# STREAM ON: VALUING SPOTIFY, FOR ITS IPO

Aswath Damodaran

# Unicorns going public?



- We have seen two high profile unicorns file for initial public offerings.
  - The first out of the gate was Dropbox, a storage solution for a world where gigabyte files are the rule rather than the exception, with a filing on February 23.
  - Following close after, on February 28, Spotify, positioning itself as the music streaming analog to Netflix, filed its prospectus.
- With it's larger potential market capitalization and unusual IPO structure, Spotify has attracted more attention than Dropbox, and I would like to focus this post on it.

# The Back Story - A Changing Business

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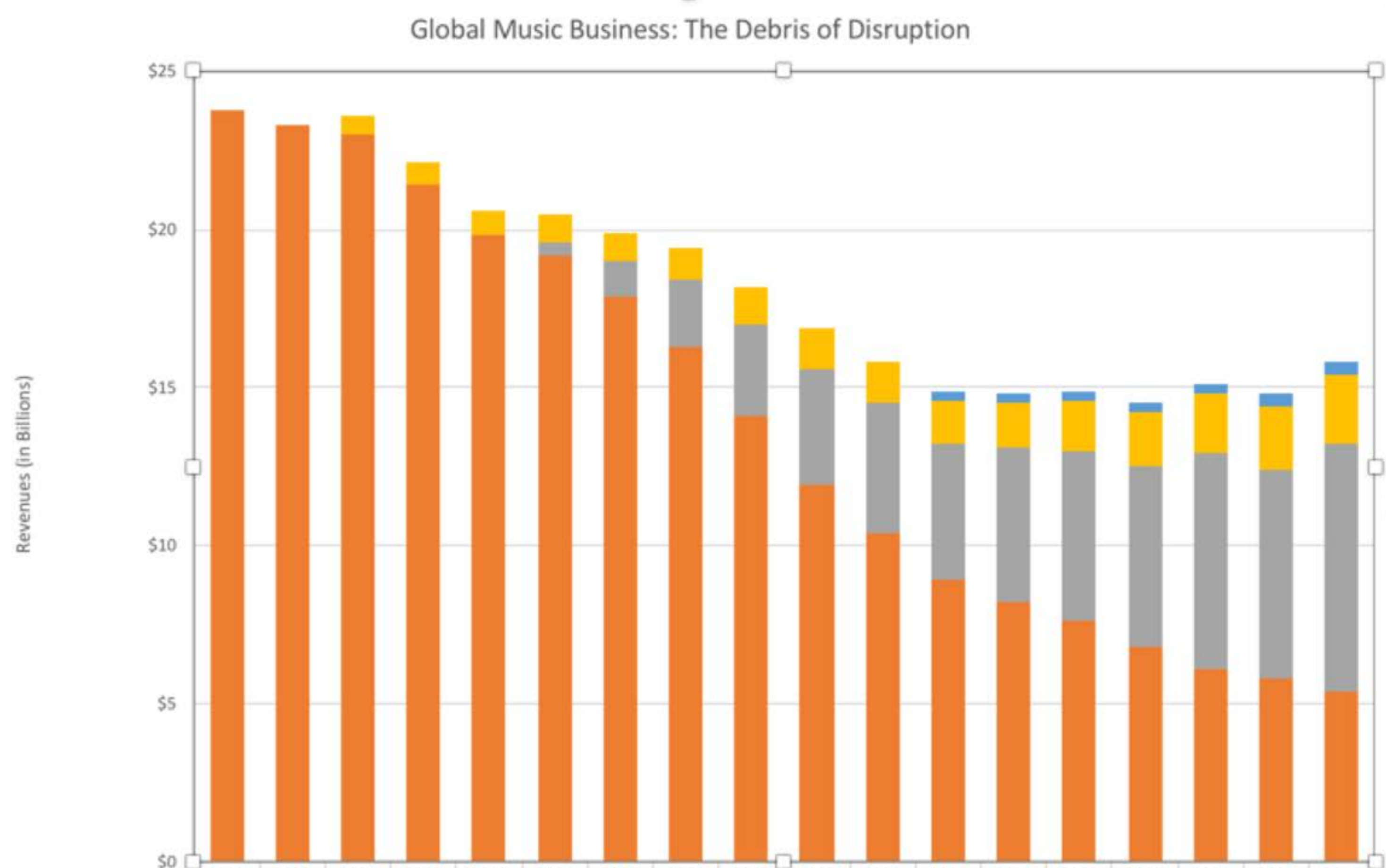


| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Syncronoization | $- | $- | $- | $- | $- | $- | $- | $- | $- | $- | $- | $0.3 | $0.3 | $0.3 | $0.3 | $0.3 | $0.4 | $0.4 |
| Performance Rights | $- | $- | $0.6 | $0.7 | $0.8 | $0.9 | $0.9 | $1.0 | $1.2 | $1.3 | $1.3 | $1.4 | $1.4 | $1.6 | $1.7 | $1.9 | $2.0 | $2.2 |
| Digital | $- | $- | $- | $- | $- | $0.4 | $1.1 | $2.1 | $2.9 | $3.7 | $4.1 | $4.3 | $4.9 | $5.4 | $5.7 | $6.8 | $6.6 | $7.8 |
| Physical | $23.8 | $23.3 | $23.0 | $21.4 | $19.8 | $19.2 | $17.9 | $16.3 | $14.1 | $11.9 | $10.4 | $8.9 | $8.2 | $7.6 | $6.8 | $6.1 | $5.8 | $5.4 |

# The Spotify Business Model

- Free or Premium: Listeners can subscribe to a free version, with limited customization features (playlists, stations etc.) and online ads. Alternatively, they can subscribe to a premium version of the service, paying a monthly fee, in return for a plethora of customization options, and no ads.
- Pricing: The company's standard service cost $9.99/month in the United States in 2018, with a family membership, where up to six family members living at the same address, can share a family service for $14.99/month, while preserving individualized playlists and stations. Prices vary globally, ranging from a high of $16.94 in the UK (for standard service) to much lower prices in Eastern Europe and Latin America
- Content Cost: Spotify pays for its music content, based upon how often a song is streamed, but the rates vary depending on whether it is on the free or premium service and where in the world, creating some complexity in how it is computed.

# 1. Growth Company

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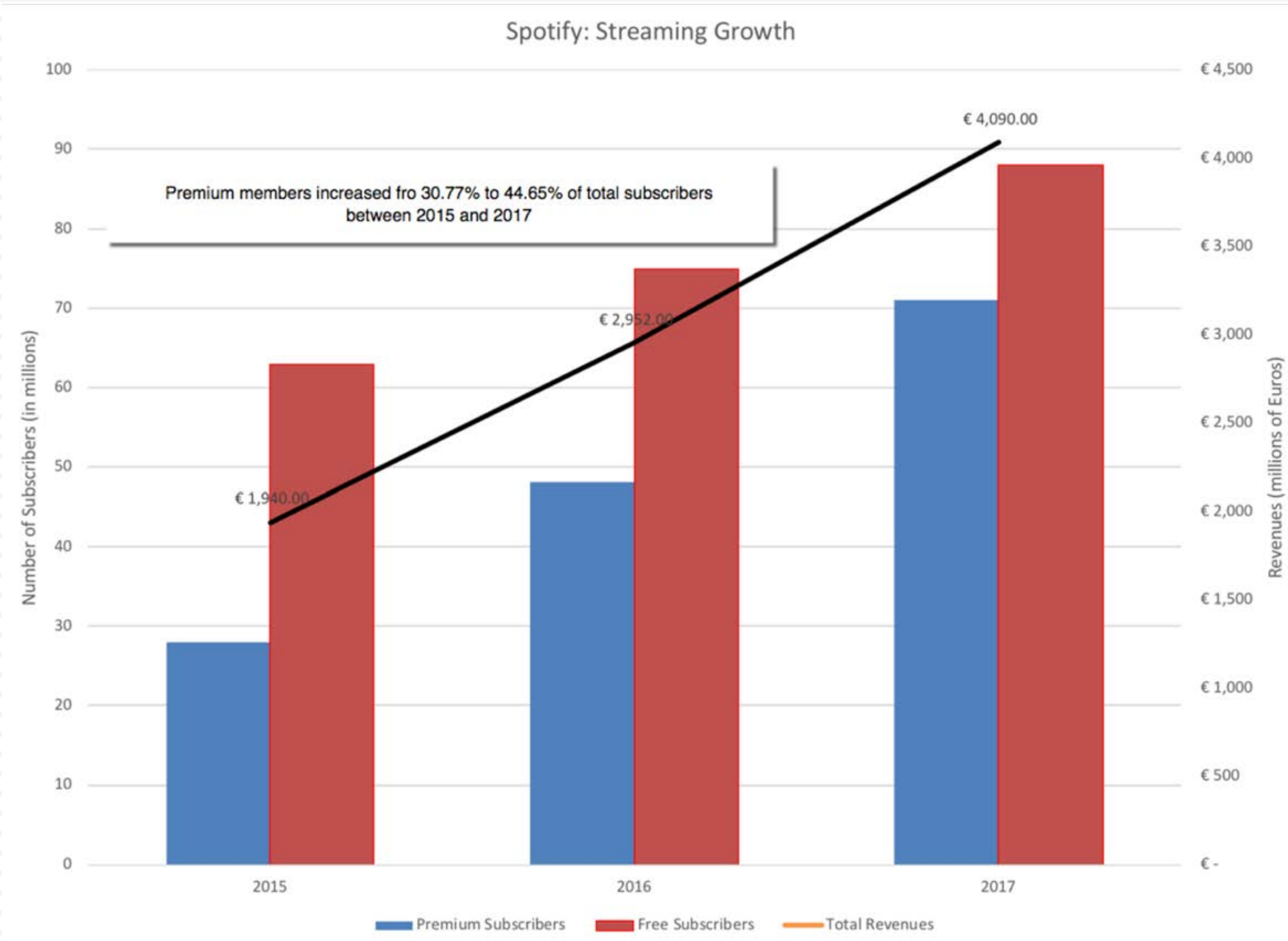

# 2. Predominantly Subscription Driven, with a discordant note

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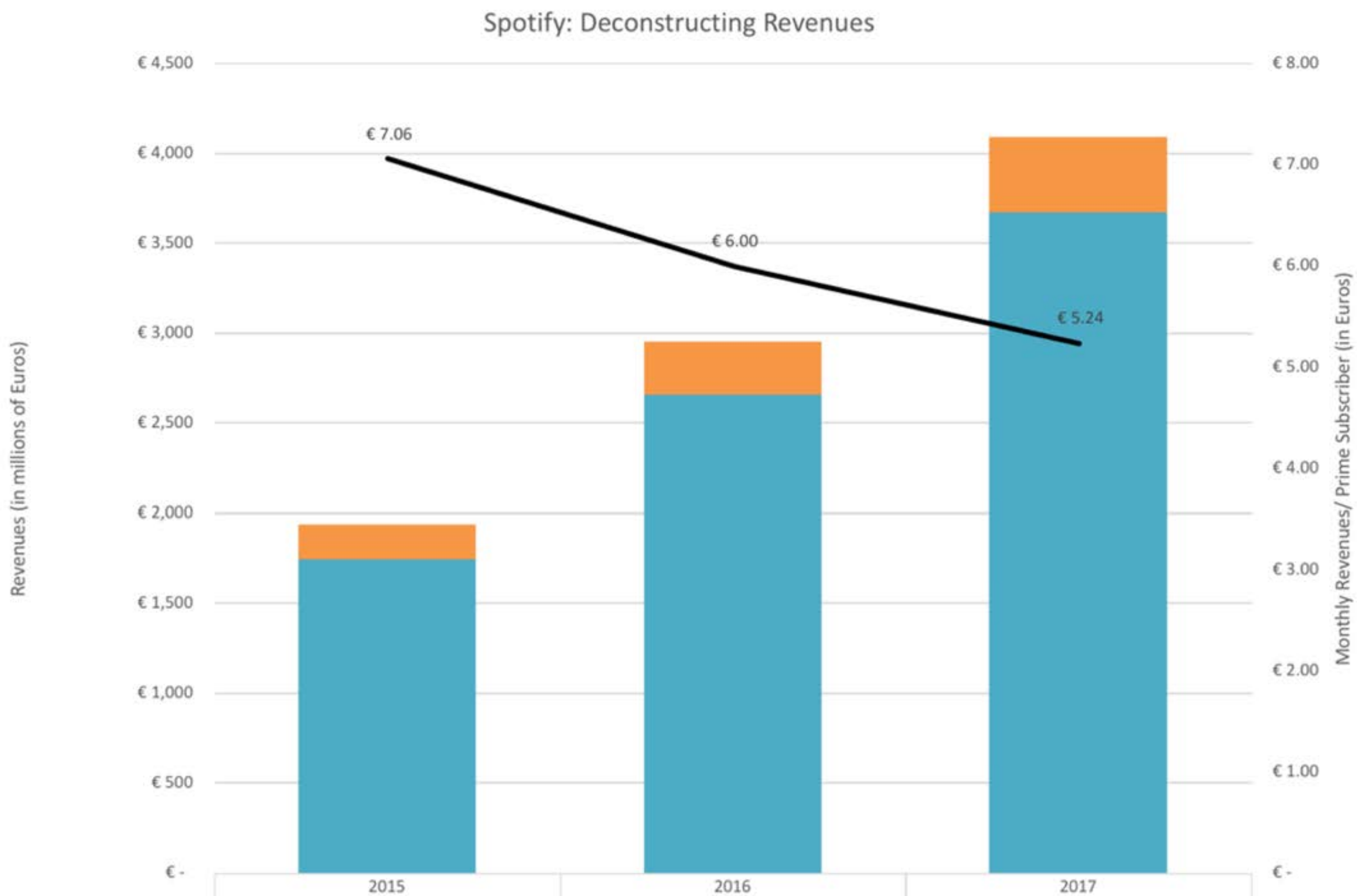
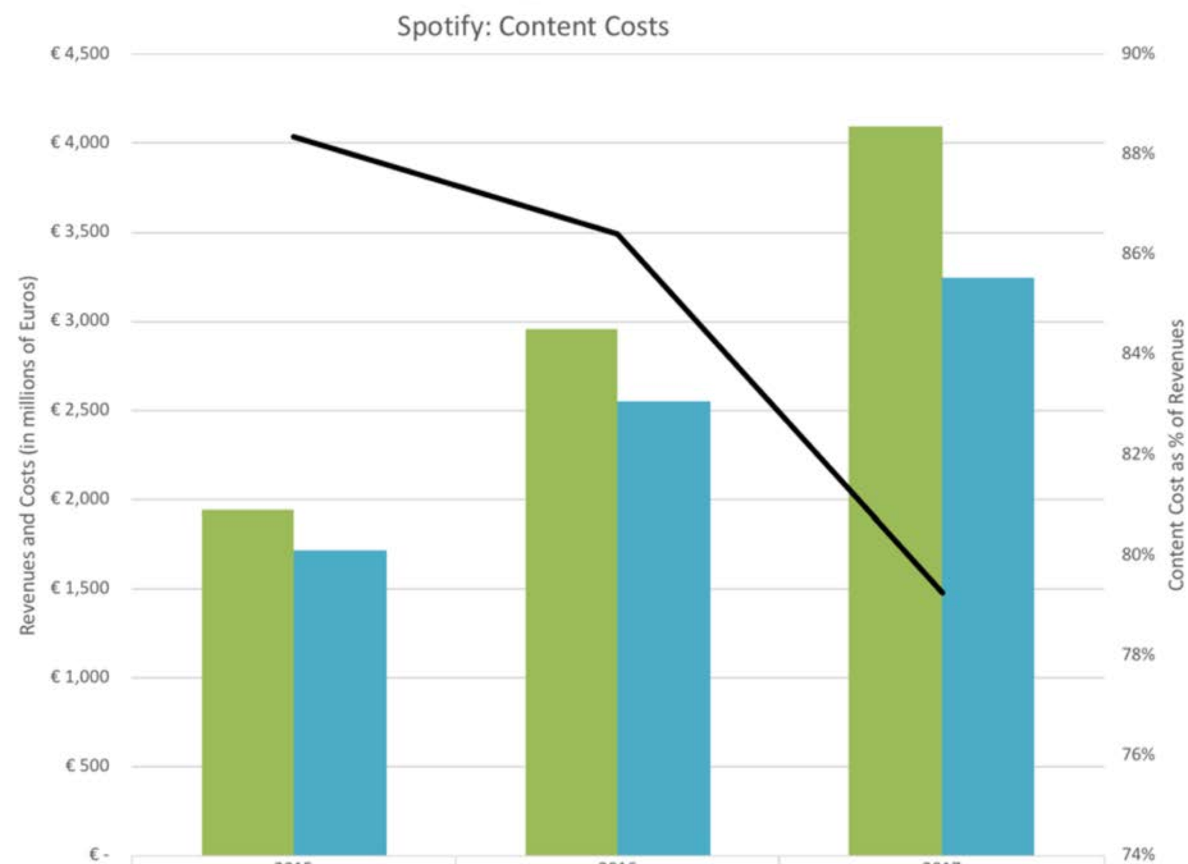



| | 2015 | 2016 | 2017 |
|---|---|---|---|
| Ad Revenues | € 196 | € 295 | € 416 |
| Premium Revenues | € 1,744 | € 2,657 | € 3,674 |
| Premium ARPU | € 7.06 | € 6.00 | € 5.24 |

# 3. Declining Content Costs, but Taylor Swift and Jay-Z are no longer here..






| | 2015 | 2016 | 2017 |
|---|---|---|---|
| Total Revenue | € 1,940.00 | € 2,952.00 | € 4,090.00 |
| Cost of Revenue | € 1,714.00 | € 2,551.00 | € 3,241.00 |
| Streaming Cost as % of Revenue | 88.35% | 86.42% | 79.24% |

# 4. Other Costs are big and getting bigger

| Year | 2015 | 2016 | 2017 |
|---|---|---|---|
| Revenues | € 1,940.00 | € 2,952.00 | € 4,090.00 |
| Content Cost | € 1,714.00 | € 2,551.00 | € 3,241.00 |
| R&D | € 136.00 | € 207.00 | € 396.00 |
| Sales & Marketing | € 219.00 | € 368.00 | € 567.00 |
| G&A | € 106.00 | € 175.00 | € 274.00 |
| Operating Income (loss) | € (235.00) | € (349.00) | € (388.00) |
| R&D as % of Sales | 7.01% | 7.01% | 9.68% |
| Marketing Cost as % of Sales | 11.29% | 12.47% | 13.86% |
| G&A Cost as % of Sales | 5.46% | 5.93% | 6.70% |
| Operating Margin | -12.11% | -11.82% | -9.49% |

# The IPO Structure: Spotify Twists

- No Banks: In a typical IPO, the issuing company seeks out an investment bank, which not only sets an offering price (backed up by a guarantee) but also creates a syndicate with other banks to market the IPO, in roadshows and private client pitches. The Spotify IPO will dispense with the bankers and go directly to the market, letting demand and supply set the price on the opening day.
- Cashing Out: In most IPOs, the cash that comes in on the offering, from the shares that are bought by the public, is kept in the company, either to retire existing financing that is not advantageous to the firm, or to cover future investment needs. Spotify is aiming to raise about $1 billion from its offering, but none of it will go to company. Instead, existing equity investors in the company will be receiving the cash in return for their holdings.

# Thoughts about Twists

- No bankers, no problem: Bankers don't value IPOs; they price them, usually with fairly crude pricing metrics, though they often reverse engineer DCFs to back up their pricing. Their guarantee on the offering price is significantly diluted in value by the fact that they set offering prices 10% to 15% below what they think the market will bear, and their marketing efforts are more useful in gauging demand than in selling the securities.
- Control or Growth: The cashing out of existing owners sends two negative signals.
  - Equity investors who cash out) do not feel that staying on as investors in the company, as a publicly traded entity, is worth it. Since they have access to data that I don't, I would like to know what they see in the company's future.
  - The structure of the share offering, with voting and non-voting shares, indicates a consolidation of control with the founders, and the offering may provide an opportunity to get rid of dissenting voices.

# My Spotify Story

- Continued (but Slower) Revenue Growth: Scaling and increased competition will result in a revenue growth of 25% a year for the next five years, scaling down to much lower growth in the years after.
- With Reduced Content Costs: Since Spotify pays for its content based upon song streams, those savings have to come from either paying less per stream (which is going to and should create push back from labels and artists) or finding ways to create economies of scale on this cost component. I assume that they can reduce content costs to 70% of revenues, while finding a way to keep artists and labels happy. That is not going to be an easy balance to maintain, especially with the top artists, as evidenced by Taylor Swift's and Jay-Z's decisions to pull their music from Spotify.

# With economies of scale reducing other costs, as a percent of revenues

| | 2015 | 2016 | 2017 | **2028 (Target)** |
|---|---|---|---|---|
| Total Revenue | € 1,940.00 | € 2,952.00 | € 4,090.00 | **€ 22,157.15** |
| Cost of Revenue | € 1,714.00 | € 2,551.00 | € 3,241.00 | **€ 15,510.00** |
| Streaming Cost as % of Revenue | 88.35% | 86.42% | 79.24% | **70.00%** |
| R&D | 136 | 207 | 396 | **€ 1,329.43** |
| Sales & Marketing | 219 | 368 | 567 | **€ 1,107.86** |
| G&A | 106 | 175 | 274 | **€ 1,336.18** |
| R&D as % of Sales | 7.01% | 7.01% | 9.68% | **6.00%** |
| Marketing Cost as % of Sales | 11.29% | 12.47% | 13.86% | **5.00%** |
| G&A Cost as % of Sales | 5.46% | 5.93% | 6.70% | **6.03%** |
| Operating Income | -235 | -349 | -388 | **€ 2,873.68** |
| Operating Margin | -12.11% | -11.82% | -9.49% | **12.97%** |

# With limited operating risk but significant failure risk…

- With Limited Capital Investments: Spotify's business model is built for scaling, with little need for capital reinvestment, except for R&D and perhaps acquisitions. I assume that small capital investments can generate large revenues, using a sales to capital ratio of 4.00, the 90th percentile of global companies.
- Manageable Operating Risk but Significant Failure Risk: Spotify's subscription based model and low turnover rate among subscribers does lend some stability to revenues, though adding more subscribers and going for growth is a riskier proposition.
  - Overall, allowing for their business mix (90% entertainment, 10% advertising) and their global mix of revenues yields a  cost of capital of 9.24%, at the 80th percentile of global companies; the firm is planning to convert much of its debt into equity at the time of the IPO, giving it a equity dominated capital structure.
  - However, the company is still young, losing money and faces deep pocketed competition, suggesting that failure is a very real possibility. I assume a 20% chance of failure, with failure translating into selling the company to the highest bidder at half of its going concern value.

# And the loose ends…

1. Add the cash balance of the company of 1.5 billion Euros, ignore the proceeds from the IPO because of the cash-out structure
2. Deal with options: Net out the value of 20.82 million options/warrants outstanding, with an average strike price of 42.56 Euros per share.
3. Get share count: Dividing the equity value by 177.17 million shares (including restricted shares) yields a value per share of 88.26 Euros per share or $108.97.
4. Non voting discount? The shares that you will be buying will be non-voting, implying a discount on this number, though how much you discount it will depend on how much you like and trust the company's founders.

## Spotify

### The Story

Spotify is the world's largest conduit for streaming music, which has become the dominant form of downloads in the music business. Spotify will continue to add users, though at a slower rate, as it faces strong competition in the US from Apple Music and scaling up issues, and shift increasingly to a subscriber based business, away from advertising. As the user base grows, the operating margins, currently negative, will improve as content costs continue to shrink and economies of scale bring other costs under control. As a money-losing company facing deep-pocketed competition, there is a 20% chance that the company will be forced to sell itself at half its fair value sometime in the next 10 years.

### The Assumptions

| | *Base year* | *Years 1-5* | *Years 6-10* | | *After year 10* | *Link to story* |
|---|---|---|---|---|---|---|
| Revenues (a) | $ 4,090 | 25.00% → | 2.85% | | 2.85% | User growth continues, albeit at slower pace, with shift towards subscription-based model. |
| Operating margin (b) | -3.75% | -3.75% → | 12.97% | | 12.97% | Content costs will continue to drop, as Spotify negotiates better deals with music labels. Economies of scale will lower G&A and R&D costs. |
| Tax rate | 25.00% | 25.00% → | 25.00% | | 25.00% | Used a global average tax rate |
| Reinvestment (c ) | | Sales to capital ratio | 4.00 | RIR = | 23.75% | Low capital intensity business with technology and platform investments taking the form of R&D. |
| Return on capital | -88.99% | Marginal ROIC = | 67.55% | | 12.00% | |
| Cost of capital (d) | | 9.24% → | 7.35% | | 7.35% | |

### The Cash Flows

| | *Revenues* | *Operating Margin* | *EBIT* | *EBIT (1-t)* | *Reinvestment* | *FCFF* |
|---|---|---|---|---|---|---|
| 1 | € 5,112.50 | -2.08% | € (106.38) | € (106.38) | € 255.63 | € (362.01) |
| 2 | € 6,390.63 | -0.41% | € (26.11) | € (26.11) | € 319.53 | € (345.64) |
| 3 | € 7,988.28 | 1.26% | € 100.95 | € 100.95 | € 399.41 | € (298.46) |
| 4 | € 9,985.35 | 2.94% | € 293.17 | € 293.17 | € 499.27 | € (206.10) |
| 5 | € 12,481.69 | 4.61% | € 575.19 | € 575.19 | € 624.08 | € (48.90) |
| 6 | € 15,049.17 | 6.28% | € 945.16 | € 837.42 | € 641.87 | € 195.55 |
| 7 | € 17,478.11 | 7.95% | € 1,389.99 | € 1,042.49 | € 607.23 | € 435.26 |
| 8 | € 19,524.80 | 9.63% | € 1,879.27 | € 1,409.45 | € 511.67 | € 897.78 |
| 9 | € 20,946.20 | 11.30% | € 2,366.35 | € 1,774.76 | € 355.35 | € 1,419.41 |
| 10 | € 21,543.17 | 12.97% | € 2,794.05 | € 2,095.54 | € 149.24 | € 1,946.30 |
| Terminal year | € 22,157.15 | 12.97% | € 2,873.68 | € 2,155.26 | € 511.87 | € 1,643.39 |

### The Value

| | | | |
|---|---|---|---|
| Terminal value | € 36,519.70 | | |
| PV(Terminal value) | € 15,902.66 | | |
| PV (CF over next 10 years) | € 1,289.39 | | |
| Value of operating assets = | € 17,192.05 | | |
| Adjustment for distress | € 1,719.20 | Probability of failure = | 20.00% |
| - Debt & Mnority Interests | € - | | |
| + Cash & Other Non-operating assets | € 1,509.00 | | |
| Value of equity | € 16,981.84 | | |
| - Value of equity options | € 1,344.28 | | |
| Number of shares | 177.17 | | |
| Value per share | € 88.26 | Most Recent VC Pricing = | € 107.33 |

# Here's what I left out

1. <u>IPOs are a pricing game</u>: To price Spotify, you have to decide your "comparable firms" (Netflix or Pandora) and your pricing variable (users or revenues).
2. <u>User-based, not top down valuations</u>: You could value Spotify from the ground up, by valuing its existing and new users.
3. <u>The Data Advantage</u>: Spotify is learning about its subscriber music tastes and that data can be used to not only modify its offerings but perhaps create content that is more closely tailored to these tastes.