Amazon and Pandora will be additive to the market, in the same way Apple Music did in 2015. The reason is that we are still very early in the phase of consumer's education for music streaming, so the bigger the number of trusted brands that market such services, the higher the number of consumers that will try and eventually migrate to the new access model (as opposed to the purchase model).

More functionalities broaden appeal of music streaming

In the countries where it operates, Amazon is already a very large retailer in music, including physical (online CD sales), downloads and music available to stream at no incremental cost as part of Amazon Prime subscriptions. Amazon until now has not offered a standalone music subscription like Apple did, probably due to the lack of a specific hardware device to pair it with (production of Amazon Fire Smartphone was stopped in September 2015). But that is changing: the initial success of Echo actually catapults Amazon into the pole position of the innovation race.

Echo is a wireless speaker powered by Amazon virtual assistant Alexa. Since its launch in the US, it has reportedly sold 3m units (Source: Consumer Intelligence Research Partners) and it has just been launched in the UK and Germany, in time for the Christmas season. The device has proved so popular already, and it is so pivotal for the future of connected homes that Google has just launched a copy-cat version called Google Home at a similar price (Fig 2).

Fig 2 Smart speakers (aka virtual assistants wifi speakers) use music as a central selling point

	Amazon Echo	Amazon Echo Dot	Google Home	Apple
Price	$179	$49.99	$129	tbc
Launch date	June 2015	March 2016	November 2016	2017?
Countries	US, UK, Germany	US, UK, Germany		tbc
Virtual assistant	Alexa	Alexa	Google	Siri
Contextual awareness	n	n	y	tbc
Music streaming options	Amazon Prime, YouTube, Spotify, Pandora, etc.	Amazon Prime, YouTube, Spotify, Pandora, etc.	Google Play, YouTube, Spotify, Pandora, etc.	Apple Music, etc.
Connectivity	Nest, Ecobee, SmartThings, Wink, Belkin WeMo, Philips Hue, IFTTT, etc.	Nest, Ecobee, SmartThings, Wink, Belkin WeMo, Philips Hue, IFTTT, etc.	Chromecast, Nest, SmartThings, Philips Hue, IFTTT	tbc
Design	black/white	black/white	inter-changeable bases	tbc
Size	235mm x 84mm x x84mm	38mm x 84mm x x84mm	tbc	tbc
Weight	1,064gr	250gr	tbc	tbc

Source: Company data, Macquarie Research, November 2016

Music plays such an important role in consumer's appreciation and usage of the Echo that Amazon is now launching an additional standalone music subscription at the usual $9.99/month level. In keeping with its tradition being a value player, Amazon is will launch two additional price tiers: $7.99 /month ($79/year) for Amazon prime subscribers and $3.99 for in-home use only via a specific Echo device (see below for more details on pricing).

In many respects, Amazon doesn't have the same marketing power as Apple when it comes to persuading consumers to buy a new piece of hardware, nor it has the same global reach. But it has an estimated 60m+ Amazon Prime subscriber base, which could be attracted by a relatively lower price point or the advantages from a full integration with voice-controlled speakers that also act as a virtual assistant.

Alongside Google Home, Goggle is also having another go at the smartphone market with a Google branded smart-phone, Pixel (Nexus has been discontinued). It's easy to see how Google also considers music strategic to attract consumers given that the Pixel is on sale with a promotion including three months' free access to Google Play Music subscription.

Apple (AAPL US, US$113.72, Outperform, TP: US$133.00), which was the first global tech company to understand the emotional power of a music service to drive hardware sales, now seems to be lagging in term of innovation, while both Amazon and Google are adding yet more functionality to music streaming.

Pricing segmentation increase free-to-pay conversion

Alongside with increased promotion from powerful global tech companies, and new streaming functionalities, we should not underestimate the importance of the new price point at $3.99 (Fig 3) between the free ad-supported service and the standard $9.99 fully flexed Spotify/Apple Music subscription.

Fig 3 Improving price segmentation with a new mid-tier price point

	Free tier	Mid tier	Premium tier	Top tier
Apple	no	no	$9.99/m	
Spotify	ad-supported	no	$9.99/m	
Google	yes	no	$9.99/m	
Tidal	no	no	$9.99/m	$19.99 for HD
Amazon	Included in Prime	$3.99 Echo, $7.99 w/ Prime	$9.99/m	
Deezer	y	no	$9.99/m	$14.99 Sonos
LOEN	no	no	$6.7/m	
QQ Music (Tencent)	y	no	$3/m	
Pandora	y	$4.99/m (Plus)	$9.99/m	
SiriusXM	no	no	$15.9/m	

Source: Company data, Macquarie Research, November 2016

Pandora also introduced a limited service available at $4.99/month, which has the potential to attract a different type of customer. Pandora's new Plus tier (US only for now) is effectively a custom radio station, free from ad breaks, and it allows users to skip as many songs as they want. Limited replay and the possibility to save a small number of favourite songs for off-line listening are also available.

With the added functionalities Pandora Plus represents an improvement compared to the previous Pandora One tier, at the same price point for consumers. The economics for Pandora have greatly changed, though, as the company agreed to higher payments to majors and artists (Pandora used to pay radio-like royalties, significantly lower than streaming royalties). The new Plus tier is based on the technology acquired with Rdio ($75m in 2015).

Amazon is also introducing a fully-flexed music service at $7.99/month ($79/year) for existing Prime subscribers, which we believe is fully subsidised by the tech company. In fact, Amazon was previously paying an estimated $2/month for each Amazon Prime subscriber accessing the limited music streaming catalogue bundled with Prime. So, for the majors, revenues will be comparable to the equivalent $9.99 from Apple Music, though Amazon's churn is likely to be significantly lower.

The addition of new price points, of smart speakers to facilitate listening at home and of new hybrid radio/streaming services, all contribute to enlarge the potential customer base, while maintaining the same econimics for the majors (promotions and discouting are paid mostly by retailers and hardware manufacturers).

Striking the right balance for Spotify IPO

If in 2016 the big catalysts are the launch of new streaming services by Amazon and Pandora, in 2017 the attention will shift to the potential IPO of Spotify as the largest streaming retailer and, more importantly, the only independent one.

The music majors (i.e. the content owners) are acutely aware of the need to nurture a strong independent distributor to avoid the same mistakes of the download era when Apple became the dominant online retailer, reducing the majors' bargaining power. The key question is the renegotiation of the licensing agreement recently expired. Spotify already enjoys a particularly favourable treatment, as it retains 30% of retail revenues (closer to 20%-25% for Apple Music) and it is allowed to maintain a very complete and compelling free tier offer.

We see Spotify's current terms as a sort of subsidy that music majors have being paying to help Spotify gaining scale and challenge cash-rich global tech giants like Apple, Google and Amazon. The question is: does Spotify still needs to be supported or it has already reached critical mass and it should start to pay more to content owners?

For a successful IPO, we argue that Spotify would need a relatively long licensing agreement (3-5 years) with terms similar to the current ones, on which the last $8bn valuation was based. But for the majors, there is also the risk that Spotify could get overly strong and start to compete directly with them on content production, a strategy well illustrated by Netflix original productions (see below for more details).

The risk is that Spotify becomes too dominant as online distribution tends to behave according to the winner-takes-all rule. Access to granular users' streaming data over a wide scale could allow Spotify to fine-tune its service better than competitors and eventually attract the majority of music fans. A virtuous circle already observed in online search, shopping, etc. But there are many ways to temper that risk.

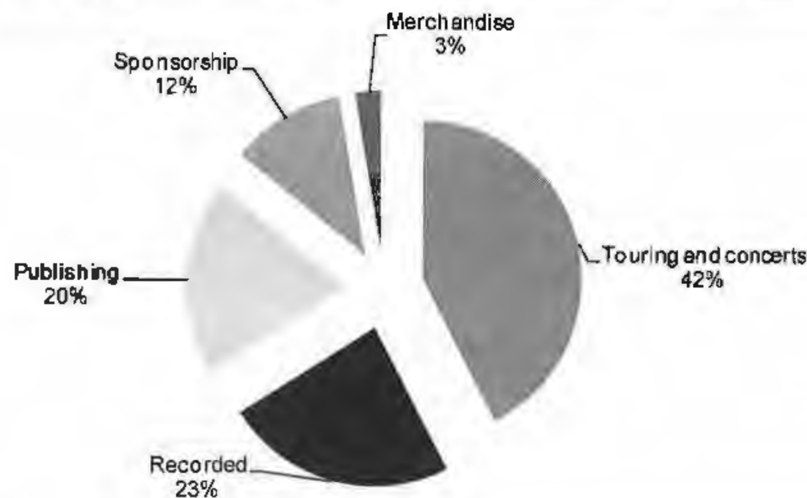
The most likely solution is that music labels will keep supporting Spotify with a similarly "generous" share of retail revenues, but force some kind of windowing so that new albums, which typically are better monetised with downloads and physical purchases, will not be immediately available on the free tier (Taylor Swift and Adele's point). In our view the length of the contract will also likely be relatively short (2-3 years) so that content owners can frequently revisit and re-assess the balance of power with distributors.

All players are focused on growing the market rather than profitability

Our view on Spotify's new licensing agreement, is consistent with the idea that content owners and retailers are prioritising revenue growth ahead of margin expansion. The main priority is to take the size of the overall market back to where it was in 1999 and to grow it even further by growing the value of the content beyond the actual recording. We believe that this approach is now consistently implemented when negotiating royalty deals with artists too.

Increasingly, majors appear to focus on signing wider contracts including all potential sources of revenues (e.g. touring, synch, licensing, merchandising) to manage the spectrum of music value. In exchange, artists are demanding and obtaining higher royalties than the historic standard level of 25%, on average (top artists were already able to negotiate royalties 40%+). Indeed, we estimate that only about a quarter of total music-related revenues have been historically targeted as "recorded music" (93% of IFPI numbers).

Fig 4 Recorded music is only one of the sources of revenues, and not the largest (2015)



Source: Company data, Macquarie Research, November 2016

In the new equilibrium, music labels look after monetisation of audio content in all possible adjacencies, the same way Disney maximises the revenues from its film across theme parks – touring and concerts for example account for 42% of total – licensing, merchandising, etc.

By offering all-inclusive deals, and conceding to higher royalty rates, majors are effectively also buying insurance against disintermediation. Margins will expand slowly, but majors will remain in control of the value chain and will more than make up for lower profitability via higher revenue growth (we forecast global recorded music revenues to double in ten years, >7% CAGR).

To consolidate their position, distributors are most likely to pursue diversification into wider audio content such as news and shows. The most advanced in this space is Sirius XM, which already has c.60% of its satellite radio-like channels providing more general form of entertainment including commentary for sport events. Spotify is also testing different forms of content including video content from TED Talks, for example.

Apple and Amazon are probably both considering whether to produce original music content. Per-se, the production of an album is something which can be done more easily than a film. But when you consider the whole spectrum for full music monetisation, majors will still be able to win the battle hands down. When Pixar considered selling to Disney, this was one of the key points highlighted: Disney would be so much better at maximising revenues from great original content.

Vertical integration: lessons learnt from Netflix

Unlike the music industry, TV and film content has long enjoyed a lucrative distribution model in many countries, as pay TV subscriptions have risen and studios have controlled the availability of their content to maximize profits. However, as in the music industry the rise of online streaming distribution is changing how consumers purchase and view content, and this introduces new economics for the TV & entertainment companies worldwide: consumption of streaming content will rise, and the winners will be those who produce and package their content well, at the right price.

Netflix in the US has very much changed consumer expectations for on-demand and mobile content availability, and this has led to increased supply of video content. TV studios initially were happy to sell back seasons of their programs to Netflix (never current-season shows) but in 2012 Netflix began to purchase and produce original programming to run exclusive on its platforms.

Amazon and Hulu (co-owned by Comcast, Disney, 21st Century Fox and Time Warner) have followed suit, creating a glut of programming. The rise in popularity of this content has made Netflix in particular more a competitor to traditional TV businesses, which have responded by reducing their output to Netflix and promoting content on streaming services as part of their "TV Everywhere" offerings and in some cases launching direct-to-consumer OTT services of their own.

Over time, Netflix's decision to compete directly with incumbent studios dramatically reduced the company's access to content from other providers and required significant content investments ($6bn in cash terms in 2016) to keep up with competing distribution platforms.

Spotify may well consider expanding higher in the value chain to produce music and gain exclusivity of some sort, but the risk of damaging the relationship with the highly consolidated suppliers and losing access to some content seems too big to us – the three largest music majors control nearly 75% of the market, while there are seven large movie studios and a plethora of TV content providers.

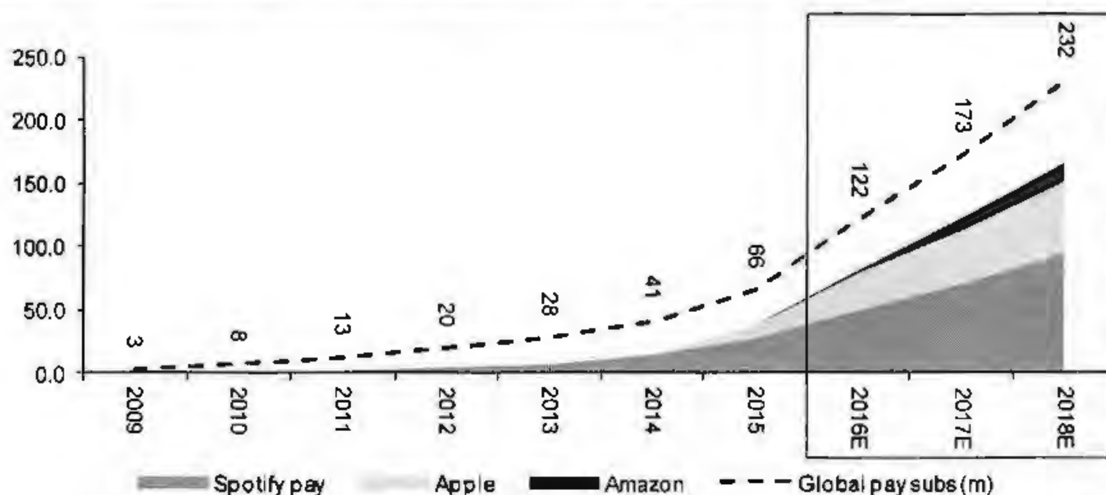
If vertical integration is to happen, it will probably happen at the labels side. We notice that Warner Music controlling shareholder – Len Blavatnik' Access Industries – has also reportedly taken a controlling 50%+ stake in Deezer; Vivendi is trialling a music video service in Brazil based on the SVoD platform originally developed for Germany (Watchever).

Streaming – hockey stick progression

With revenue growth trending around the 50% mark, streaming remains the main factor behind the recovery in recorded music globally, even if it still account for "only" about a quarter of the whole market. The gains from streaming more than offset the high single-digit decline in physical/download revenues, which combined will continue to represent more than half of the market until 2019, based on our forecasts.

In terms of the main forces behind streaming growth, Spotify and Apple currently account for two-thirds of the total paying subscriptions, and they continue to grow above industry average (Fig 5). The launch of Apple Music in summer 2015 has been incremental to the underlying progression of Spotify and stimulated the whole market, which is now growing at a faster rate. Alongside its newly redesigned music platform Apple is also refining its consumer proposition, which now focuses on exclusive music and video premieres plus a wide range of radio stations.

Fig 5 Paying subscriptions growth at a faster pace since launch of Apple Music, and Amazon' stand alone service will contribute to growth from Q4 16



Source: Company data, Macquarie Research, November 2016

The recent launch of Spotify in Japan may change these dynamics in terms of the composition of growth. Japan is the second largest market for recorded music (16% of global sales), after the US, and it is peculiar for it record-high share of physical sales (75%). However, we do not expect the paid streaming market to quickly dominate the overall music market. Physical sales continue to decline gradually, the popularity of music consumption via YouTube is likely to remain a barrier to adoption of paid subscriptions.

We believe existing services like Line Music and AWA continue to struggle to attain conversions to paid subscriptions, and Spotify is likely to face comparable challenges. A major barrier in Japan is the resistance of Johnny's Entertainment, the country's leading music agency, to release content digitally. Music from dominant music groups represented by Johnny's – like SMAP or KAT-TUN – are unlikely to be made available on paid streaming services, and their absence will deter sign-ups.

Anecdotally, we can also infer from the data that global revenue growth is coming from new buyers, not necessarily only from existing buyers switching. The typical i-Tunes customers are spending increasingly less on downloads, but much of Apple Music's success is due to new customers who were not previously buying music.

Granular data available for H1 is positive

Global recorded music data is only reported on an annual base, but there are already enough country associations that have published results for H1 and the trend is positive:

1. In **the US**, the largest market globally (34% of global sales), recorded music revenues grew 8.1% in H1 2016, the strongest rate of growth since the late '90ies. Streaming now accounts for 47% of total revenues (was only 32% in H1 2015), followed by downloads at 31% and physical at 20%. (Source: RIAA)
2. In **Japan** In 1H16, overall digital sales increased by 12%, with subscription revenues up 85%. Physical sales saw a 5% decline, resulting in an overall 3% decrease in recorded music sales, by our calculation. Physical still accounts for 75% of the domestic market, subscription streaming for just 5% (was 3% last year), and other forms of digital (inc. ringtones and ring backs) for 10%. (Source: RIAJ)
3. In **Germany**, a large market but still heavily biased towards physical (60% of total), recorded revenue growth was +3.6%. Downloads still account for 30% of total revenues but streaming nearly doubled to 10% of total. (Source: BMVI)
4. In **Norway**, a significant market because it is already dominated by streaming (83% of total), growth was higher than the average at 7.8% for the overall market. Revenues from music video streaming (read: YouTube) only account for an abysmal 1.2% of total, supporting the growing demand by artists and majors for Google to pay more. (Source: IFPI Norge)
5. In **Spain**, revenues were up 4.1%, following 7% growth in 2015 (was 11% in 2014). The market is still 74% lower than the peak achieved in 2001. Streaming now accounts for 30% of total, downloads for 24% and physical 46%. (Source: ProMusicae)

These countries account for just over 60% of the total music market, with an aggregate weighted growth rate of 2.6% in H1 2016, well above the 1% reported in 2015. Adding to this remarkable improvement for larger countries, our proprietary model shows that smaller countries are likely to grow faster, with a proportionately higher contribution to the overall industry growth.

Combining faster growth from developed countries and the potential contribution from smaller countries for which data are not easily available, we can infer that global recorded music revenues are currently expanding by 5%, better than our previously published estimate of 4% for 2016.

Raising our top-of-consensus-range estimates to 5% growth in 2016

As we incorporate the new information discussed above into our proprietary global music model (please see our first Global Music report here), we raise our short term estimates for recorded music revenues and we take more confidence on our medium/ long-term estimates, which are already above consensus:

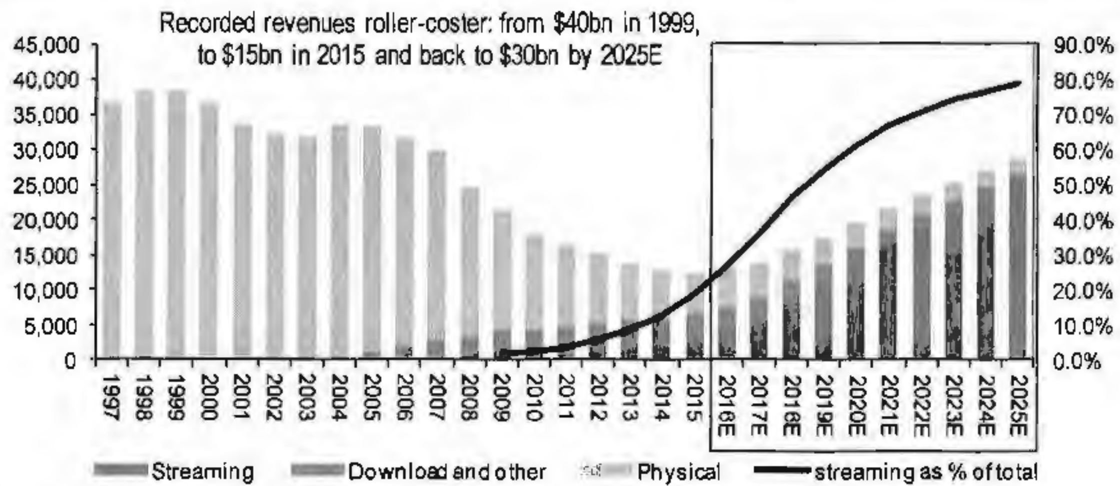
⇒ For 2016 we now forecast recorded music to grow 5% (was 4%) at constant currency, fuelled by stronger contribution from streaming on the back of Spotify promotions for new subscribers. Download revenues are also declining slower than we expected, with a higher percentage of Apple Music subs being new to buying music online, not just "i-Tunes switchers".

⇒ For 2017 we forecast 7%, but we see upside to this level if Spotify's launch in Japan, the second-largest territory and the one with the highest percentage of sales from physical, is successful. Amazon Unlimited Music (including mid-tier price point with Echo) should also boost growth in the UK and Germany (also a large physical market). Pandora Plus may also support even higher growth in the US.

⇒ Longer term, we look at recorded music revenues doubling over ten years, (2015-2025). We are also growing more confident of continued industry growth beyond this point when global pay streaming penetration will be only 7% and music revenues per capita will still be 41% below the previous peak, in nominal terms.

Streaming will grow to 50% of the market by mid-2019 and to 80% in 2025, based on our forecasts (Fig 6). The composition of growth will continue to be driven by volumes, with ARPU possibly lower as a reflection of the new price points at $3.99-$4.99 (Amazon Echo and Pandora Plus) and stronger contribution from developing markets where streaming services are typically sold at lower prices.

Fig 6 Global recorded music to double in ten years



Source: Company data, Macquarie Research, November 2016

Our estimates are comfortably above consensus in terms of market growth, even before including revenues from adjacencies (touring, sponsorship, merchandise, etc.). However, we have a more cautious view on margin progression due to growing artist royalties and the need to increase Artists and Repertoire (A&R) spending, after many years of cost cutting. Distributors will also need to maintain a relatively high level of marketing spending to educate consumers about streaming services, especially in countries like Japan and Germany.

Supporting evidence through the value chain

In this section we provide an update on the global music market from the bottom up, collating evidence from different geographies and different levels in the value chain.

Vivendi (Universal Music)

- Vivendi has been underperforming global recorded music industry for the past few quarters, losing share to competing large labels as well as independents. The company is now fully committed to increase its A&R spending to stabilise and regain part of the lost ground, a move which may keep margins under pressure in the short term, in exchange for faster growth in the medium term.
- Still, the organic revenue growth trend has markedly improved in Q2, also thanks to strong performance from Drake. Universal Music Group reported an underlying growth of 6% in the three months ending June, a marked acceleration from the 0.5% in Q1 '16 and the 1% in FY 2015 when the global market grew 3%.
- Interestingly, Vivendi consistently reported stronger streaming results showing great capacity to monetise its repertoire, but lagged peers in downloads and physical sales which track more closely the impact from new releases. We are confident the company has all the resources to discover new talent and grow its front list accordingly.
- Vivendi also seems to be testing innovative vertical integration models with the launch of a premium music video service for mobile users in Brazil. The mobile-first platform is built on the retired technology previously developed for SVoD in Germany (Watchever), which demonstrates interesting synergies between the pay TV and music divisions.

Sony

- We expect Sony to have seen a 45% YoY revenue increase in streaming revenues in Yen terms, but declines in physical recordings and downloads, as well as the impact of Yen appreciation, may result in a 7% decrease YoY in overall Recorded Music revenues. We note that the success of Adele's 25 a year ago presents a high base for comparison.
- Looking into 2017, we expect streaming to remain the key growth driver for Sony Music, propelling Record Music revenue growth to a CAGR of 9% in FY3/18-23. The upcoming leadership change, with Rob Stringer – current Chairman of Columbia Records -- to replace Doug Morris as CEO of Sony Music Entertainment, is unlikely to deflect this shift. A more significant profit driver this year for Sony Music may be the success of Aniplex's mobile game Fate/Grand Order, which is currently the second-ranked game in terms of revenue gross on Apple's Japan App store.

Spotify

- Spotify's role as the leading streaming platform globally is strengthening. Paying subscribers growth has accelerated, in comparison with the somewhat slower progress of Apple Music. Steady growth of recorded music sales in Norway, one of the markets with the highest penetration of music streaming (83%), are well supportive of Spotify's business model long term.
- Little feedback is available on the results of Spotify's diversification efforts into more radio-like ad-supported content (talk shows, news, sport, etc.), but we think it is integral part of Spotify's strategy, while it is highly unlikely that it will follow a Netflix-like strategy to integrate vertically into music production.
- As the company is widely reported to be planning its IPO in the second half on 2017, focus will shift to the terms of the new licensing agreement with the majors, currently under discussion (please see above in the report).

Pandora

- The 2020 vision appears doable: 1) US$2.4bn of revenue from the core Internet radio service with ~60% gross margins; 2) US$1.3bn from a new expanded listening subscription service; and 3) US$300m from live events sponsorship.
- The new suite of products amplifies Pandora's ability to up/cross-sell between ad-supported, a middle-tier ad-free service, and a full-fledged on-demand platform. Pandora One is currently priced at US$4.99/month and has ~4m subs; the new launch is expected to have two tiers including a US$5/month expanded ad-free service and a US$10/month on-demand platform. Though details

are limited, the on-demand service won't be a 'me-too' product to Spotify. Management has curated these services using ten years of compiled user data and we expect to see rewind and replay features, among others.

- Though the 10% penetration assumes some degree of cannibalization, monetization on advertising remains strong. Growing engagement gives management leverage to negotiate better ad RPMs. In addition, the new agreements preserve core ad margins; management is targeting US$2.4bn in revenue, with ~60% gross margins by '20.

Sirius XM

- New streaming services are popping up every day, including various tiers from Pandora and iHeartRadio. Though these are largely mobile services, they could give up some of their economics to be included into the Apple CarPlay and Android Auto ecosystem. Apple CarPlay is available in ~24 car makes/~114 models, while Android Auto is currently available in ~23 makes with ~28 more coming soon.
- But Sirius XM won't be disintermediated: This still pales in comparison to Sirius XM's 75% penetration rate in all new cars sold. Half of net adds are correlated to SAAR, one-third from used cars, and the remainder from additional distribution channels. The latter includes insurance and auto-financing companies as well as social media.
- Sirius XM then monetizes this through one of the most effective CRM systems among consumer companies. This includes extensive marketing capabilities, domestic-based call centers, and a sophisticated price grid. We expect stable churn of ~2% in 3Q/4Q despite the two back-to-back price increases.

LOEN Entertainment

- In Korea, market leader LOEN reached 3.8 million paying users and is has been adding approximately 100,000 net new subscribers per quarter to its Melon music platform in 2016, in line with the pace of volume growth in 2015. But
- We project LOEN's music revenue will jump significantly from 4Q16, thanks to the price hike implemented for existing users from September 2016. The price hike was implemented for new subscribers from March 2016. The monthly price for its unlimited music streaming plan rose from Won6,000 to Won7,900, and the combo plan for unlimited streaming plus 30 downloads rose from Won9,000 to Won13,000.
- As a result, we project LOEN's music streaming revenue will jump 14% YoY and 37% YoY in 2016 and 2017.

Apple

- AAPL is moving towards streaming with Apple Music, which reached 17mm subscribers in September for a run rate of ~$510mm per quarter at $9.99/mo. For comparison, Spotify has 40mm paying subs. However, AAPL's largest music streaming opportunity remains in the app store. Apple's recent concession to reduce its take rate from 30% to 15% after one full year of an individual subscription has improved the streaming services' willingness to sell subscriptions in-app (which are therefore subject to AAPL's 30%, and later 15%, take).
- Music streaming apps are now consistently among the top grossing apps in the App Store with Spotify (#8), Pandora (#9), YouTube (#20), and Tidal (#21) in the US, according to App Annie. Netflix, Tinder, HBO NOW, and Hulu are among the other non-game apps in the 20 top grossing apps as AAPL moves beyond games for monetizing the App Store.

Amazon

- AMZN recently introduced the Amazon Music Unlimited streaming service on top of its existing Prime Music. Amazon Music Unlimited is $9.99/mo, but only $7.99 or $79/year for Prime members. There is also an Echo-only $3.99 plan, and coming soon is a six-person family plan for $14.99/mo or $149/year.
- AMZN's entrance into music streaming is yet another benefit for Prime members/Echo owners and will likely help drive the Prime and Alexa ecosystems.

Google

- GOOG participates in direct music sales and music streaming through Google Play Music and is broadening its reach via its YouTube Red and YouTube Music subscription services. However, there is no usage data available on these services.
- Like Amazon, Play Music and YouTube Music are important drivers for its coming Google Home ecosystem as GOOG aims to compete with AMZN's Echo. GOOG significantly trails AAPL in monetizing music apps with only Pandora among the top 20 grossing apps in the Google Play store.

Tencent

- QQ Music completed a landmark merger with China Music Corp (CMC) in July 2016. QQ Music and CMC are the top 2 music-streaming companies in China, collectively own over 20M licensed songs and holds 56% of China's online music market share, according to iiMedia Research. Tencent will hold 60% of CMC after the merger and the combined company is reportedly valued at US$6 billion, according to WSJ. The dominant market position will increase QQ Music's bargaining power on negotiating licensing deals with the Music Majors. Another major player in the space NetEase Music is also in the process of raising Rmb1bn at Rmb7-8bn valuation.
- QQ Music is part of Social Networking Group (SNG) and doesn't disclose standalone revenue. According to its general manager, Tencent Music turned profitable as of July 2016. Total monthly active user (MAU) has surpassed 400M, daily active user (DAU) has surpassed 100M and total paying user has exceed 10M. Our channel checks suggest that the ARPU of QQ Music is around Rmb15 per month or Rmb180 per year.
- According to iResearch, China's online music industry is set to grow 52% yoy to RMB6.1B in 2016, with subscription revenues to grow 80% to RMB1.8B.

KKBOX (KDDI)

- KDDI owns 76% of music company KKBOX and rebranded its previous "Lismo" service under that name. KDDI views music as a core part of its content line up. The "Uta pass" service costs ¥300 per month. KDDI's music network is also available to subscribers on other mobile networks, both inside and outside Japan. The service's website is here.
- KDDI is an active participant in the music and content space in Japan, and was the first in the industry to launch full song downloads for mobile phones in 2004. KDDI's "au Smart Pass" service offers a wide range of contents and services and has now signed up 14.6m members, 38% of its retail subscriber base.
- KDDI's "Value Services" segment, which includes content revenues, contributes almost 9% of the consolidated KDDI group revenues and 11% of operating profits. The new three-year business plan from management is focused on maximizing the "au economic zone" (non telecom businesses) under the "Life Design" concept, including contents, financial services, utilities, and shopping, and we expect to the company will continue to invest in and expand the music services offerings. See also our report: KDDI – Expanding the Zone.

Streaming a driver of data usage for telecom operators

Most European operators view music as a tool to increase data usage and expect to monetise the services as consumers contract to bigger bundles. However, the scale of music is often dwarfed by video. Both Vodafone and KPN signal that music is around 10% of traffic volumes and, although it is growing due to streaming, its importance is likely to diminish as video traffic increases at a faster rate. Vodafone suggest music streaming apps such as Spotify and iTunes each make up c4-5% of UK data traffic. YouTube is the dominant source of traffic, at 50%+, some of which may be music video-related.

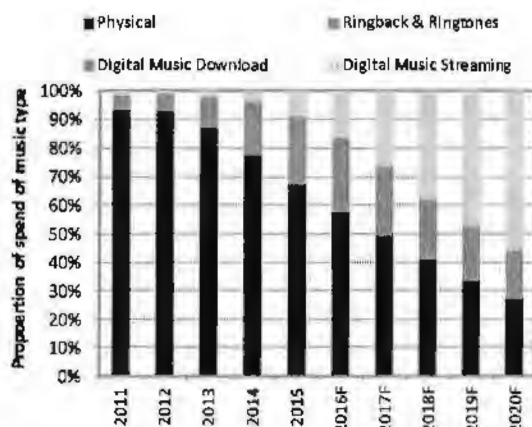
In many countries operators have partnerships with streaming mobile services. For example Vodafone previously bundled Spotify (around 2 years ago) and KPN includes Spotify in its high end bundles. In other countries operators have shifted focus from Spotify and Deezer to iTunes over the past year, but this reflects the scale of the iPhone base within the customer mix.

Another factor to consider is regulation, which may impact the business model. Individual countries have interpreted net neutrality rules differently so that in the Netherlands streaming cannot be zero-rated but in Belgium there is more flexibility. Outside Europe, the regulatory flexibility allows for revenue sharing and a more active relationship. Telefonica benefits from music data and streaming within its VAS revenues.

South Africa – MTN case study

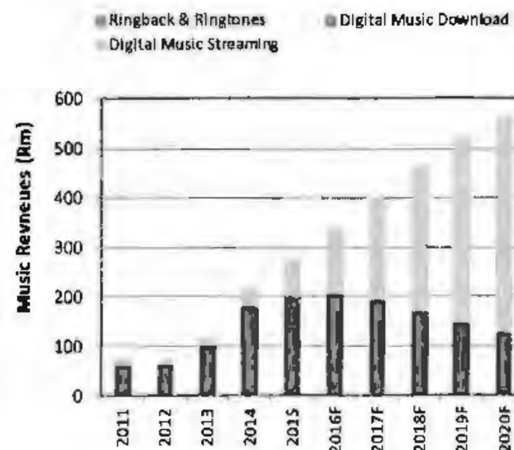
- The tale of music in South Africa and other African countries is rather different. Having a sophisticated economy, South Africa exhibits many of the same trends of other developed countries, i.e. a decline in physical recorded music that is not expected to be replenished by increasing digital music consumption. CD sales, which constituted the bulk of physical recorded music in SA, shank from 17.1m units in 2009 to 12.2m units in 2013, with corresponding physical music revenue forecast to decline by 79% from 2010 to 2019 (Fig 7).

Fig 7 South Africa Physical vs. Digital spend %



Source: PWC (2016-2020), Macquarie Research, November 2016

Fig 8 South Africa Digital trends



Source: PWC (2016-2020), Macquarie Research, November 2016

- Ring-back and ringtones (usually defined as simply "mobile") peaked in 2011 but in Rand terms will hold up over the coming years as per Fig 8. PricewaterhouseCoopers (PWC)'s 2016-2020 prediction is that digital music (encompassing mobile, downloads and streaming) revenue music streaming will rise from R273m at end of 2015 to R566m by end of 2020 i.e. a 15.7% CAGR. Of these sectors, streaming music is set to expand at a rapid 42.7% CAGR, with the shift from download purchases to access self-evident. Statista estimates that in 2016 with Digital Music ARPU per SA user was US$3.93.

- The major promoters of digital music in South Africa are the mobile operators. The IFPI cites "insiders" who estimate that iTunes in 2013 accounted for 40-50% of digital revenues in South Africa, which is quite plausible given that iTunes supports both local and international artists. Although brick and mortar stores are in decline, they have not signalled any intention to make an attempt at becoming purveyors of digital goods. The various music offerings, business models and OTT competitors of MTN and Vodacom are compared in Fig 9. MTN is the largest distributor of digital music in Africa, and hence much of the discussion that ensues will focus on them.

Fig 9 MTN and Vodacom Music offerings

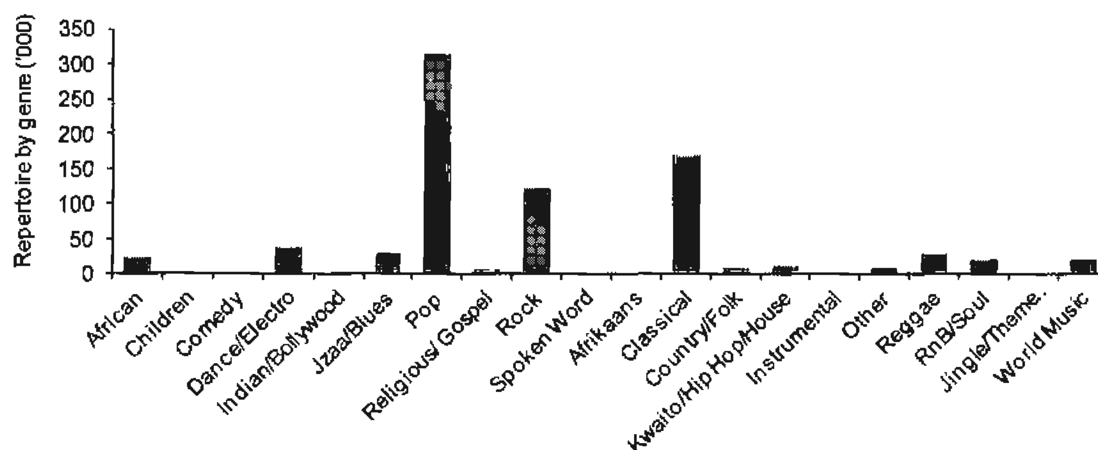
	Service Model	Mobile $$ model	MTN	VOD	OTT competitors
Music	Ring-back tone	Subscription (week/ month) Download fee	MTN Callertunez	Welcome Tones (Z)	
	Ringtones	Once-off	MTN True tones ~94k	Vodacom Ringtones	
	Full Tracks	Pay per track. (potential discount) Data charges	MTN Music (A) ~1m	Unlimited Full Track - Track purchase	iTunes, Google Play Music store
	Streaming (live & off-line)	Music subscription (per day). Data - special rates	MTN Music (A) - on Music Plan	Unlimited Full Track - Monthly subscription	Apple Music, Google Play Music, Spotify, Pandora, Deezer
	Sponsored music	Another user shares a track	MTN Music+	—	
	Music Video	Video Free pay for data (MTN)/ airtime (VOD)	MTN Music+	Video Play	YouTube
	IVR Radio (program & skip/ artist)	Pay for time (per min.) + dedications		—	—
	Internet radio streaming (program & skip/ artist)		MTN Mobile Radio (Z)	—	Apple Beats1, Pandora
Downloads / month			50m (WECA largest segment)	Not disclosed	
Customers			70m of 229m in Africa	Not disclosed	
Digital Revenues		Unlimited Full Track - Monthly subscription	R 6,398m (music & video, part of data revenue)		
Of which Music			R 944 ($70m)	Not disclosed (part of data revenue)	

(A) = allowance ... a quantum of data is included in purchase
(Z) = zero rated ... date usage does not count against mobile broadband

Source: Company data, Macquarie Research, November 2016

- In discussions with MTN, they have expressed the view that South Africans like their international music, and data from PWC indicates that in 2014 that 62% of digital sales in South Africa were International. Measured by repertoire International drops to 56%.
- Fig. 10 illustrates the number of music items (all types) available in the MTN Play South Africa music store, though this doesn't necessarily represent the popularity of purchase.

Fig 10 MTN & Vodacom Music offerings



Source: Company data, Macquarie Research, November 2016

Whereas Vodacom has followed a carrier billing type model with respect to music, MTN follows a variety of business models, which reflects the strategic importance of music to MTN. These models include:

1) **Revenue share with content aggregators**

In 2014 MTN partnered with Simfy Africa, but that tie up did not last. In 2015 an organization, Capasso, representing SA recording artists claimed MTN owed its members R1m in royalty payments. MTN responded that Capasso was claiming payments for non-members. It hence came as little surprise when MTN entered into an agreement with Sony Music in Feb 2015 for access to their catalogue of local and international artists for ring-back tones. Under the terms of the agreement Sony would going forward administer royalty payments. The parties indicated at the time they were negotiating for an extension of the deal to encompass full tracks and albums.

MTN indicates they have been unsuccessful in attempting to sign up Warner Music Group.

MTN has admitted that the margins on digital service as less than traditional telecoms services due to the revenue share agreement. They guide that 30-40% is paid to the musician; however it would appear that their long-term strategy is to cut out content aggregator fees for local artists.

2) **Purchasing of content rights through their content aggregator Connect Content Africa (CCA)**

MTN bought the pan-African rights to acquire Adele's Hello for a Caller Ringback Tone. It was downloaded 11m times in South Africa alone.

Although CCA started off as a distributor of digital music, in 2015 it started to diversify into a record label after MTN took a stake in the company. (MTN's 2015 report does not disclose how much; however, MTN has indicated they "own" the company). CCA scouts for various talent through talent shows, e.g. MTN Project Fame West Africa, and once artists as signed up they assist with marketing, sponsorship and digital management & distribution.

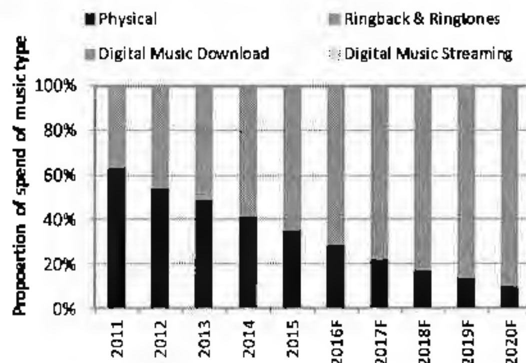
3) **Endorsement deals**

In 2015 MTN signed the biggest endorsement deal in South African music history, R10m with local rapper Cassper Nyovest. Thereafter in 2016, MTN contributed extra sponsorship (estimated at R10m) for Cassper Nyovest's #FillUpOrlandoStadium concert.

Nigeria overview

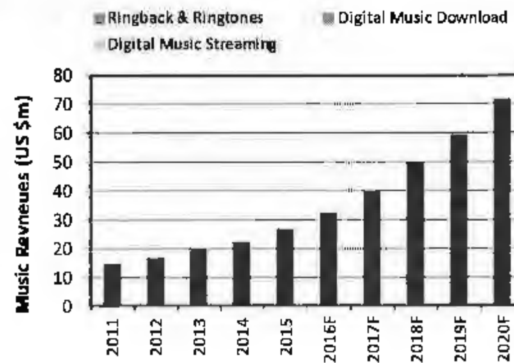
The data in Fig 9 indicates that MTN obtains the majority of their music downloads from West Africa; however what is downloaded is different from a product and content perspective compared to South African consumers. Fig 11 illustrates the increasing dominance digital music over physical music in Nigeria; although one must consider that physical music it the country never really took off due to a combination of lack of bricks and mortar stores, and criminal gangs that sell high-quality CDs at a fraction of the legitimate product. Local artists in Nigeria have historically had to rely on live performances, although the digital channel through model presents artists with new frontiers for monetization and promotion. PWC estimated that in 2014 and 2013, 80% of Nigerian music industry earnings have come from mobile operators.

Fig 11 Nigeria Physical vs. Digital spend %



Source: PWC (2016-2020), Macquarie Research, November 2016

Fig 12 Nigeria Digital trends



Source: PWC (2016-2020), Macquarie Research, November 2016

Observing what is downloaded, Fig 12 reveals that ringback and ringtones constitute the bulk of the historical and forecast digital music revenues. A similar trend is evident in Kenya. iTunes launched in Nigeria in 2012 (26m songs as of 2015) but faces competition from Deezer, Google Music and local providers iRoking (sister company to SVOD provider iRoku), Spinlet, Gidilounge, notjustok and MTN Music+ and The Kleek (Universal Music/Samsung).

Smartphones, telcos and music in Africa

At face value, digital music does not represent a massive revenue opportunity for mobile operators. Even if one considers that digital revenues could grow at 20% CAGR (at the upper end of a range between SA and Nigeria), MTN's Music revenues would increase to circa R4.5bn by end 2020 – in the context of around R153bn, i.e. circa 3% of revenues.

Will the predicted explosion of smartphone penetration in Africa unlock the digital music market further? We are of the view that the answer is a combination of yes and no. Already today MTN provides various music services through IVR/USSD voice technologies for feature phones. An app smartphone combination may permit an enhanced user experience and more offline consumption methods; however, it doesn't change the fact that music (on its own) is heard, not seen.

For revenues to become more meaningful, one would have to have a very optimistic set of assumptions on the increase in disposable income of African consumers and their spend prioritization. We are of the view that video content (broadcasting or SVOD), followed by gaming, will continue to receive priority of consumer wallet.

MTN is confident in their view that, with the exception of South Africa, local music sells in Africa. This is a double-edged sword. Consumers are willing to pay for satellite TV and SVOD, as such content is not obtainable elsewhere; however, in Africa broadcast radio (which itself will go digital at some point in the future) provides an alternative, free source for meeting user needs. To transition from free to paid content, users are effectively paying for the option of customizability. Recent moves by the South Africa Broadcasting Corporation which compelled their radio stations to carry 90% local content have been met with consumer backlash; however, quality radio in other Africa countries could hinder consumer migration to digital music.

In our view, telcos remain better placed than OTT providers of digital music due to a combination of:

- Ability to zero-rate data, or offer bundled data/ music packages such that the cost of broadband is no longer prohibitive
- Provide payment mechanisms via airtime or mobile money in order to overcome lack of credit card penetration (outside of South Africa)
- Ability to provide options other than monthly subscriptions, in order to address affordability issues
- Exploit mechanizing synergies between music, video, wallpapers, ringtones, etc.

However, as per our hypothesis on SVOD, size of catalogue matters. Consequently, telcos should seek out partnerships with record labels or global distributors and vice versa. Given affordability constraints on African consumers, this will likely require a consideration of the revenue-share model if the global digital music providers wish to make a meaningful impact in Africa.

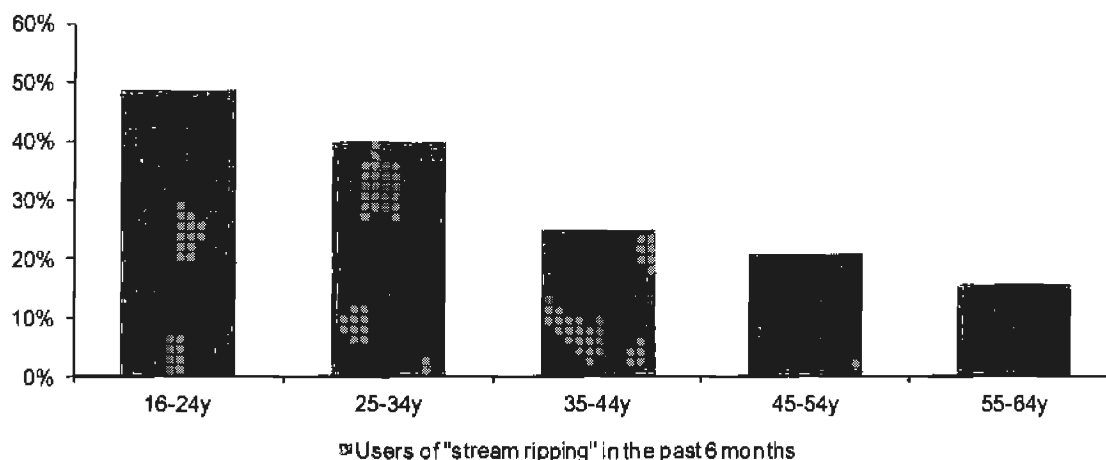
Appendix – Stream ripping common, but piracy is behind us

Piracy has been often mentioned as the main reason for music revenue decline since the 1999 peak, but we have always argued against this assumption. Consumers flew to illegitimate download sites because they offered a better service than the legal online retailers, not necessarily because they wanted to steal music: for a long time iTunes had a smaller catalogue (The Beatles were added only in 2010, AC/DC in 2012) and it lacked intuitive sharing and discovery functionalities.

Here we would like to open a parenthesis and highlight the similarities with the increasingly strong adoption of ad-blocking software. This trend should be read as consumers voicing their unease with the increasingly intrusive online and mobile advertising, not necessarily as consumers willing to steal content. According to a number of reports, as advertising shifted to video, it now accounts for c.40% of data traffic, which slows down connections and increases the cost of telecom bills due to higher mobile/fixed data consumption. Closed parenthesis.

A recent study published by the IFPI found that nearly half of 16-24 year-olds have used stream ripping over the previous six months (Fig 13). This is a "new" form of piracy equivalent to recording and copy of music broadcast from the radio onto audiocassette, which we believe is mostly popular among YouTube users.

Fig 13 Young listeners tempted by stream ripping, but not for sharing

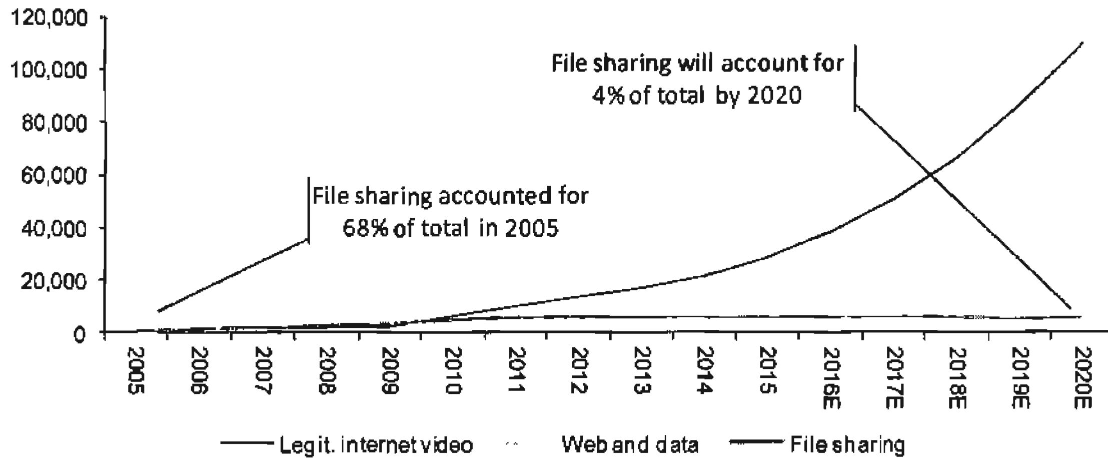


Source: Company data, Macquarie Research, November 2016

On YouTube it is also relatively easy to download an unrestricted file of music videos, though usability is really quite limited compared to a pay streaming service. The data also clearly show that file sharing is in decline, especially once accounting for the fact that users are probably sharing larger files (music videos as opposed to MP3).

IP traffic data from Cisco (Fig 14) show that file-sharing has peaked in absolute terms, while its relative weight within the total consumer traffic declined from 68% in 2005 to 14% in 2015 (4% forecast by 2020).

Fig 14 File sharing has been declining, in stark distinction to internet video growth (Consumer IP traffic in PB per month)



Source: Company data, Macquarie Research, November 2016

As music fans migrate to legitimate platforms, they are reverting increasingly less to peer-to-peer websites such as Bit Torrent. Streaming services offer a superior alternative to piracy, and consumers are happily embracing it even when there is a highly attractive free alternative: Spotify has the highest ever recorded free-to-pay conversion (28% and growing) among any other fremium service.

Fig 15 Global Media - valuation table

	Ticker	Mkt Cap ($m)	Analyst	Rating (O/N/U)	TP	Price	u/d-side	EV/EBITDA FY0	EV/EBITDA FY1	EV/EBITA FY0	EV/EBITA FY1	P/E FY0	P/E FY1	FCF yield FY0	FCF yield FY1	DVD yield FY0	DVD yield FY1	ND/EBITDA FY0
Facset	FDS US	6,189	HM	Neutral	$ 180	$ 154.7	16.3%	16.1x	13.7x	17.8x	15.2x	24.3x	21.9x	4.6%	5.4%	1.2%	1.1%	0.2x
Pearson	PSON LN	7,603	TN	Outperform	£ 9.25	£ 7.6	22.1%	7.8x	15.2x	9.4x	22.7x	10.8x	25.9x	-0.3%	1.4%	6.9%	6.9%	0.7x
RELX Group	REL LN	19,372	GS	Underperform	£ 12	£ 14.6	-17.9%	15.1x	13.3x	16.5x	14.6x	21.3x	19.2x	3.6%	4.3%	2.4%	2.6%	1.7x
Thomson Reuters	TRI US	29,394	GS	Neutral	$ 38.7	$ 39.4	-1.8%	11.2x	10.2x	16.3x	14.6x	21.6x	18.3x	4.7%	5.0%	3.4%	3.6%	1.4x
Verisk Analytics	VRSK US	13,780	HM	Neutral	$ 88	$ 81.6	7.9%	16.8x	14.8x	21.2x	18.7x	26.5x	27.0x	3.3%	4.9%	0.0%	0.0%	3.0x
Wolters Kluwer	WKL NA	11,667	GS	Outperform	€ 42	€ 35.3	19.1%	11.3x	10.2x	13.3x	12.0x	17.1x	15.5x	4.7%	5.3%	2.3%	2.6%	1.8x
Prof. Publishing (tot/ median)		**99,535**					**12.1%**	**11.9x**	**12.8x**	**16.4x**	**16.5x**	**19.2x**	**19.8x**	**4.1%**	**4.9%**	**2.3%**	**2.6%**	**1.5x**
CBS Corporation	CBS US	25,198	TN	Outperform	$ 65	$ 56.6	14.8%	11.2x	9.3x	12.2x	10.1x	17.1x	13.8x	4.8%	13.9%	1.1%	1.2%	2.6x
ITV	ITV LN	8,379	GS	Neutral	£ 2.1	£ 1.7	23.2%	7.5x	6.9x	7.7x	7.2x	9.8x	9.7x	9.8%	10.6%	4.2%	4.3%	0.3x
Mediaset	MS IM	3,372	GS	Underperform	€ 2.1	€ 2.6	-19.4%	13.4x	10.1x	19.3x	13.4x	33.0x	16.8x	10.0%	12.9%	3.1%	5.3%	2.0x
Mediaset Espana	TL5 SM	3,756	GS	Neutral	€ 11	€ 10.2	8.1%	12.1x	10.3x	12.6x	10.7x	17.1x	14.7x	6.3%	6.7%	5.6%	6.6%	-0.5x
Prosieben	PSM GR	9,416	GS	Outperform	€ 53	€ 39.3	35.0%	10.9x	9.9x	12.8x	11.4x	16.1x	14.4x	5.9%	6.8%	5.2%	5.9%	2.4x
FTA Broadcaters (tot/ median)		**50,121**					**14.8%**	**11.2x**	**9.9x**	**12.6x**	**10.7x**	**17.1x**	**14.4x**	**6.3%**	**10.6%**	**4.2%**	**5.3%**	**2.0x**
Havas	HAV FP	3,409	TN	Neutral	€ 7.5	€ 7.4	1.2%	8.8x	7.9x	10.6x	9.1x	18.3x	17.4x	5.7%	13.8%	1.7%	1.8%	-0.3x
Dentsu	4324 JP	14,300	NR	Neutral	¥ 5700	¥ 5270	8.2%	11.6x	9.0x	15.5x	10.9x	20.7x	16.8x	-9.2%	8.3%	1.4%	1.5%	1.1x
Interpublic Group	IPG US	8,889	TN	Outperform	$ 26	$ 22.4	16.1%	8.6x	8.3x	10.1x	9.8x	18.5x	17.0x	5.8%	1.0%	2.1%	2.7%	0.4x
Publicis Groupe	PUB FP	15,467	TN	Outperform	€ 73	€ 62.5	16.8%	8.8x	9.0x	9.8x	10.0x	14.2x	14.0x	8.3%	6.3%	2.6%	3.1%	1.0x
Omnicom	OMC US	18,828	TN	Outperform	$ 90	$ 79.8	12.8%	9.8x	9.5x	11.2x	11.0x	18.1x	16.9x	10.5%	4.9%	2.5%	2.8%	1.0x
WPP	WPP LN	27,768	TN	Outperform	£ 19.5	£ 17.8	9.7%	12.4x	11.6x	13.7x	12.7x	19.0x	15.6x	5.0%	7.4%	2.5%	3.2%	1.5x
Ad. Agencies (tot/ median)		**88,661**					**11.2%**	**9.3x**	**9.0x**	**10.9x**	**10.5x**	**18.4x**	**16.8x**	**5.7%**	**6.8%**	**2.3%**	**2.7%**	**1.0x**
21st Century Fox	FOXA US	48,939	TN	Neutral	$ 27	$ 26.3	2.8%	9.9x	8.9x	10.8x	9.7x	15.2x	13.6x	5.6%	6.9%	1.3%	1.5%	2.3x
Disney	DIS US	148,962	TN	Outperform	$ 110	$ 92.7	18.7%	10.4x	9.5x	12.0x	10.9x	18.0x	16.0x	4.5%	5.0%	1.2%	1.4%	0.8x
Discovery	DISCA US	16,919	TN	Neutral	$ 27	$ 26.1	3.4%	7.7x	7.5x	9.0x	8.6x	14.9x	12.4x	6.9%	5.6%	0.0%	0.0%	3.1x
Loen Enertainment	016170 KS	1,523	KC	Outperform	113000	68900	64.0%	20.1x	15.7x	21.1x	16.3x	33.8x	26.7x	3.6%	4.0%	1.0%	0.0%	-1.0x
Pandora Media	P US	2,618	AY	Outperform	$ 14	$ 11.3	23.6%	47.2x	-21.5x	90.9x	-14.7x	nmf	nmf	-2.8%	-10.9%	0.0%	0.0%	-2.0x
Scripps Networks	SNI US	8,305	TN	Neutral	$ 65	$ 64.4	1.0%	9.5x	10.7x	10.6x	10.7x	13.1x	12.6x	9.2%	6.9%	1.4%	1.6%	3.0x
Sirius XM Radio	SIRI US	20,120	AY	Outperform	$ 4.85	$ 4.2	16.3%	16.4x	13.8x	19.6x	16.2x	36.7x	29.0x	5.5%	7.4%	0.0%	0.0%	3.2x
Sony	6758 JP	31,870	DT	Outperform	¥ 3820	¥ 3337	14.5%	5.8x	6.1x	13.6x	14.0x	27.8x	46.5x	11.2%	6.8%	0.6%	0.6%	-0.1x
Time Warner Inc	TWX US	68,769	TN	Neutral	$ 105	$ 89	18.0%	12.2x	10.4x	13.4x	11.4x	18.7x	16.4x	5.0%	13.9%	1.6%	1.8%	2.8x
Viacom	VIAB US	15,133	TN	Neutral	$ 35	$ 37.6	-6.8%	6.5x	8.7x	8.8x	9.4x	6.9x	10.5x	14.3%	6.0%	3.9%	3.7%	2.8x
Vivendi	VIV FP	26,027	GS	Outperform	€ 24.5	€ 18.4	33.0%	11.6x	10.7x	15.5x	14.0x	29.4x	25.8x	4.1%	3.7%	10.9%	5.4%	-3.3x
Entertainment (tot/ median)		**393,707**					**18.0%**	**10.4x**	**9.5x**	**13.4x**	**10.9x**	**18.4x**	**16.2x**	**5.5%**	**6.0%**	**1.0%**	**0.6%**	**2.3x**
AT&T	T US	226,158	AY	Outperform	$ 43	$ 36.8	16.9%	7.4x	6.5x	14.1x	12.7x	13.5x	12.8x	7.4%	7.5%	5.1%	5.2%	2.6x
Comcast	CMCSA US	147,925	AY	Outperform	$ 74	$ 61.8	19.7%	8.3x	7.9x	12.8x	12.3x	19.3x	17.8x	6.9%	6.6%	1.6%	1.8%	2.0x
DISH Network	DISH US	27,113	AY	Outperform	$ 66	$ 58.6	12.7%	15.3x	12.0x	24.8x	17.0x	36.4x	18.6x	4.9%	6.3%	0.0%	0.0%	4.9x
Liberty Global	LBTYA US	34,306	AY	Outperform	$ 39	$ 32.6	19.6%	8.8x	9.7x	26.5x	30.7x	nmf	9342.5x	9.3%	8.4%	0.0%	0.0%	5.5x
Netflix	NFLX US	53,587	TN	Underperform	$ 85	$ 124.9	-31.9%	242.6x	238.8x	368.8x	432.6x	444.7x	315.9x	-1.7%	-2.9%	0.0%	0.0%	2.5x
Sky	SKY LN	17,168	GP	Outperform	£ 14	£ 8.2	71.1%	9.5x	9.3x	12.0x	12.3x	13.0x	49.4x	5.6%	5.4%	4.1%	4.2%	3.1x
Verizon Communications	VZ US	196,086	AY	Neutral	$ 55	$ 48.1	14.3%	6.5x	6.6x	9.9x	10.3x	12.1x	12.6x	10.8%	3.8%	4.6%	4.8%	2.3x
Distribution (tot/ median)		**502,213**					**19.6%**	**9.5x**	**9.7x**	**15.5x**	**14.0x**	**24.3x**	**18.6x**	**5.6%**	**5.4%**	**1.6%**	**1.8%**	**2.5x**

Analyst: Giasone Salati(GS), Tim Nollen (TM), Amy Yong (AY), Bob Liao (BL), Guy Peddy (GP), Nathan Ramler (NR), Chad Beynon (CB), Andrew DeGasperi (AD). Mark Murphy (MM), Damian Thong (DT), Hamzah Mazari (HM), Kwang Cho (KC)
Source: Company data, Macquarie Research, November 2016 (prices as of 01/11/2016)

Recommendation definitions

Macquarie - Australia/New Zealand
Outperform – return >3% in excess of benchmark return
Neutral – return within 3% of benchmark return
Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

Macquarie – Asia/Europe
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie – South Africa
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie - Canada
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

Macquarie - USA
Outperform (Buy) – return >5% in excess of Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

Volatility index definition*

This is calculated from the volatility of historical price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Asia/Australian/NZ/Canada stocks only

Recommendations – 12 months
Note: Quant recommendations may differ from Fundamental Analyst recommendations

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa*
ROA = adjusted ebit / average total assets
ROA Banks/Insurance = adjusted net profit /average total assets
ROE = adjusted net profit / average shareholders funds
Gross cashflow = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 30 September 2016

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	47.26%	55.50%	38.46%	45.47%	59.09%	48.21%	(for US coverage by MCUSA, 8.20% of stocks followed are investment banking clients)
Neutral	38.01%	29.31%	42.86%	48.77%	37.88%	36.79%	(for US coverage by MCUSA, 8.25% of stocks followed are investment banking clients)
Underperform	14.73%	15.19%	18.68%	5.76%	3.03%	15.00%	(for US coverage by MCUSA, 8.00% of stocks followed are investment banking clients)

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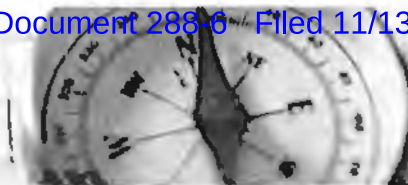

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Bloomberg Intelligence

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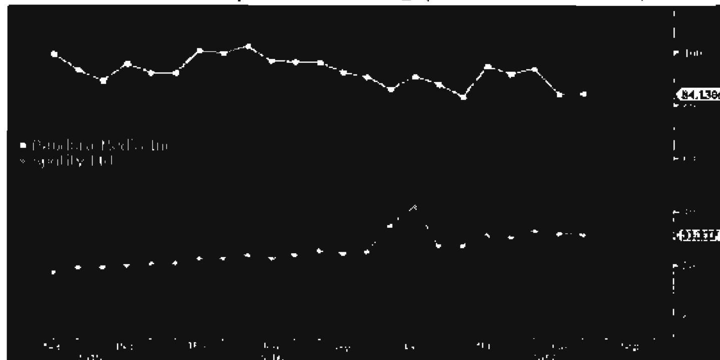
1. Spotify's Product Roars Ahead Amid Business Model Challenges

(Bloomberg Intelligence) -- Spotify's rapid user growth and engagement suggest its product leads competitors, yet its structural profit profile is a challenge longer-term. The company recorded $2.16 billion in 2015 sales and a $192 million net loss, according to the Wall Street Journal, driven partly by content costs that account for as much as 70% of revenue. Spotify may delay its IPO to renegotiate those licensing agreements, Bloomberg reported. Music-label ownership of a portion of Spotify's equity may aid its negotiating leverage.

Spotify reached 50 million paid subscribers in September, up from 20 million in June 2015. The major music labels and larger independents reportedly own 8-15% of the company, based on reports from the Guardian and Fortune. Spotify's private market valuation tops $8 billion, according to Bloomberg. (03/08/17)

U.S. Time Spent Streaming (Billions of Minutes)



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Bloomberg Intelligence

Streaming Music Topic Primer

BI Internet Media, Global Dashboard

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1. Streaming May Stabilize Music Sales Amid Profitability Challenge

(Bloomberg Intelligence) -- The rise of on-demand music-streaming subscriptions may finally stabilize sales of music content after years of decline. Streamers such as Spotify and Pandora will likely continue struggling to reach profitability amid onerous licensing costs, even as they invest in operations in a bid for growth. Meanwhile, the likes of Apple and Amazon.com are leveraging music streaming to draw users into their ecosystem to spur cross-selling, with the size of the industry itself unlikely to meaningfully alter their sales growth.

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On-demand music streaming may grow at a compound annual rate of 22% from 2015-20 to top $11 billion globally. Ad-supported streaming revenue in the U.S. may reach $6 billion by that time. Music apps were the No. 1 category ranked by time spent among U.S app users in 2016, ComScore said. (06/20/17)

Market Overview

Addressable Market

2. 2020 Music Subscriptions May Top $11 Billion, Stabilize Labels

Revenue from on-demand streaming music subscriptions may top $11 billion in 2020, up from $4.1 billion in 2015, according to PwC and Ovum. This implies an annualized global subscriber base of about 110-135 million, based on BI analysis of Spotify's 2015 revenue per subscriber. The major music labels -- Sony Music, Universal Music (Vivendi) and Warner Music -- will be the primary beneficiaries. Streaming-service providers such as Spotify, Pandora, Apple, Google and Amazon will also capture gains.

As streaming outgrows physical and download sales beyond 2020, growth could pick up. Spotify's 2015 revenue per subscriber was about $91. This number is likely to remain flat or fall as subscriber growth in emerging markets outweighs developed market gains. (06/20/17)

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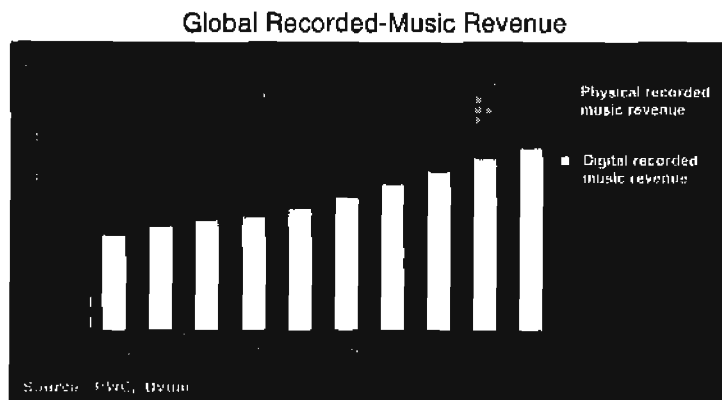
Global Recorded-Music Revenue

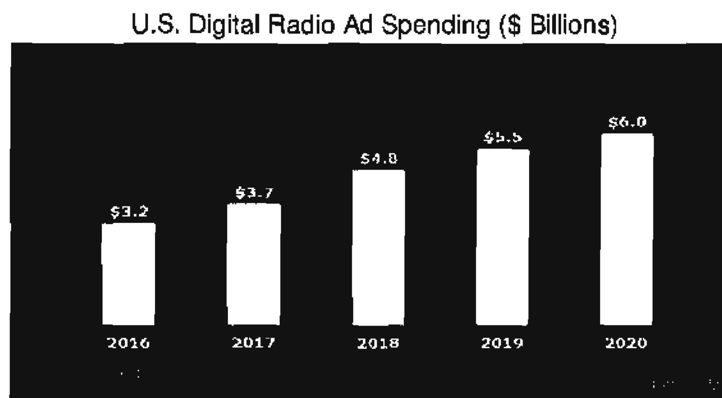


3. Digital-Radio Ad Sales Rising Slowly, May Aid Streamers' Profit

Digital radio advertising may aid profitability and address a segment of the market unwilling to pay for a subscription, yet it will likely grow slower than on-demand and still remain nascent overseas. U.S. digital ad revenue was $3.2 billion in 2016, with Pandora recording $1.07 billion in ad sales, almost entirely from the U.S. Only about $295 million, or 10%, of Spotify's 2016 revenue came from ads, suggesting international digital-radio ad sales remain muted.

Pandora said it postponed international expansion due to licensing issues. The company's ad-supported segment targets a contribution margin of 60% after content costs vs. 37% in its subscription offering. About 40% of Spotify users are in the U.S., based on ComScore data. (06/23/17)

U.S. Digital Radio Ad Spending ($ Billions)



4. Declining Wireless Data Costs Enables Rise of Spotify, Pandora

Falling prices for wireless data are supporting the rise of music streaming. As this trend continues, the effective cost of a subscription may be palatable to a broader audience. In a 2016 CTIA survey, 84% of U.S. consumers described themselves as extremely likely to use more data if it didn't count against their monthly usage, suggesting perceptions of added cost remains a constraint on using data freely. Telecom offerings such as zero-rating on streaming or unlimited data may speed adoption.

Streaming 30 hours of Pandora at 64 kbps, which represents about a month's use, would consume about 840 megabytes. (06/20/17)

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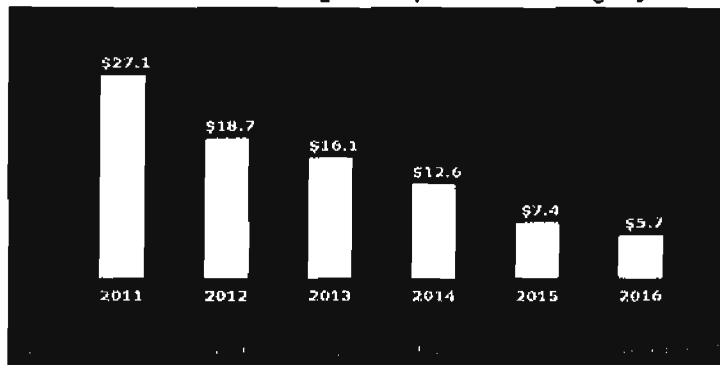
North America Average Cost per Wireless Gigabyte



5. Bundles May Speed Music Streaming for Amazon, Spotify, Sprint

The adoption of music streaming subscriptions is likely to be accelerated by bundle offerings from internet and telecom giants that leverage cross-selling to pick up users. Sprint's acquisition of Tidal is likely a bid to cross-sell its subscribers the streaming service. Amazon offers a discounted on-demand plan to Prime subscribers, while Spotify has partnered with The New York times to cross-sell subscriptions. Platforms better able to leverage cross-selling could gain market share at the expense of peers. (06/21/17)

Cross-Selling Bundle Offerings

Amazon	Amazon Music Unlimited Bundled For Prime Members At $79/year
Sprint	Bought 33% Of Tidal in January 2017, Promises Exclusive Content, Promotions and Offers
Spotify	Bundled With The New York Times Digital Edition For $5/Month
Apple	BeatsX Wireless Headphones Come With Three Free Months Of Apple Music

6. Bevy of Substitutes Key Headwind for Spotify, Pandora and Apple

The existence of numerous substitutes for music streaming, from YouTube and downloads to legacy physical recordings, is likely the biggest drag on sales growth for the industry. Time spent listening to music remains fragmented across formats and devices, according to Edison Research. Longer term, the seamless multidevice experience offered by streaming may help siphon usage away from siloed formats such as radio and owned music.

Adding premium non-music content such as video, news and sportscasting into streaming bundles may bolster appeal to consumers. (06/21/17)

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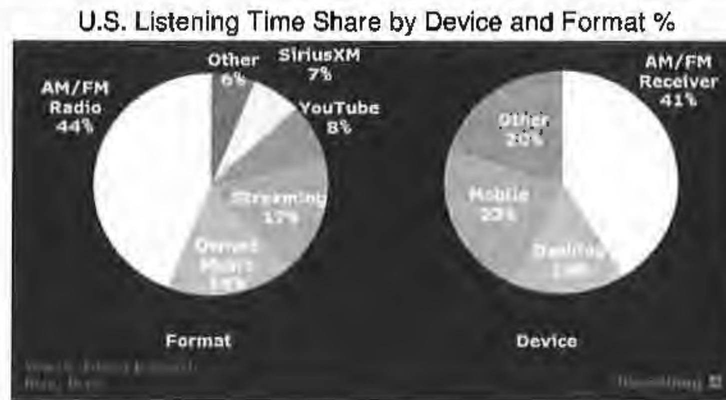
U.S. Listening Time Share by Device and Format %



Profit Woes

7. Content Costs Mute Music Streamers' Long-Term Profit Outlook

Content-licensing costs paid to music labels and artists by music streaming platforms such as Spotify and Pandora add uncertainty to their long-term profit outlooks. These companies, which are competing for growth in new subscribers, are challenged by operating losses and cash burn. About 70% of gross revenue is paid to content providers for on-demand services, with streamers targeting lower payout margins longer term.

Spotify signed longer-term licensing deals with Vivendi's Universal Music, Warner and Sony Music in 2017 amid an effort to rein in costs as it prepares for a public listing, according to Bloomberg. Apple also sought lower rates from record labels as of June, Bloomberg said. (08/28/17)

Target 2020 Contribution Margin After Content Cost

EXPANDED PANDORA PORTFOLIO

	[illegible]	CONT. MARGIN	[illegible]	OPERATING PROFIT	[illegible]
pandora	[illegible]	60%	[illegible]	25%	[illegible]
pandora [illegible]	[illegible]	42%	[illegible]	15%	[illegible]
pandora [illegible]	[illegible]	37%	[illegible]	10%	[illegible]

Source: Pandora Analyst Day

8. Profit Challenge Likely to Spur Consolidation in Music Streaming

A challenging near-term profitability outlook for music streaming is likely to spur market consolidation by companies that can use deep pockets to fuel growth and leverage cross-selling opportunities. Amazon and Apple may push streaming as a way to add appeal to Prime membership and devices, respectively. Sirius could acquire streaming users as a strategy to future-proof its business as music consumption is increasingly funneled through streaming.

Smaller companies are likely to get purchased or exit the market. Sprint recently bought 30% of Tidal in a bid to enter the content market. Rdio went bankrupt and Pandora purchased some of its assets in December 2015. Other smaller offerings include SoundCloud, Deezer, Napster and iHeartRadio. (06/08/17)

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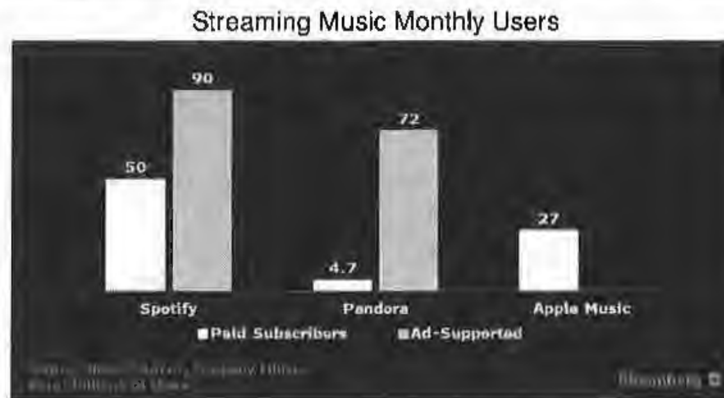
Streaming Music Monthly Users



Company Strategies

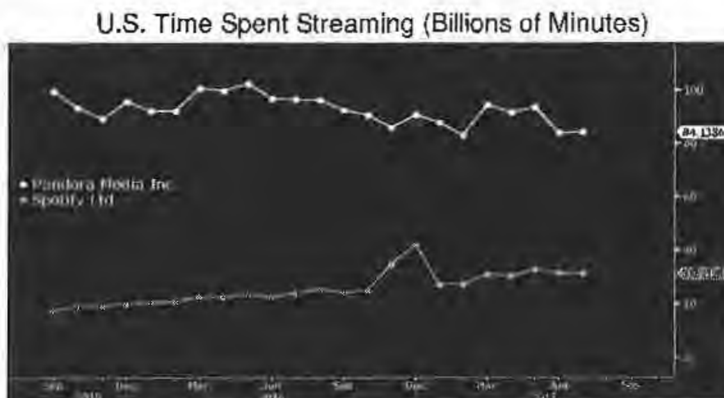
Spotify

9. Spotify's Product Roars Ahead Amid Business Model Challenges

Spotify's rapid user growth and engagement suggest its product leads competitors, yet its structural profit profile is a challenge longer-term. The company recorded $3.06 billion in 2015 sales and a $601 million net loss, Bloomberg reported, driven partly by content costs that account for as much as 70% of revenue. Spotify renegotiated its licensing deals with Warner Music, Vivendi's Universal Music and Sony in 2017 in a bid to limit these costs.

Spotify reached 60 million paid subscribers in July, up from 20 million in June 2015. The major music labels and larger independents reportedly own 8-15% of the company, based on reports from the Guardian and Fortune. Spotify's private market valuation tops $8 billion, according to Bloomberg. (09/20/17)

U.S. Time Spent Streaming (Billions of Minutes)



Pandora

10. Pandora Profit Hope Risky as Sirius Invests to Spark Growth

Pandora's bid for profit remains challenged amid growth constraints, even with Sirius' investment. Subscription uptake faces stiff competition, with Spotify and Apple already controlling 87 million subscribers globally. Ad growth could also be threatened if subscriptions cannibalize ad-supported radio users. Pandora may have room to cut costs, with adjusted gross profit per employee running at less than half that of Twitter in 4Q. If Sirius' cash injection can fuel growth, it may swing Pandora's profit outlook.

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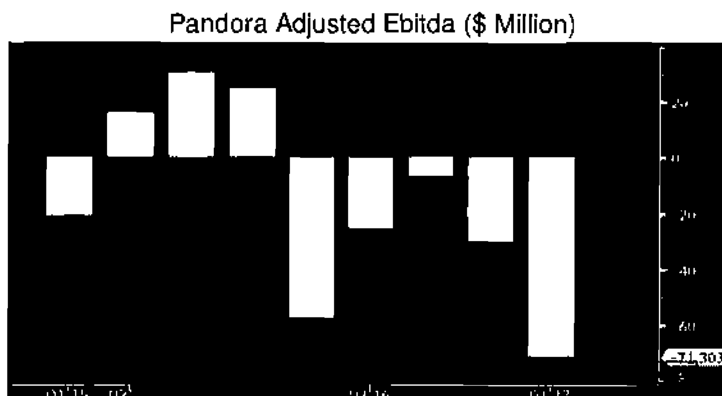
Sales made up 22% of Pandora headcount in 2Q16 vs. 58% at Yelp, suggesting the company is less dependent on headcount to fuel growth, leaving room for cuts elsewhere. Analysts expect Pandora to carve out $9 million in Ebitda profit in 2018. (08/28/17)

Pandora Adjusted Ebitda ($ Million)



Sirius

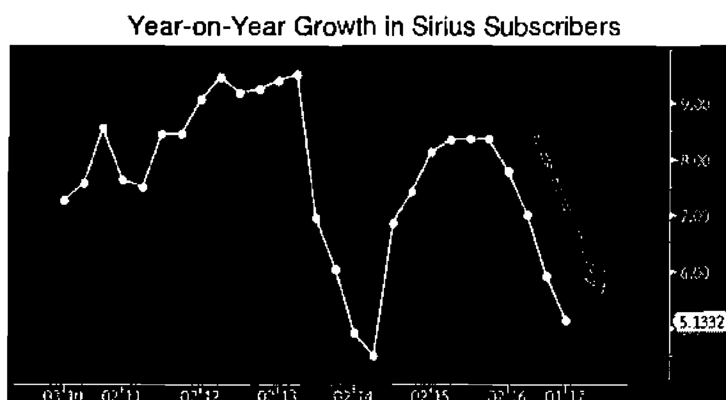
11. Sirius Streaming Entry Would Future-Proof, Build an Ecosystem

Contributing Analysts Joshua Yatskowitz

SiriusXM may seek to enter music streaming in an effort to future-proof its business from the growth of competitive offerings that intrude on its stronghold in car-radio subscriptions. Pandora would help it tap the ad-supported digital streaming market and gain share in radio listening. The leadership of Liberty Media, part owner of Sirius, has said the on-demand market is unattractive on account of poor unit economics. Although Pandora's on-demand product could help stem user attrition by Apple and Spotify.

Sirius subscriber growth has slowed amid steadying new vehicle sales and high penetration rates. Growth may also be challenged at the margin by the rise of digital streaming. (06/12/17)

Year-on-Year Growth in Sirius Subscribers



Apple

12. Apple Music Topping 27 Million Users Marks Music Streaming Bid

Contributing Analysts John Butler (Telecom)

Apple's June 2015 launch of its streaming music service, Apple Music, reflected the company's effort to expand its

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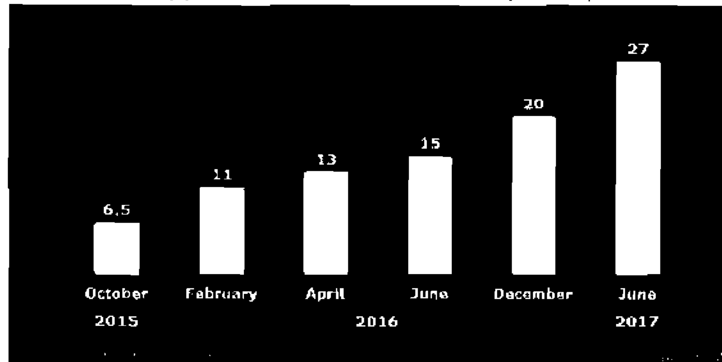
services business (11% of 2016 revenue) and a bid to build on its dominant position in the music download market, originally established through the iTunes Store. The addition of Apple Music should strengthen Apple's ecosystem and provide a platform for an expansion into video content as well, while leveraging its install base of more than 1 billion devices.

Apple music had 27 million paying subscribers as of June. U.S. digital download revenue from music content began declining in 2013, according to RIAA data. Global music-streaming subscription revenue may grow 22% compounded annually from 2015-20, according to Ovum and PwC. (06/08/17)

Apple Music Paid Subscribers (Million)



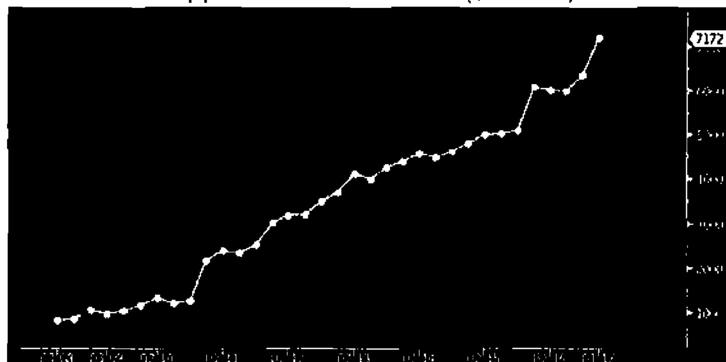
13. Apple Can Leverage Size, Installed Base to Expand Music Margins

Contributing Analysts John Butler (Telecom)

Apple should be able to generate higher structural operating margins in its music streaming business than smaller rivals by leveraging its greater scale and ability to source subscriptions from its installed device base. Apple music had 27 million paying subscribers as of June. U.S. digital-download music revenue fell for the first time in 2013, according to RIAA data, while global music streaming subscription revenue is forecast to grow at 22% a year through 2020, according to Ovum and PwC.

Apple's services revenue, which contains Apple Music and the iTunes Store, was 11% of total revenue in 2016, up from 9% in 2011. Apple Music's profitability is also advantaged by the fact that it doesn't need to pay a cut to its own App Store for subscriptions on iOS devices. (06/08/17)

Apple Services Revenue ($ Million)



Google, Amazon

14. Google, Amazon Likely Leveraging Music for Ad, E-Commerce Sales

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Google and Amazon's strategy with their music streaming offerings likely centers on adding appeal to their internet ecosystems to aid ad sales and increase Prime memberships. The streaming offerings may remain loss leaders that add to profit by increasing volume in the core business. Amazon Music's $79 annual subscription rate for Prime members, which undercuts the going $120 rate, gives credence to the willingness of these giants to compete on price with less profitable peers such as Spotify and Pandora. (06/21/17)

U.S. Users' Way of Music Listening (% Respondents)

	18-29	30-44	45-54	55-64	65+
Pandora	28%	20%	16%	13%	5%
Spotify	23%	9%	5%	2%	1%
AM/FM Radio	14%	28%	44%	49%	59%
Purchased (CDs, iTunes)	11%	15%	14%	18%	19%
Apple Music	7%	4%	3%	1%	0%
Google Play	5%	6%	3%	3%	2%
iHeartRadio	4%	8%	5%	2%	1%
Amazon Prime	4%	6%	5%	4%	4%
Tidal	1%	1%	0%	0%	0%

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Mechanical and Performance Royalties: What's the Difference?

Mechanical vs. Performance
What's The Difference?

To start thinking about music in legal terms, it's important to realize that there are two types of musicians: songwriters and performing artists. These hold two distinct copyrights: songwriters hold the rights to the lyrics and melody of a piece of music, while performing artists hold the rights to a particular recording of a song, which is called a master recording. Songwriters may only seek copyright for a full song, and cannot divide lyrics and melody into separate rights.

Both songwriters and recording artists typically assign their rights to a third party for management, instead of attempting to track a song's use and seek payment independently. Song copyrights are typically assigned to music publishers, while master recording copyrights are typically assigned to a record label.

PERFORMANCE ROYALTIES

The fees music users pay when music is performed publicly. Music played over the radio, in a restaurant or bar, or over a service like Spotify or Pandora is considered a public performance.

- Performance Rights Organizations or PROs (in the US that's **BMI, ASCAP,** and **SESAC**) collect **songwriting** performance royalties from music users, and then pay songwriters and rights holders (publishers).

- Like BMI and ASCAP, **SoundExchange** collects **recording** performance royalties to recording artists and labels whenever music is performed publicly — but only for digital performances.

- That's because copyright regulation as it stands means terrestrial broadcasters (AM/FM radio) pay performance royalties to songwriters, *but not* the recording artists.

- Digital performances (for example, Pandora) pay a **recording** digital performance royalty to SoundExchange *and* a **songwriting** digital performance royalty to the PROs.

for songwriting performance royalties. In exchange for the right to collect on behalf of songwriters across America, they are limited in their ability to negotiate by this rate court.

- SoundExchange isn't governed by a consent decree, which means they can negotiate on the free market. This is where things get complicated. Recording artists get paid **nothing** when their music is played on AM/FM radio (because there's no performance right for recordings on terrestrial radio), but they are typically paid at least **5 times** more than songwriters when music is performed digitally, like on Pandora. That's because of SoundExchange's negotiation power, and BMI/ASCAP's limitations. AM/FM broadcasters do pay songwriters, but it's at a royalty rate ultimately set by the courts.

MECHANICAL ROYALTIES

Royalties paid to songwriters and artists when music is sold (think CD or vinyl) but also when music is streamed (streaming mechanicals) "on-demand" (like Spotify). Songwriting mechanical royalties are set by government through what's called a compulsory license, which right now is set to about 9 cents of every dollar earned via sale.

- Current copyright regulation wasn't created at a time when services like Spotify or Beats existed, (which are kind of a hybrid of 'performance' and a 'sale') so they pay both performance royalties and mechanical royalties to songwriters and artists.

- Spotify pays about 10% of its revenue to songwriters (split between mechanical and performance royalties) and about 60% to the artists. Services like Spotify don't have to negotiate with songwriters, because the government sets the rates – through the consent decree for PROs and a compulsory license for mechanical licenses.

- Mechanical royalties for songwriting are usually paid by labels or artists to a third party, (traditionally for the major publisher it's been HFA (the Harry Fox Agency), who pay the publishers.

Now that you have a firm grasp of the difference between mechanical and public performance royalties work, you should create a free account to view all of the music royalty assets we have up for auction on the site. You can create your free account in less than two minutes by clicking the button below.

Helpful Links

Buying Music Royalties 101

Music Royalties Overview

Mechanical and Performance Royalties: What's the Difference?

Royalty Distribution: Who Collects What For Who?

Guide to Sync Royalties

About Production Music

Create A Free Account >>

Other Guides

Film and Television Royalties

Book Publishing Royalties

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Drug Royalty Financing Thrives in Difficult Market

Why Music Royalties Belong In Your Portfolio

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The undersigned hereby certifies that on November 13, 2017, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's SDNY Procedures for Electronic Filing.

/s/ Steven G. Sklaver
Steven G. Sklaver