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Listening to the Future: Spotify's Dominance Through Podcasts and Emerging Markets

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Abstract

This Equity Research report conducted a valuation on Spotify, the leading company in the audio streaming sector. Being market leader, the company is expected to continue its current growth path, amplified by the opportunities to expand its premium and ad-supported segments in emerging markets, and the increased monetization of its advertising segment through podcasts. It is issued a “Buy” recommendation, with an expected price of €300,2 per share in the end of 2022, translating in a 52% total return for shareholders.

Keywords
Audio Streaming
Podcasts
Advertising
Emerging Markets

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Opportunities and risks

Opportunities

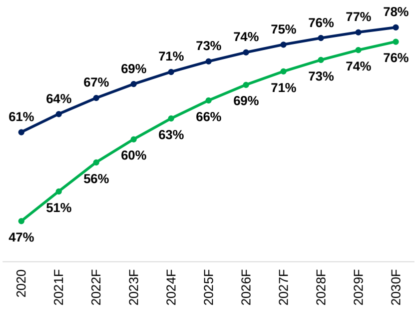
Emerging Markets

Spotify is still in the process of expansion and establishment in new markets. However, it is already providing its services across the globe and to a very high number of countries. Spotify is available in 178 countries as of the date of this report.

The most recent and significant geographic expansions include the launch in July 2020 in Russia, the Commonwealth of Independent States, and the Balkans, adding to the launch, in the first half of 2021, in 86 new countries. These include South Korea, one of the biggest music markets globally (6th in the world). This 80+ countries expansion taps into a potential market of around 1 billion people. Also, most of these additional countries come from Asia, Africa, and the Middle East. Previously, these markets represented less than 20% of total Spotify's MAUs, which shows the existent opportunity in both the eastern and the least developed countries. Along with product expansion and growth within existing markets, geographic expansion to unexplored markets is one of the primary sources of growth and size for Spotify. These countries tend to be the where streaming is not explored to its fullest, giving a massive opportunity to widen its user base.

As Spotify settles in and starts establishing itself in Europe and North America, new goals are set in the remaining regions. Spotify is successfully establishing itself in Latin America, with a penetration rate in the targeted population of 18% in 2020[1]. However, ROW[2] region is seen as one of the main sources of growth for Spotify – with only 2% targeted population captured, split in 1,5% in ad-supported and 0,5% in premium. Being many of the 86 new countries in this region, Spotify has a considerable opportunity to win these markets and grow MAUs and Revenues at even greater rates for the foreseeable years.

Figure 24 – Latin America and R.O.W **internet penetration rate** forecast



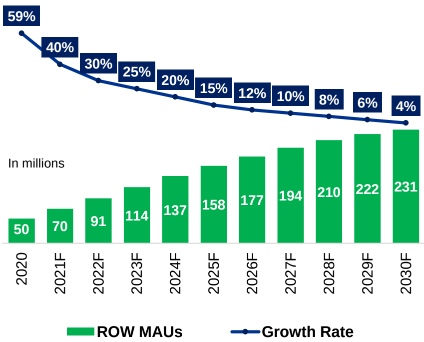
Spotify adjusts its pricing to each market to accommodate different purchasing powers[3], in order to deliver premium service to a broader population since willingness to pay for a premium service is different between regions. An example of the effort to attract users to a subscription-based plan is the testing of Spotify+, which enables users to get all the functionalities of the premium service while still being exposed to advertisements. Spotify is charging $0,99 for it

[1] We consider the target population to be the population within each region with internet access.
[2] ROW - Rest of the World
[3] Source: Spotify's 2020 annual report

monthly in the U.S, and it may be an excellent solution for countries with a lower purchasing power. With this, we expect an increasing share of revenues coming from ROW and Latin America.

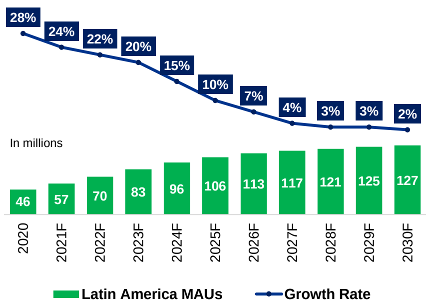
Also, there is capital being allocated to increase internet penetration in where internet is not a given. An example is Elon Musk's Starlink venture for Wi-Fi delivery through drones/satellites, increasing the internet access in remote regions. Spotify also takes into account that internet reach may be lower in some countries, along with the fact that there are fewer next-generation mobile phones, by creating Spotify Lite[4]. It is a simplified version of the Spotify app, which uses less storage, data, and battery for older devices to run the app.

Figure 25 – **R.O.W MAUs** forecast & yearly growth rate



It's forecasted that by 2025 the Rest of the World region will reach an internet penetration rate of 71% (vs. 56% in 2020). With this, we forecast that by 2025 Rest of the World reaches 177 million company-wide MAUs, with a 22% CAGR - split into 137 million ad-supported MAUs and 40 million premium subscribers, with a respective CAGR of 22% and 20%.

Figure 26 – **Latin America MAUs** forecast & yearly growth rate



As the internet penetration rate is also forecasted to rapidly increase in Latin America (from 61% to 73% between 2020 and 2025), the growth trend in MAUs is also expected to be observable in this region for the forecasted years. Hence, we forecast Latin America will reach 172 Million company-wide MAUs in 2025 (with a CAGR of 18% from 2020 to 2025), split into 106 ad-supported MAUs (18% CAGR) and 67 premium subscribers (16% CAGR).

As Spotify expands its presence in these markets, internet access increases, and streaming gains further strength as being the primary go-to for audio content, we expect that emerging markets will be a key focus and a critical segment in Spotify's business for the upcoming years, as shown by our forecasts. We expect growing importance in revenues and MAUs coming from Latin America and ROW regions, forecasting it to be 10% and 12% of total revenues by 2025, respectively.

One noticeable omission in Spotify's business is China, the second-largest economy globally. This is a market with high difficulties in terms of penetration, with a quite established player already present (Tencent Music Entertainment, publicly listed, along with fierce competition from NetEase, soon to complete an IPO), and with many other big tech companies failing to tap in this market (e.g., Alphabet, Meta Platforms and Uber). For this reason, in 2017, TME and Spotify entered into a stock swap agreement, in which both Spotify and TME exchanged a 9,1% stake in both ways. Spotify has a stake of around 8% currently.[5] Hence,

[4] Source: Spotify Newsroom
[5] Source: Spotify's 2020 annual report

Figure 27 – **Revenue split** per regions **(2020)**

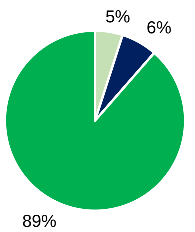


Figure 28 – **Revenue split** per regions **(2025 Forecast)**

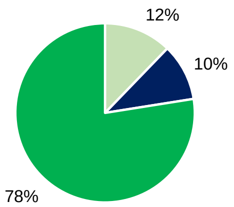


Figure 29 – **Ad-supported gross margin** forecast

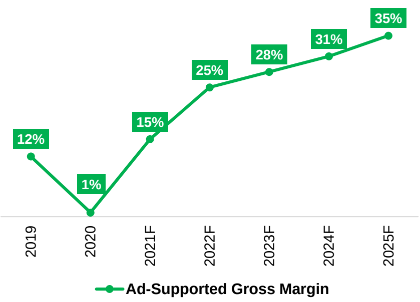
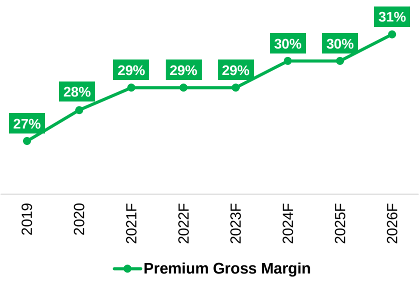


Figure 30 – **Premium gross margin** forecast



Spotify has exposure to the Chinese audio streaming market, with a massive player in it being related to the company, which would otherwise become a competitor. As of the 3rd quarter of 2021, the Chinese equities market was hit hard by Evergrande's financial struggles and the increasing government control on China's biggest companies. Spotify saw its TME Ltd. stake's fair value decrease more than 60% in 2021 (from €2228 Million to €885 Million). The majority of analysts' view is that large-cap Chinese stocks are somewhat discounted today, continuing to believe in the potential of being exposed to the Chinese stock market, especially in the tech sector. There is no foreseeable change for Spotify's presence in the Chinese market through its TME ownership, as it is highly strategic.

Investment in Podcasts

The investment in Podcasts is entirely rational and purposeful. It is a market in extreme growth, with podcast usage rising over 200% on Spotify, in 2020, according to Magna Global[6]. Spotify believes that the industry landscape found in podcasts today is very similar to music and streaming in the 2000s. Spotify's recent investments communicate their main goal in this market - to be the number one podcast/audio content provider in the world, and own the whole supply chain within the market. It owns exclusive content, provides distribution and metric-tracking solutions for podcast creators (through Anchor and Megaphone), and, most importantly, connects advertisers to content creators. Financially, this purpose can be observed with even higher expectations, and here's why.

Spotify has an issue specifically in the music streaming market - it is challenging to decrease the costs of revenue as a percentage of revenue. Rightsholders are quite powerful, with royalties composing most of Spotify's cost of revenue (which are around 70% of revenues historically). It is improbable that fees and royalties related to music differ a lot in the future from their level now[7]. Podcast market rise, and being the market leader in it, enables Spotify to achieve higher profit margins mainly in two ways. First, by boosting ad-supported gross margin, since podcasts are far more profitable than music. This is not only because of the increased podcast listening time (which decreases the weight of music royalties paid as % of revenues in this segment) but also because the cost of revenue associated with advertising can be considered to have fixed nature since the cost of providing advertising does not increase significantly for each incremental dollar

[6] Bensaid, A. (Bloomberg Intelligence - 2021). "Spotify Technology Research". Retrieved through the Bloomberg Terminal (no URL available)
[7] Further explored in Challenges section

of advertising revenue. The second way is by expanding premium segment gross profit, as the share of time dedicated to music listening decreases.

Figure 31 – **Revenue split** per segment – 2020 vs 2025 forecast

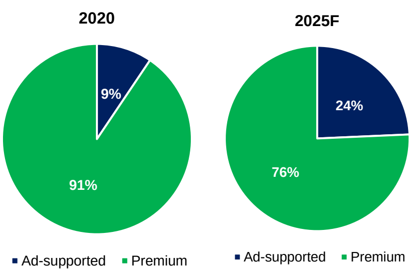
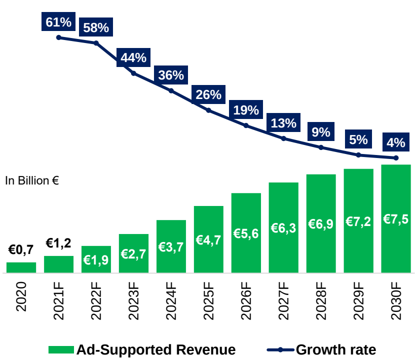


Figure 32 – **Ad-supported revenue forecast**



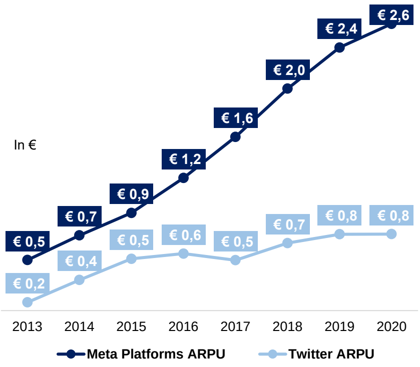
It may take time for margins improvement to become apparent, but they are becoming visible. As of 2021's third quarter, the ad-supported segment increased its weight on overall revenues to 13%, compared to 9% in the previous year, mainly coming from a higher contribution from podcasts in the platform and boost in advertiser spending allocated to audio through Spotify Audience Network.[8] [9] More specifically, the higher demand for this advertising-marketplace platform enabled Spotify to increase its path of monetizing further its podcast segment, which allowed a 75% YoY increase in Spotify's ad-supported revenue in the 3rd quarter of 2021. The potential of this product is observable, as Spotify sees positive signs while it is only available for advertisers in 4 markets: United States, Canada, United Kingdom, and Australia. Only in the United States, 60% of all podcast advertiser base was already using this platform in the first three months after launch[10]. As of the end of 2021, podcast creators of all sizes and types within these four markets can get advertisement inventory in their content. Spotify expects to expand its availability much further across all regions in which it operates, which can translate into an even more significant increase in ad-supported revenues. With this being said, we expect that the split of revenues from each segment changes significantly (ad-supported moving from a 9% weight in 2020 to 24% in 2025), with advertisement revenue growing at a CAGR of 44% between 2020 and 2025.

Spotify has also been investing heavily in owning podcast content, becoming exclusive in the platform. The multi-million-dollar acquisitions and deals with podcast creators attempt to remove the risk of content owners having high bargaining power, which is a reality in the music segment. Its major acquisitions regarding exclusive podcast content were Gimlet Media, Cutler media, and The Ringer, with a total amount of €391 Million spent. While owning these widely popular podcast studios, Spotify fully captures its advertisement revenues. Adding to this, Spotify signed a multi-year, multi-million-dollar exclusivity deal with one of the most favourite podcasts globally, The Joe Rogan Experience [11].

To better capture the shift to podcasts as a reliable way of advertisement, Spotify made two very strategic acquisitions. Anchor and Megaphone, acquired both for

[8] **Spotify Audience Network** enables creators to make meaningful revenue from podcasts. It is an audio advertising marketplace, where advertisers connect with podcast distributors creating content in the platform (which includes Spotify's owned studios as well), facilitating the process for content creators to monetize their work, while at the same time being a powerful platform for enabling advertisers target specific audiences, in both music and podcast content, by leveraging Spotify's data and audience metrics tracking.
[9] Bensaid, A. (Bloomberg Intelligence - 2021). "Spotify Technology Research". Retrieved through the Bloomberg Terminal (no URL available)
[10] Spotify Technology S.A (2021). "Taking the Spotify Audience Network On the Road". *https://ads.spotify.com/en-US/news-and-insights/spotify-audience-network-global-launch/*
[11] Final deal value undisclosed

Figure 33 – **Facebook and Twitter monthly advertising ARPU evolution**



a total of $385 Million, are being highly leveraged for the whole podcast supply-chain. Anchor technology is mainly being used by creators, to produce content and upload it directly to the platform. Also, Megaphone-backed technology is being used to further develop Spotify's Audience Network and enable better targeting and advertisement experience for creators, advertisers, and listeners.

We expect ad-Supported ARPU to increase significantly, as advertisers show increasing spending and interest in this form of advertising. It is expected to grow similarly to tech-companies advertising ARPU (e.g., Meta Platforms and Twitter). With ad-Supported ARPU in 2021's third quarter already reaching €0,41, which translates into a YoY growth of 32%, we expect the ad-supported ARPU will reach €0,91 by 2025 (24% CAGR 2020-2025).

With this in mind and observing Spotify's developments and investments, while also considering the effort to remain the number 1 platform for all audio content in the world, we expect this to be translated mainly in the ad-supported segment, with a considerable growth being expected in this segment for the foreseeable years. At the same time, the premium segment may also take advantage from this by consistently converting users from free to premium historically. However, as Spotify establishes itself in countries with lower purchasing power, we expect company-wide conversion rates to decrease slightly. Hence, it is even more important for Spotify to leverage opportunities from its faster-growing number of users in the ad-supported segment worldwide, monetizing it successfully.

Challenges and Risks

Rising competition

Spotify largely owns the audio streaming market. However, the competitive landscape is becoming riskier.

Being one of its most concerning risks, Spotify currently faces its fierce, powerful, cash-heavy, and rising competitors. Not only does it impose challenges in retaining current MAUs, and keeping them engaged in the platform, it also affects the ability to attract users from both new and established markets. Tech giants Apple, Amazon, Alphabet, and also smaller players such as Pandora and Tidal are increasing their presence in the audio streaming market, using different strategies - pricing, marketing, exclusive content, or prioritizing their service in their own produced devices. Additionally, conflicting online liability laws are creating a value gap in the market. Some services, such as Alphabet's YouTube, can claim that they are not responsible for the content published on their platforms, questioning the long-term sustainability of the industry and the market.

Music streaming platforms from tech-giants Alphabet, Amazon, and Apple pose the most considerable risk for Spotify's market leadership. As these platforms are a very small portion of their revenues, it is not crucial that this segment is immensely profitable in an expansion phase of their products. As such, these companies are able to reduce their pricing and operate at lower margins on its music streaming segment, or even at a loss for some years, which may attract users more effectively and steal market share from Spotify. Additionally, since their financial slack is much more significant than Spotify's, these companies may have an advantage in M&A activities in the market, being able to pay more significant premiums for other companies.

This posts a major uncertainty on whether Spotify will keep its market leadership and retention of users in the long term. Decreasing conversion rates to premium subscriptions, increasing churn rate or decreasing ad-supported MAUs growth rate are the most relevant drivers that may be affected by this. It may translate into an overall decrease in both ad-supported and premium MAUs, which ends up impacting Spotify revenue and ability to sustain its growth expectations.[12]

Emerging markets risk

As mentioned before, Spotify has recently made a significant investment in its international expansion, which included 80+ countries, mainly under-developed ones. Such countries present very different purchasing habits (even though Spotify adapts its pricing strategies with this in consideration). This leads to consumers in such markets having smaller budgets for entertainment expenditure, which presents further challenges in converting customers to its premium segment and having a significant penetration rate in such markets. Also, there are already small and local players providing music streaming services[13], with much more local content and deals with local artists in some of these markets. Although Spotify invests on "going local" when expanding its operations to new markets, in some countries it may be harder (or more expensive) to own rights for local content, which ultimately would impact its ability to attract new users.

An example of this risk is Spotify's expansion to India. Initially, its penetration in the market was fast – after its launch at the beginning of 2019, India added 2 million MAUs by the end of the first quarter. As the pandemic worsened and India became one of the most affected countries, subscribers' growth rates started to go lower than expected in 2021, when this number was only expected to grow stronger for a considerable period (2Q growth in MAUs moderated to 22% vs. 1Q

[12] Further explored in "Scenario Analysis"
[13] An example of this situation is India's Gaana, with a wide variety of local music and with popularity among consumers in the country

25% growth). Although the investment in such markets has a quite significant upside, with the possibility of being a large source of growth, this is a representative example when considering this risk as broader. This risk may translate into Spotify's investments not translating into significant growth rates in subscribers and conversion to the premium segment, making the investments not being compensated by revenue growth through MAUs acquisition. Also, by expanding to countries with lower purchasing power, both company-wide premium and ad-Supported ARPUs are likely reduced, which imposes further pressure in attracting MAUs.

Right holders and competitors bargaining power

With Spotify's dependency obtaining licenses on its music content, the risk that these increase their costs is widely concerning. It can cause a significant disruption in its business – since the cost of revenue has historically been around 70% of revenues. Although right holders and artists are also very dependent on streaming for their growth and sustainability (after many years of industry decline), there is the risk that regulation increases the costs to right holders, which may translate into further increases in costs for streaming companies. An upward shift in expenses with right holders would very much directly impact Spotify's cost structure, drastically reducing its margin and affecting the ability to grow its profits. Also, the audio streaming segment from Spotify's biggest competitors is only a small portion of their business (e.g., Amazon, Apple, Alphabet), and being them companies with a vast financial slack, it means that they can put pressure on Spotify by incurring into deals more advantageous for rightsholders and run their business at lower margins (or even losses) for more extended periods. This may pressure Spotify's financials at a level that can be unbearable to support in the long term.

Covid-19 Impact

Just as in many markets, Covid-19 emergence affected Spotify and may continue to impact. However, it has a proven two-sided effect on the company.

On the negative side, there was and may continually exist a decrease in advertisers' spending. Also, the reduction of overall income may lead to a decrease in premium subscribers and a lower willingness to pay for the service. Travel limitations and the decline in the commuting necessity shifted consumers' listening habits, and Spotify may not be able to adapt to these changes. Artists may also have less availability/opportunities to create content and make it available in the platform, which ultimately would negatively impact the platform's content quality and users' retention.

On the positive side, lockdowns and social distancing made consumers increase podcast listening drastically. For example, 90% of podcast listening occurs at users' homes, which was already happening before the pandemic[14]. Also, using U.S adults as an example, 22 percent of them confirmed that they were listening to podcasts much more due to social distancing and staying at home[15]. This caused podcast listening to accelerate further in 2020 and 2021, which may cause a quicker shift to podcast listening.

Valuation

DCF Method

As we built a deeper knowledge of the company, market trends, and metrics evolution, we believe that the DCF method is the most advantageous to value the company. We used a forecasting period of 14 years until 2035, as we believe that only by that time the growth associated with the industry and Spotify, especially in emerging economies, will be at steady-state. By then, in order to get the terminal value, we applied an annuity growth rate of 4,5% for five more years[16] and applied the perpetuity growth rate aligned with the long-term global GDP growth rate, of 2,5%[17], to 2040's core free-cash-flow.

WACC Model

Spotify raised financial debt for the first time, adding to leases held before. Its cash reserves are strong and growing, making net debt negative negligible compared to its equity market value. Currently, Spotify's market value equity is €37 billion, while its net debt is €-1085 million. We forecast the Net Debt-to-Equity ratio to remain stable, with Net debt weighting -1% and Equity 101% on the Enterprise Value. We expect Spotify to keep its high ratios of cash in its balance sheet, which should compensate slightly for the amount of debt. As such, we believe the best approach to discount cash-flows is by obtaining the discount rate through the WACC model.

Inputs and assumptions

To obtain Spotify's beta, we regressed the last three years' weekly returns with the MSCI World Index, as Spotify operates globally, which resulted in an **equity beta of 0,96**, with a 95% confidence interval between 0,58 and 1,3. This interval

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[14] Bensaid, A. (Bloomberg Intelligence - 2021). "Spotify Technology Research". Retrieved through the Bloomberg Terminal (no URL available)
[15] According to a Morning Consult survey conducted in early 2021.
[16] The steady state growth rate isn't sustainable in the long run (4,5%). As such, we apply an annuity formula for an additional five years before defining a long-term perpetuity growth rate more in line with the long-term real GDP growth rate.
[17] OECD (2021). "Real GDP long-term forecast". https://data.oecd.org/gdp/real-gdp-long-term-forecast.htm#indicator-chart

is quite wide, and as such, we observed the unlevered betas of our assumed peers to get a better sense of Spotify's levered beta.

as of 15/12/2021	Beta Equity	R.F rate	MRP	Re	Rd	Beta Debt	Unlevered Beta
Netflix	0,67	1,4%	4,3%	4,3%	1,8%	0,08	**0,64**
Sirius XM	1,13	1,4%	4,3%	6,3%	1,3%	-0,03	**0,82**
iHeart Radio	1,52	1,4%	4,3%	7,9%	2,5%	0,25	**0,72**
Apple Inc.	1,05	1,4%	4,3%	5,9%	1,3%	-0,03	**1,07**
Alphabet Inc.	0,89	1,4%	4,3%	5,2%	1,3%	-0,03	**0,95**
Amazon Inc.	0,68	1,4%	4,3%	4,3%	1,3%	-0,03	**0,66**
Tencent Music Entertainment	0,71	1,4%	4,3%	4,4%	3,3%	0,44	**0,71**

Source: Bloomberg

Table 11 – **Peers' Unlevered Beta analysis**

Figure 34 – **Peers' beta analysis output**

Average peers Unlevered Beta	0,80
Spotify Beta Debt	0,23
Weight Debt	-1%
Weight Equity	101%
Spotify Levered Beta	**0,80**

The peers observed in this comparison were Netflix, Sirius XM, iHeart Media, Apple, Alphabet, Amazon, and Tencent Music Entertainment. The observed unlevered betas are presented in table 11[18]. The resulting average unlevered beta is 0,8. When levering this beta to Spotify's capital structure, we observe a 0,8 beta. Also, to better evaluate our confidence in the regressed beta, we calculated the average one-year rolling beta, which is 1,1. With both these values, our confidence interval is narrowed to between 0,81 and 1,1. As such, we rely on our regressed equity beta, maintaining it as **0,96**. We believe that this beta fits the company after evaluating Spotify's exposure to systematic risk and business cyclicality. We considered the entertainment industry to have much more factors accounted for in its beta due to very different segments compared to Spotify. As such, we believe this to be a better approach compared to using the industry-wide beta.

Figure 35 – **CAPM model inputs**

Equity risk premium	5,70%
Risk-free rate	1,44%
Market risk premium	4,26%
Equity Beta	0,96
Return on Equity	**5,53%**

By relying on NYU Stern's widely used Professor Aswath Damodaran's **Equity risk premium (5,7%)[19]** and being the last U.S. government 10-year treasury bond **1,44%[20]**, which we considered the **risk-free rate**, we obtained the **Market Risk Premium of 4,26%**. Using the CAPM Formula, the calculated Return on Equity is 5,53%.

Figure 36 – **Synthetic credit rating** estimation metrics

Interest Coverage Ratio	*Rating*	*Spread*
> 8.5	AAA	0.75%
6.5-8.5	AA	1.00%
5.5 �6.5	A+	1.50%
4.25- 5.5	A	1.80%
3- 4.25	A-	2.00%
2.5-3	BBB	2.25%
2- 2.5	BB	3.50%
1.75-2	B+	4.75%
1.5-1.75	B	6.50%
1.25-1.5	B-	8.00%
0.8-1.25	CCC	10.00%
0.65-0.8	CC	11.50%
0.2-0.65	C	12.70%
<0.2	D	14.00%

Source: NYU Stern

As Spotify doesn't have coupon-bearing bonds nor an attributed credit rating, we computed the interest coverage ratio[21] for 2022 of 7,46. According to figure 36, this translates into a credit rating of AA, being the resulting spread of 1%. Hence, using a synthetic credit rating approach, our calculated Spotify's cost of debt is assumed to be 2,44%. When comparing Spotify's credit rating with its peers, we considered this rating to be in line.

As mentioned before, we assumed a Debt weight of -1% and Equity weight of 101%. Hence, our Weighted Average Cost of Capital is assumed to be **5,64%.**

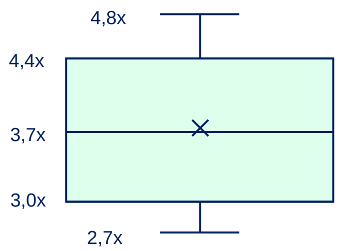
[18] While not visible in the table, the unleveraging of each peers' beta was done taking into account their current capital structure retrieved on Bloomberg, not presented in the table for formatting purposes
[19] Damodaran. A. (2021). Implied Equity Risk Premium dataset. *"https://pages.stern.nyu.edu/~adamodar/"*
[20] As of 15/12/2021. Retrieved through the Bloomberg terminal.
[21] 2022's EBIT Forecast divided by 2022 Annualized Interest Expense.

After obtaining the Core NPV, by summing the core free-cash-flows, each discounted to 2022, we added the non-core book value of €1,4 billion. Hence, the Enterprise Value computed is €54,9 Billion, which by subtracting 2022's negative net debt (excess cash above gross debt) results in Spotify's equity value of €55,9 Billion. With 190,8 million shares outstanding, our base-case scenario price target for fiscal year 2022 is €293,17 per share. As of 15th of December, 2021, Spotify's current price stands at €199,64, which translates into a 47% total return for shareholders in such scenario.

Relative Valuation

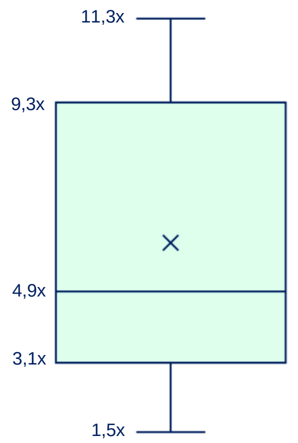
As a complementary method to the DCF Valuation, a relative valuation was performed based on the peers we chose earlier in the report. The common EV/EBITDA multiple was not used since Spotify's EBITDA is still too unstable to be reliable. After all, the company is still finding its way to more stable profitability. Although more reliable, the EV/Gross Profit multiple has some of the same flaws since Spotify is still trying to increase its margins, not being at the levels of their future expectations. Note that the platforms that we expected to have a similar gross margin to Spotify would be Apple Music, Amazon Music and, YouTube Music. However, as these platforms are a small portion of their parent companies' revenues, and their audio-streaming financials are not disclosed, we cannot obtain a reliable multiple that can be thoroughly compared to Spotify. Hence, the multiples associated with these companies have much more into account than their audio streaming segment. To overcome this situation, we decided to use EV/Sales multiple because it is also a way to access the company's economic value based on its operational performance.

Figure 37 – **Box and Whisker Tier 1 EV/Sales**



Using the peers defined for Tier 1, we got an EV/Sales median multiple of 3,7x and an EV/Gross Profit median multiple of 7,1x. Both correspond to a share price of €238 and €131, respectively.

Figure 38 – **Box and Whisker Tier 2 EV/Sales**



Tier 1	EV / Sales	EV / Gross Profit
Sirius XM Holdings Inc.	4,3x	6,7x
Tencent Music Entertainement Group	2,7x	7,5x
iHeartMedia Inc	3,1x	5,6x
Spotify Technology SA	4,8x	16,5x
Mean	3,7x	9,1x
Median	**3,7x**	**7,1x**
# Sample	4	4

Table 12 – **Tier 1 Peers** Source: Bloomberg

Grouping Tier 1 and Tier 2 together, we got an EV/Sales median multiple of 4,9x and an EV/Gross Profit median multiple of 13,6x. Both correspond to a share price of €319 and €250, respectively.

Tier 2	EV / Sales	EV / Gross Profit
...	...	...
Alphabet Inc	10,2x	19,0x
Amazon.com Inc	4,7x	11,8x
AMC Networks Inc	1,5x	
Apple Inc	7,9x	27,5x
Discovery Inc	2,7x	4,3x
Walt Disney Co	4,9x	15,0x
Netflix Inc	11,3x	29,0x
Meta Platforms, Inc.	10,1x	12,6x
Twitter Inc.	9,3x	14,7x
Mean	6,0x	14,2x
Median	**4,9x**	**13,6x**
# Sample	13	12

Table 13 – **Tier 1 and 2 Peers** Source: Bloomberg

Scenario Analysis

Adding to our base-case discussed throughout our report, we consider that there are two main situations that may affect Spotify's future performance with a higher probability, each of them with a different effect on the stock price.

Best-Case Scenario: Ad-supported ARPU growth intensified

As discussed earlier in "Opportunities", Spotify's ad-supported segment is expected to gain much more relevance, mainly through its ARPU growing heavily in the future. We compared this growth with companies in which advertising revenue grew at double (or even triple) digit rates while its business was expanding, and expected Spotify to follow this trend as their ad-supported business is expanded. However, our growth rates are more conservative in our base-case when compared to the ones observed with Facebook and Twitter from 2014 to 2020. This is because Spotify's advertising content is very different from both of them, as it is audio-based, and the growth trend may differ from them. However, we consider that there's still some possible upside compared to our forecasts, and that is precisely what we address as our best-case scenario for Spotify. In table 14 and 15 we can observe our base-case and best-case assumptions for Spotify's ad-supported ARPU compared.

Base-case ad-supported ARPU	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Europe	€ 0,61	€ 0,82	€ 1,03	€ 1,21	€ 1,39	€ 1,53	€ 1,62	€ 1,67	€ 1,70	€ 1,72
North America	€ 0,70	€ 0,95	€ 1,13	€ 1,34	€ 1,54	€ 1,69	€ 1,80	€ 1,87	€ 1,89	€ 1,92
Latin America	€ 0,20	€ 0,28	€ 0,38	€ 0,49	€ 0,61	€ 0,70	€ 0,78	€ 0,84	€ 0,86	€ 0,88
Rest of the World	€ 0,21	€ 0,29	€ 0,39	€ 0,51	€ 0,64	€ 0,73	€ 0,80	€ 0,87	€ 0,89	€ 0,91

Table 14 – Base-case scenario ad-supported ARPU forecast

Best-case ad-supported ARPU	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Europe	€ 0,63	€ 0,85	€ 1,11	€ 1,38	€ 1,66	€ 1,82	€ 1,93	€ 1,99	€ 2,02	€ 2,05
North America	€ 0,73	€ 0,98	€ 1,27	€ 1,59	€ 1,91	€ 2,10	€ 2,23	€ 2,32	€ 2,35	€ 2,39
Latin America	€ 0,20	€ 0,28	€ 0,38	€ 0,49	€ 0,61	€ 0,70	€ 0,78	€ 0,84	€ 0,86	€ 0,88
Rest of the World	€ 0,21	€ 0,29	€ 0,39	€ 0,51	€ 0,64	€ 0,73	€ 0,80	€ 0,87	€ 0,89	€ 0,91

Table 15 – Best-case scenario ad-supported ARPU

With this scenario, Spotify's revenue is impacted in every region, being considerably higher. Hence, Spotify's price per share reaches a value of €408,58. We attribute a probability of 15% to this scenario.

Worst-Case Scenario: Intensified Competition affecting MAUs growth

As mentioned in more detail throughout the report, in the "Challenges" section, Spotify's competitors pose risks to the company's sustained market leadership. If competitors enter with a more aggressive strategy, we expect this to affect quarterly churn rate, conversion to premium rates, and ad-supported MAUs growth rate, which overall impacts Spotify's market share as the audio-streaming market grows.

Spotify's price per share reaches, hence, a value of €190,4 under this outlook. We attribute a probability of 10% to this scenario occurrence.

Sensitivity Analysis

As in many models, our valuation is subject to some input risk. As such, we analysed our model's sensitivity to some of the most critical inputs and assumptions in our research to understand how our price target would change with changes in our inputs.

As such, we conducted a sensitivity analysis with the WACC (which values we considered according to our beta range defined earlier) and the perpetuity growth rate.

Hence, in table 16 and 17 we can observe the different combinations of both parameters' ranges and the resulting price target in each combination.

		Perpetuity Growth Rate				
	293,17 €	**1,5%**	**2,0%**	**2,5%**	**3,0%**	**3,5%**
WACC	**4,91%**	306,32	338,62	384,31	453,87	572,65
	5,24%	278,34	303,58	338,04	387,91	466,52
	5,64%	249,29	268,22	293,17	327,56	378,01
	5,88%	234,92	251,10	272,07	300,33	340,47
	6,20%	217,74	230,96	247,75	269,79	299,99

Table 16 – **Sensitivity Analysis –** WACC and Perp. Growth rate effect on share price

		Perpetuity Growth Rate				
	48%	**1,5%**	**2,0%**	**2,5%**	**3,0%**	**3,5%**
WACC	**4,91%**	55%	71%	94%	129%	190%
	5,24%	41%	53%	71%	96%	136%
	5,64%	26%	36%	48%	66%	91%
	5,88%	19%	27%	38%	52%	72%
	6,20%	10%	17%	25%	36%	52%

Table 17 – **Sensitivity Analysis –** WACC and Perp. Growth rate effect on total return for shareholders

Figure 39 – **Beta range** considered sensitivity analysis' WACC

Beta	WACC
0,81	4,91%
0,885	5,24%
0,96	5,64%
1,035	5,88%
1,11	6,20%

Looking at the table, we can see that the resulting WACC's range is not wide, obtained with the previously mentioned equity beta range. We also infer from the sensitivity analysis that our model has a more upside character than a downside one, as by changing our inputs the total return for shareholders increases more drastically than it decreases table 17. In our 25 different input combinations, we can observe that all our combinations would keep our recommendation on "Buy", with total return for shareholders ranging between 10% and 190%.

Final Recommendation

Figure 40 – **Scenario Analysis Result**

Scenario Analysis		
Scenario	Probability	Share-Price
Base-Case	75%	€293,17
Best-Case	15%	€408,58
Worst-Case	10%	€190,40

Bundling together our base, best, and worst-case scenarios, with each respective probability of occurrence, we reach our final price target for year-end 2022 of **€300,2** per share, which translates into a total return for shareholders of 52%.

In table 18 we can observe the result of all the valuation methods done throughout our report.

	Price (€)	Price ($)	Total return (%)	Recommendation
Current (15th December 2021)	199,64	225,4		
Discounted Cash-Flows (base-case)	293,2	331,0	46,8%	**Buy**
Discounted Cash-Flows (with scenarios)	300,2	338,9	50,4%	**Buy**
Multiple EV/Sales - Tier 1	238,4	269,1	19,4%	**Buy**
Multiple EV/Sales - Tier 2	319,1	360,3	59,8%	**Buy**

Table 18 – **Valuation methods summary**

Our final recommendation is based solely on the valuation through the DCF method, with all scenarios considered, being the relative valuation only a complementary method to assess our valuation based on Spotify's peers.

With our price target translating into a return above 10%, our final recommendation is "Buy". Although the market is already considering significant growth for Spotify at its current price, our vision is that the upside coming from its advertising segment and expansion in emerging markets is not being fully embedded in its current market value, particularly in its ad-supported ARPU and emerging markets MAUs outlook. Even though the competitive landscape is risky, we expect Spotify's market leadership to be sustained and to continue to be able to attract new users, as well as keeping its current user base engaged, by continuously improving and adapting its service.

Appendix

SPOTIFY TECHNOLOGY S.A

COMPANY REPORT

AUDIO STREAMING

17 DECEMBER 2021

DINIS FORTE | MIGUEL RAMOS

Listening to the future

Spotify's dominance through markets expansion and podcasts.

- Based on our FY22 price target of €300,20, we issue a BUY recommendation.
- Spotify sees as its key differentiation from its competition their ability to collect and interpret data from listening patterns. Through R&D and engineering, Spotify can predict music and podcasts that users will enjoy, enriching their experience in the platform.
- As of the 3rd quarter of 2021 Spotify has 381 million MAUs, split into 220 ad-supported MAUs and 172 million subscribers.
- With podcast growing importance in the platform, adding to the increased capabilities in advertising monetization, we expect a major upside in ad-supported ARPU, growing at a CAGR of 24% from 2020 to 2025
- After an expansion to 86 new markets, mainly emerging economies, we expect a positive trend in Latin America and Rest of the World, with their MAUs growing at a CAGR of 18% and 26% between 2020 and 2025, respectively.
- The most concerning risk to Spotify's leadership is its competition from tech-giants Amazon, Apple and Alphabet.

Company description

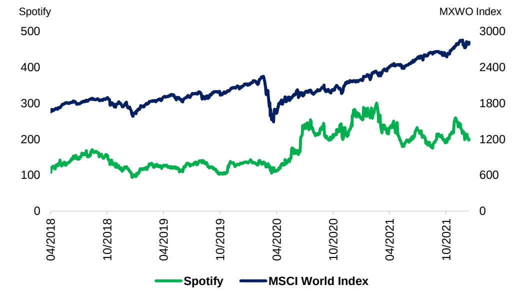
Spotify is the market leader in global audio streaming market at the moment. It is split in two different segments (ad-supported and premium), capturing revenues from both advertisers and premium subscribers. Spotify has a global footprint, being available in 178 countries at the time of this report.

Recommendation:	BUY
Price Target:	€ 300,20
Price (as of 17-Dec-21)	€ 199,64

Source: Bloomberg

52-week range (€)	€ 175,5 - € 304.64
Market Cap (Billions)	€ 37,95
YTD Return	-22,5%
Outstanding Shares (m)	190,8m

Bloomberg: SPOT



(Values in millions)	2020	2021E	2022F
Revenues (€)	7880	10635	12249
Ad-supported revenue	745	1197	1891
Premium revenue	7135	9168	10358
Gross Profit (€)	2015	2838	3476
EBITDA (€)	(293)	170	403
Core result (€)	(263)	179	302
Non-core Result (€)	299	(940)	96
Ad-supported MAUs	199	241	288
Premium Subscribers	155	183	205

Source: Spotify Annual Reports & Analyst estimates

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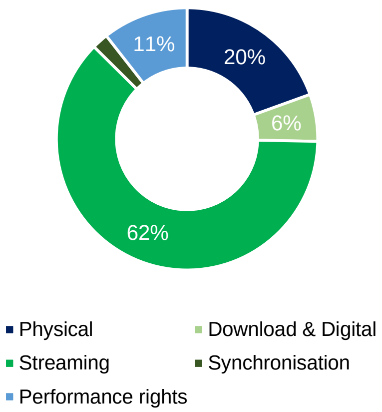
Company Overview

Figure 1 – Spotify’s logo

Figure 2 – Spotify’s presence globally

Figure 3 – Source of revenues split - **Music recording industry** (2020)



Source: IFPI

Company Description

Under the legal name of "Spotify Technology S.A" and the commercial name "Spotify", the company was incorporated in 2006, founded by Daniel Ek and Martin Lorzenton. It operates in the audio streaming sector and came to pioneer and revolutionize what became an incredible shift in the music industry and audio in general, after years of being a sector in decline. In 2009, Spotify became a Luxembourg public limited liability company, and on April 3, 2018, a direct listing of the company's ordinary shares was completed, on the NYSE, under the ticker SPOT.

Spotify states as its mission "to unlock the potential of human creativity by allowing a million creative artists the opportunity to live off their art and billions of fans the opportunity to enjoy and be inspired by these creators". It is currently the most popular global audio streaming service, with around 30% market share globally in terms of subscribers.[1]

Spotify allows millions of people around the world to listen to audio content (music and podcasts, with audiobooks being eventually added to the platform) in its platform through mobile, tablet, computer, car, and many other devices, allowing people to listen to audio on-demand, whenever and wherever they want. Spotify revolutionized the audio industry, leading the shift from physical product sales to a streaming, on-demand access model.

Spotify’s key differentiation from its competition is considered to be the ability to collect and interpret data from listening patterns, with deep customization of each user’s experience with the app on all devices. Through R&D and engineering, Spotify can predict music or podcasts that users will enjoy in a way that keeps MAUs engaged, with the goal of keeping churn rate as low as possible. With these, Spotify is enabling the discovery of new content to its users, enabling artists as well to be discovered. A rich and differentiated user experience drives engagement, which drives their brand to a stronger position, resulting in consistent market leadership through the years. Spotify also relies on being a pioneer in the audio streaming sector, with strong brand recognition and continuous product expansion to accommodate its users’ broader demands.

[1] Analyst’s estimates, computed with current market size data provided by Statista’s Digital Music Outlook report: Statista, November 2021, “Music Streaming Outlook”, “https://www-statista-com.eu1.proxy.openathens.net/outlook/dmo/digital-media/digital-music/music-streaming”

As of today, Spotify is the largest paid music service in the world, with streaming being the most significant source of revenue in the music recorded industry[2].

Spotify's reporting is split geographically into four regions: North America, Latin America, Europe, and Rest of the World

Figure 4 – Top 10 Spotify Shareholders

Holder	% Held
Daniel Ek	16,8%
Baillie Glifford & Co	11,7%
Martin Lorentzon	11,1%
Morgan Stanley	9,1%
Tencent Holdings Ltd.	8,7%
T Rowe Price Group Inc	6,1%
ARK Investment Management LLC	2,5%
Technology Crossover Management VIII Ltd	2,4%
BlackRock Inc	1,9%
Sumitomo Mitsui Trust Holdings Inc	1,9%
Total top 10	**72,1%**

Figure 5 – Top 5 Voting Power Distribution

Holder	Voting power
Daniel Ek	33,5%
Martin Lorentzon	41,9%
Baillie Glifford & Co	3,8%
Morgan Stanley	2,4%
T Rowe Price Group Inc	2,1%
Total top 5	**83,7%**

Stock and Ownership Overview

Its IPO started at the price of €120,55 ($147,92). Historically, it has ranged between €98,83 and €300,64 per share. In the last 52 weeks, its price has ranged between €175,5 and €300,64, translating into a return of 46% to 149,4% since IPO. Currently, Spotify has 190.8 million shares outstanding, and its current price is €199,64.

Daniel Ek and Martin Lorentzon hold 27,9% of Spotify's total outstanding shares. In figure 1, we see the breakdown of the top 10 shareholders, which amounts to 72,1% of the company's shares.[3]

It's worth noting that even though both founders own less than 30% of Spotify's equity, they remain owners of a much higher percentage in terms of the voting power. As of December 31st, 2020, both combined for 75,4% of voting rights (Ek with 33,5%, Lorentzon with 41,9%).[4] Inside Daniel Ek's power lies all the voting power over the ordinary shares held by Tencent Holdings, which has no voting power over Spotify.

Business Model & Description

Starting as a music streaming platform (continuing to be its primary business), recent acquisitions and investments highlight an effort to diversify its content portfolio to a greater range of audio products, with a significant focus on podcasts and, more recently, on audiobooks[5]. This approach is quite rational when considering growth opportunities and the current market environment, which we will further explore in this report.

How Spotify Generates Revenue

Spotify has two independent but very related and connected sources of revenue.

Through the Premium segment, Spotify collects revenues from recurring subscribers, with various subscription plans in its portfolio. A subscription allows users to have a higher audio quality and unlimited online and offline streaming access to music and podcasts, enabling them to connect to Spotify through an

[2] Source: IFPI
[3] Source: Bloomberg
[4] Gutierrez, H. (2021). "Spotify 2020 Annual Report on Form 20-F". Spotify Technology S.A.
[5] Spotify expects to acquire a major player in the audiobook market, Findaway. The company hasn't disclosed values, as it is still uncertain and waiting for regulatory approval. Source: Spotify's newsroom

extensive range of devices. Premium subscriptions are also offered to end-users through partners, such as telecom companies bundling subscription plans with their products/services.

The ad-supported service has no subscription fees, providing limited on-demand online access to the whole catalogue of music (e.g., only possible to listen on "shuffle") and unlimited online-only access to podcasts. The service is available on computers, tablets, and compatible mobile devices.

Without a subscription, these users are subject to varied forms of advertising delivered by Spotify from advertising agencies. These agencies enter into agreements with Spotify, purchasing advertising on the platform on behalf of the agencies' clients. This advertisement revenue comes both from music and podcast streaming. Spotify believes that these ads, targeted to each user's taste through Spotify's engineering and data curation, drive a better user experience, which can, in turn, result in higher returns for advertisers.

There is a huge focus on improving analytics and tools to evaluate and improve the efficacy of measuring ads impact in podcast content. Through acquisitions, such as Megaphone, Spotify aims to accelerate the shift from traditional radio advertising to podcasts. The radio market continues to lose ground to new forms of audio, and advertisers see the edge that the new audio trends have on targeting audiences. The ad-supported business segment expansion through podcasts is a tremendous opportunity for Spotify to improve company-wide gross margin.[6]

Both segments live independently but strive together and interact in many ways. Spotify uses ad-supported as a path for users to become premium subscribers, and a large part of the additional premium subscribers comes from this channel. Although being only 9% of company-wide revenues in 2020, the ad-supported service is a viable stand-alone product. It is likely that with podcasting market expansion, and expected high growth of advertising through this medium, this Spotify's segment revenue moves upwards.

Value Drivers Evolution[7]

Users Drivers

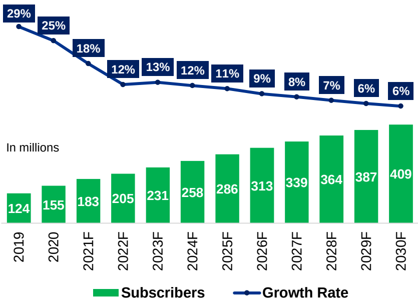
Monthly Active Users (MAUs) are an indicator of the total audience engaged in Spotify's service. It represents the total number of users who consumed any

[6] Further details in "Opportunities" section
[7] All historical data given by the company's Annual reports.

content in the last 30 days from the period indicated. As of the 3rd quarter of 2021, Total MAUs amount to 381 million, representing a YoY change of 19%.

Premium Subscribers are the users who have activated a payment method for Spotify's premium service. This includes all subscription plans existent. As of Q3 2021, Spotify has 172 million Premium subscribers, also resulting in a YoY change of 19%.

Figure 6 – **Premium Subscribers** evolution and growth rate



Premium Subscribers' evolution is mainly affected by conversion rates to premium (from ad-supported) and churn rate. Spotify doesn't distinguish churn rate per region. We forecast the churn rate to follow the decreasing trend until 2024, from 5% to 4,6% worldwide. However, conversion rates differ per region. Europe and North America are more capable of converting ad-supported users to premium. As the targeted population grows less each year (since internet penetration rate is forecasted to get closer to 100% in both regions), we forecast a decrease in these rates as competition increases[8], and there are fewer possibilities to attract subscribers. Latin America and Rest of the World are regions where users opt for the ad-supported more frequently – resulting in lower conversion rates. As Spotify expands to countries with lower purchasing power, we expect the conversion rate to premium to be affected in the Rest of The World region, with a stronger declining trend.

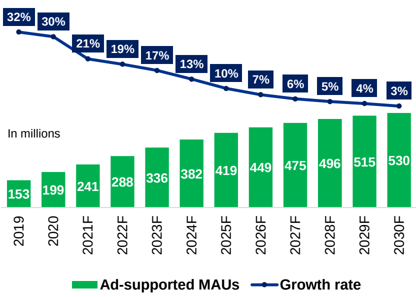
Quarterly Churn Rate	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Worldwide	5,0%	4,8%	4,8%	4,8%	4,6%	4,6%	4,6%	4,6%	4,6%	4,6%	4,6%

Table 1 – Spotify's global churn rate forecast

Conversion Rates	2018	2019	2020	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Worldwide	34%	31%	28%	29%	24%	23%	21%	20%	19%	19%	18%	18%	18%
Europe	41%	40%	36%	32%	28%	28%	28%	28%	26%	26%	26%	26%	26%
North America	32%	37%	38%	36%	35%	35%	32%	30%	30%	30%	30%	30%	30%
Latin America	29%	26%	26%	24%	23%	22%	21%	20%	20%	20%	20%	20%	20%
Rest of the World	29%	15%	13%	25%	13%	12%	10%	10%	10%	10%	10%	10%	10%

Table 2 – Conversion to premium rates per region

Figure 7 – **Ad-supported MAUs** and yearly growth rate



The ad-supported MAUs are the total ad-supported users who consumed any content in the last thirty days from the indicated period. As of Q3 2021, Spotify had 220 million ad-supported MAUs, growing at the same rate as the premium segment (19% YoY).

We forecasted all drivers regarding users taking into consideration the current Spotify market share, along with forecasted internet penetration rate[9] and target population[10] in each region. Given the target population in each region, we are

[8] Further explored in "Challenges and Risks" section
[9] Data provided by Statista's Digital Music Outlook report:
Statista, November 2021, "Music Streaming Outlook", "https://www-statista-com.eu1.proxy.openathens.net/outlook/dmo/digital-media/digital-music/music-streaming"
[10] Target population was considered to be the population with internet access

able to compute the Spotify penetration rate among them. As we forecast users metrics, we measure them against the referred target population to make sure our assumptions are plausible and realistic, while also considering the competitive environment (table 3).

	2019	2020	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**	**2030F**
Europe												
Population	745	746	747	747	748	748	749	750	750	751	752	752
Internet Penetration Rate	83%	86%	88%	90%	92%	93%	94%	95%	96%	96%	97%	97%
Target Population	**617**	**640**	**657**	**673**	**685**	**696**	**704**	**711**	**717**	**722**	**726**	**729**
North America												
Population	362	364	367	369	371	373	375	378	380	382	384	386
Internet Penetration Rate	87%	88%	89%	90%	91%	92%	93%	94%	95%	95%	96%	96%
Target Population	**316**	**320**	**326**	**333**	**339**	**344**	**350**	**355**	**360**	**364**	**368**	**372**
Latin America												
Population	602	609	615	621	627	632	637	641	646	651	655	660
Internet Penetration Rate	58%	61%	64%	67%	69%	71%	73%	74%	75%	76%	77%	78%
Target Population	**349**	**372**	**394**	**413**	**431**	**447**	**462**	**474**	**486**	**496**	**506**	**515**
Rest of the World												
Population	5531	5599	5666	5732	5797	5859	5921	5981	6040	6099	6157	6214
Internet Penetration Rate	43%	47%	51%	56%	60%	63%	66%	69%	71%	73%	74%	76%
Target Population	2351	2609	2913	3217	3470	3705	3918	4109	4281	4437	4577	4704

Table 3 – Target population evolution per region

As such, in table 4 and 5, we present our forecasts in terms of ad-supported MAUs and Premium subscribers for each region, as well as Spotify's penetration rate in each region's targeted population.

Ad-supported MAUs	2020	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**	**2030F**
In millions											
Worldwide	**199**	**241**	**288**	**336**	**382**	**419**	**449**	**475**	**496**	**515**	**530**
Growth Rate	**30%**	**21%**	**19%**	**17%**	**13%**	**10%**	**7%**	**6%**	**5%**	**4%**	**3%**
Europe	62	72	82	92	101	107	110	112	114	115	117
Growth Rate	31%	15%	15%	12%	9%	6%	3%	2%	2%	2%	2%
Penetration Rate	9%	10%	12%	13%	14%	15%	15%	15%	16%	16%	16%
North America	40	42	45	46	48	49	50	51	52	53	54
Growth Rate	7%	5%	5%	4%	3%	2%	2%	2%	2%	2%	2%
Penetration Rate	12%	13%	13%	13%	13%	14%	14%	14%	14%	14%	14%
Latin America	46	57	70	83	96	106	113	117	121	125	127
Growth Rate	28%	24%	22%	20%	15%	10%	7%	4%	3%	3%	2%
Penetration Rate	11%	13%	16%	18%	20%	22%	23%	23%	24%	24%	24%
Rest of the World	50	70	91	114	137	158	177	194	210	222	231
Growth Rate	59%	40%	30%	25%	20%	15%	12%	10%	8%	6%	4%
Penetration Rate	2%	2%	2%	3%	3%	4%	4%	4%	4%	5%	5%

Table 4 – Ad-supported MAUs forecast per region

Premium Subscribers	2020	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**	**2030F**
In millions											
Worldwide	**155**	**183**	**205**	**231**	**258**	**286**	**313**	**339**	**364**	**387**	**409**
Growth Rate	**25%**	**18%**	**12%**	**13%**	**12%**	**11%**	**9%**	**8%**	**7%**	**6%**	**6%**
Europe	62	70	77	85	95	106	114	122	128	134	140
Growth Rate	25%	13%	9%	11%	12%	11%	8%	7%	6%	5%	4%
Penetration Rate	9%	10%	11%	12%	13%	15%	16%	17%	18%	18%	19%
North America	45	51	56	61	65	67	69	72	74	76	78
Growth Rate	21%	13%	10%	10%	6%	4%	3%	3%	3%	3%	3%
Penetration Rate	14%	15%	16%	18%	18%	19%	19%	19%	20%	20%	20%
Latin America	32	37	43	50	58	67	76	84	92	99	106
Growth Rate	28%	16%	17%	17%	17%	15%	13%	12%	9%	8%	7%
Penetration Rate	8%	9%	10%	11%	12%	14%	15%	17%	18%	19%	20%
Rest of the World	16	26	30	35	40	46	54	61	70	78	86
Growth Rate	31%	58%	16%	17%	14%	16%	16%	15%	13%	12%	10%
Penetration Rate	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%

Table 5 – Premium subscribers forecast per region

We expect all regions to continue the trend of deaccelerating MAUs growth after growing at a CAGR of 29% in the reported years (2017-2020). All regions have been growing at a decreasing pace in the reported years, except for ROW[11] – where ad-supported and premium users are expected to have a higher growth rate in 2021 following Spotify's geographic expansion to 86 new markets[12], with it forecasted to deaccelerate in the following years just like the remaining regions. Europe and North America are markets in which Spotify is more established, just like its competition. Hence, we expect both segments' growth rates to deaccelerate sooner.

We forecast higher growth rates for Latin America and ROW as the internet penetration rate is expected to increase significantly in both (which adds significant upside to both regions), adding that audio streaming is not as established compared to Europe and North America. It's worth noting that Latin America is expected to increase its target population penetration rate significantly. Adding to an expected rapid increase of internet penetration rate, Spotify has an advantage in this market as it is the one in which it leads with a more significant gap to its competitors (e.g., Spotify has an estimated 60% market share in Brazil).

There were 553 million music streaming subscribers worldwide in 2020. Spotify accounted for 28% of these, with 155 million premium subscribers. As per industry forecasts regarding worldwide music streaming subscribers, total market subscribers are expected to grow to 913 million by 2025[13], at an 11% CAGR between 2020 and 2025. We forecast Spotify's premium subscribers to reach 286 million, at a 13% CAGR between 2020-2025. Hence, we expect Spotify's share of premium subscribers in the market to reach 31% in 2025, with Spotify forecasted to grow slightly above the market. The market share increase and the growth above the market forecast are not only expected to be a result of effectively capturing new users entering the streaming market (especially in Latin America and Rest of the World). It is also a result of the competitive environment worldwide. We believe Spotify is able to capture users from its rivals, mainly due to its investments in owning exclusive content.

Millions

Premium Subscriber	2019	2020	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**
Total Market	433	553	636	717	792	858	913
Spotify	124	155	183	205	231	258	286
Market Share	29%	28%	29%	29%	29%	30%	31%

[11] Rest of the world
[12] Spotify Technology S.A. February 22, 2021. "Spotify Expands International Footprint, Bringing Audio to 80+ New Markets". "https://newsroom.spotify.com/2021-02-22/spotify-expands-international-footprint-bringing-audio-to-80-new-markets/"
[13] Data provided by Statista's Digital Music Outlook report:
Statista, November 2021, "Music Streaming Outlook", "https://www-statista-com.eu1.proxy.openathens.net/outlook/dmo/digital-media/digital-music/music-streaming"

Table 6 – Premium subscribers market share forecast

Figure 8 – **Premium ARPU** forecast

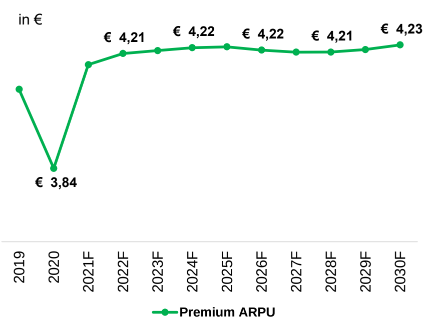


Figure 9 **– Ad-supported ARPU** forecast

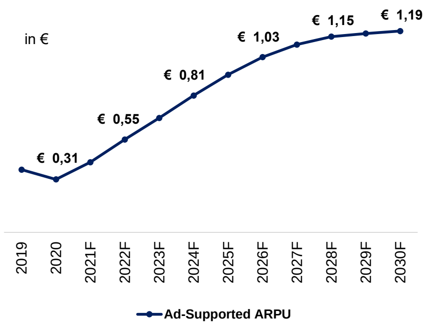


Figure 10 – **Company-wide revenue** forecast

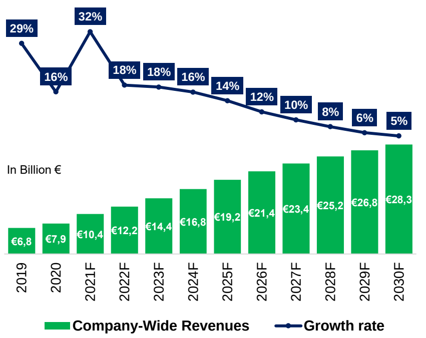
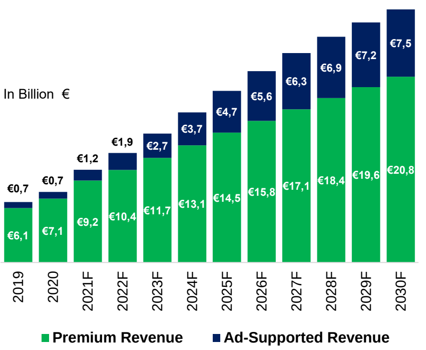


Figure 11 – **Premium and Ad-supported revenue** forecast



It is worth noting that a small number of premium subscribers are not part of the company-wide MAUs, which makes the sum of ad-supported MAUs and premium subscribers to be overstated versus total MAUs.

Average Revenue Per User

Premium Average Revenue Per User (ARPU) is a monthly measure calculated as the year-end revenue divided by year-end premium subscribers, as a monthly average (that is, divided by 12 months).

The increase in 2021's Premium ARPU follows a worldwide rise in Spotify's subscription prices. As such increases are not regular, we apply the Euro expected inflation rate throughout the forecasted years from 2022 onwards.

Ad-supported ARPU is the monthly average revenue per ad-supported MAU. It is the driver we forecast to grow more consistently at higher rates, with this trend already visible in the first three quarters of 2021. A significant upside is expected in the forecasted years, as audio advertising is expected to grow heavily.[14]

In €

ARPU	2019	2020	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**	**2030F**
Ad-Supported ARPU	€ 0,37	€ 0,31	€ 0,41	€ 0,55	€ 0,67	€ 0,81	€ 0,93	€ 1,03	€ 1,11	€ 1,15	€ 1,17	€ 1,19
Premium ARPU	€ 4,09	€ 3,84	€ 4,17	€ 4,21	€ 4,21	€ 4,22	€ 4,23	€ 4,22	€ 4,21	€ 4,21	€ 4,22	€ 4,23

Table 7 – Ad-supported and Premium ARPU forecast

With this, year-end revenues for both segments are given by:

$$Revenue = Monthly\ ARPU * 12 * MAU\ (Or\ Subscribers)$$

Revenue Progress

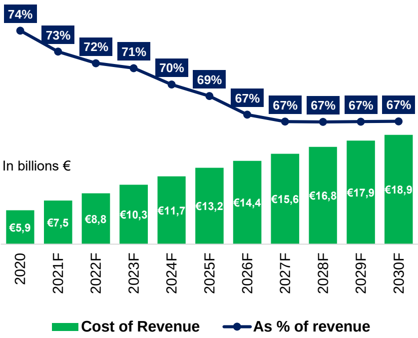
Revenue has been growing at a high percentage, with CAGR from 2017 to 2020 worldwide being 24%. Revenue growth rate is expected to deaccelerate in the forecasted years, except for 2021. We believe that with a boost in audio advertising from 2021 onwards, the expansion to 86 new markets, and premium subscriptions price increase, will result in 2021's growth relatively high (with the first three quarters of 2021 already proving this trend). We expect revenue growth to be 32% in 2021, with ad-supported growing 61% and premium growing 28%. All forecasted revenue results from the drivers' evolution mentioned above in the "Value Drivers Evolution" section of the report.

Cost Structure

Spotify's highest cost is its Cost of Revenue. It has a substantial weight in percentage of revenue, of around 70%. This leaves Spotify with a gross margin

[14] Our ad-supported ARPU forecast is presented in further detail in the "Opportunities" section.

Figure 12 –**Cost of revenue** (absolute and as % of revenue) forecast



below 30%, historically. These are mainly composed of royalties paid, which are a function of music listened in the platform. These hardly change as a % of revenue and can be almost considered a given, likely remaining a big part of Spotify's cost structure. We expect that cost of revenue (as a percentage of revenue) will slightly decrease in the forecasted years, which will increase Spotify's gross margin. This is mainly due to podcast listening growing massively. With its cost structure not involving royalties and deals with rightsholders to be paid, the podcasting market is much more profitable, with little cost of revenue associated.

"Research & Development", "Sales & Marketing" and "General & Administrative costs" are the remaining core costs and have been historically around a constant percentage of revenue. We expect these costs to remain somewhat stable as a percentage of revenue for the forecasted years (10%, 11%, and 5%, respectively). As a result of high costs of revenue, the EBITDA margin was negative in the reported periods, with this trend being reverted in the nine reported months of 2021. EBITDA has ranged between -1% and -4% until 2020. 2021's three reported quarters present a 2% EBITDA margin, and we expect the positive trend for Spotify's EBITDA to continue in the forecasted years.

Costs Breakdown

€ millions	2019	2020	**2021F**	**2022F**	**2023F**	**2024F**	**2025F**	**2026F**	**2027F**	**2028F**	**2029F**	**2030F**
Total Cost of Revenue	**(€5 042)**	**(€5 865)**	**(€7 526)**	**(€8 772)**	**(€10 262)**	**(€11 712)**	**(€13 194)**	**(€14 368)**	**(€15 593)**	**(€16 803)**	**(€17 866)**	**(€18 855)**
% of Revenue	**-75%**	**-74%**	**-73%**	**-72%**	**-71%**	**-70%**	**-69%**	**-67%**	**-67%**	**-67%**	**-67%**	**-67%**
Ad-supported	(€599)	(€739)	(€1 017)	(€1 418)	(€1 958)	(€2 545)	(€3 030)	(€3 447)	(€3 777)	(€4 118)	(€4 343)	(€4 520)
Premium	(€4 443)	(€5 126)	(€6 509)	(€7 354)	(€8 304)	(€9 167)	(€10 163)	(€10 921)	(€11 816)	(€12 685)	(€13 523)	(€14 335)
Gross Profit	**€1 722**	**€2 015**	**€2 838**	**€3 476**	**€4 153**	**€5 072**	**€5 988**	**€7 020**	**€7 827**	**€8 444**	**€8 971**	**€9 454**
Gross Margin	**25%**	**26%**	**27%**	**28%**	**29%**	**30%**	**31%**	**33%**	**33%**	**33%**	**33%**	**33%**
Research and Development	(€615)	(€837)	(€999)	(€1 181)	(€1 390)	(€1 618)	(€1 850)	(€2 062)	(€2 258)	(€2 435)	(€2 588)	(€2 730)
% of Revenue	-9%	-11%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
Sales and Marketing	(€620)	(€826)	(€1 140)	(€1 286)	(€1 514)	(€1 762)	(€2 014)	(€2 246)	(€2 459)	(€2 651)	(€2 818)	(€2 972)
% of Revenue	-12%	-12%	-11%	-11%	-11%	-11%	-11%	-11%	-11%	-11%	-11%	-11%
General and Administrative costs	(€283)	(€354)	(€529)	(€606)	(€665)	(€708)	(€752)	(€840)	(€912)	(€991)	(€1 056)	(€1 125)
% of Revenue	-5%	-5%	-5%	-5%	-5%	-4%	-4%	-4%	-4%	-4%	-4%	-4%
EBITDA/EBIT	**(€73)**	**(€293)**	**€170**	**€403**	**€585**	**€983**	**€1 372**	**€1 872**	**€2 197**	**€2 368**	**€2 510**	**€2 627**
Margin	**-1%**	**-4%**	**2%**	**3%**	**4%**	**6%**	**7%**	**9%**	**9%**	**9%**	**9%**	**9%**

Table 8 – Core costs breakdown forecast

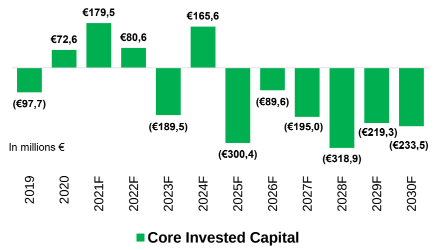
Invested Capital

As tech company, with its products being mainly software/applications, Spotify relies very little on capital, which makes it a non-capital-intensive company. Its assets-to-revenue ratio is below 1. Its more relevant assets are Cash and Cash Equivalents and Long-Term Investments, mainly comprised of a stake in Tencent Music Entertainment.

After reformulating its Balance Sheet, we observe that core invested capital has been negative from 2017 to 2019. This is mainly due to a specific core liability: Accrued fees to right holders (€1,5 billion in 2020). These are fees to be paid to right holders, mainly royalties and fees associated with content streaming, and have typically been close to 20% of revenues. 2019 had a significant increase in invested capital due to lease right-of-use assets starting to be considered as part of the balance sheet from 2019 onwards, according to GAAP standards.

Due to a recent aggressive acquisition strategy, goodwill[15] has been one of the most relevant core assets from 2020 onwards (€736 million in 2020), with higher observable growth. This translated into a positive core invested capital in 2020 for the first time (€72,6 million). This impacted Free-Cash-Flow, due to significant increases in invested capital in both years.

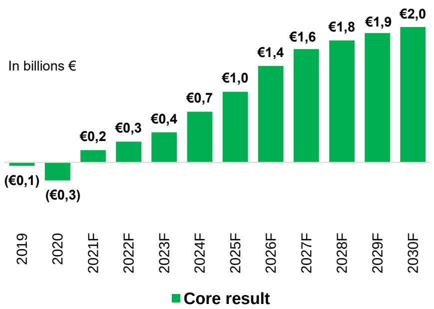
Figure 13 –**Core invested capital** forecast



We expect core invested capital to return to a negative trend from 2021 onwards, after forecasting it to reach €179,5 million in that year. This is because we expect accrued fees to right holders to remain in line with its past trend and hence to continue to stay very much in line with revenues (that is, remaining at a constant percentage of revenue). At the same time, we believe fixed assets, goodwill, and acquired intangible assets, among other core assets lines, will slightly decrease its value as % of revenue. We expect, hence, this to translate into a somewhat negative core invested capital without significant variations in the forecasted years after 2021.

Spotify's Cash conversion cycle health is quite positive, with it decreasing historically from -6 days in 2017 to -18 days in 2021 (average payable period higher than average collection period).

Figure 14 –**Core result** outlook

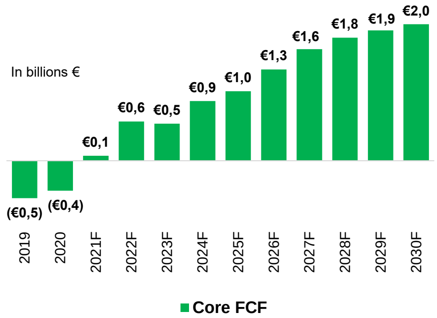


Cash Conversion Cycle	2018	2019	2020	2021F
Trade and other receivables	€400	€402	€464	€596
Revenue	€5 259	€6 764	€7 880	€10 365
Average Collection Period	**28**	**22**	**21**	**21**
Trade and other payables	€427	€549	€638	€813
Cost of revenue	€3 906	€5 042	€5 865	€7 526
Average payable Period	**40**	**40**	**40**	**39**
Cash Conversion Cycle	**-12**	**-18**	**-18**	**-18**

Table 9 – Spotify's cash conversion cycle

Core Free-Cash-Flow

Figure 15 –**Core FCF** outlook



After the core result in the full reported years being negative, we can observe a reversal of this trend in the first nine months of 2021, with core result reaching €127,8 Million. 2020 had a negative core result as Spotify saw its revenues being hit due to pandemic headwinds. We expect the positive core result trend to continue as we forecast Spotify's margins to improve[16].

We expect a core free-cash-flow in 2021 of €72,5 million. As invested capital is expected to not change significantly in the forecasted years, Free-Cash-Flow is

[15] These are mainly the excess of the consideration transferred when acquiring companies, that is, the amount above the fair-value of the acquisition.
[16] Refer to "Opportunities" section for further details.

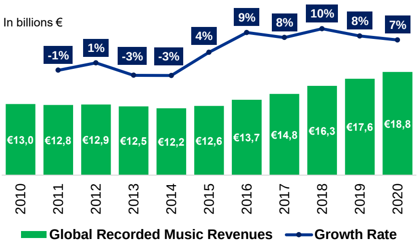
predicted to have significant growth rates in the forecasted years due to core result and overall profitability improvement.

Capital Structure

In 2021, Spotify has issued exchangeable notes without coupon payments, totalling €1,223 million after deducting transaction costs, being considered senior debt. As of the third quarter of 2021, the value of such notes was €1,175 million. These will mature on March 15, 2026, and won't be redeemable before March 20, 2024. This was Spotify's first debt issue in its history, and the company stated that the cash raised through it would be used for "general corporate purposes".

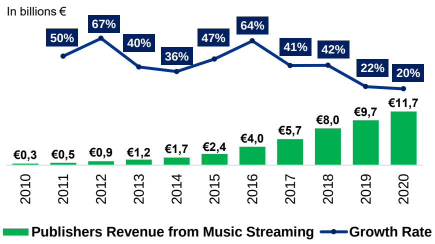
As of the third quarter of 2021, Spotify's net debt to enterprise value ratio, considering current equity market value, is -1%. Spotify has a large amount of excess cash (€2,462 Million in 2020), resulting in negative net debt.

Figure 16 – Historical **Global Recorded Music Revenues**



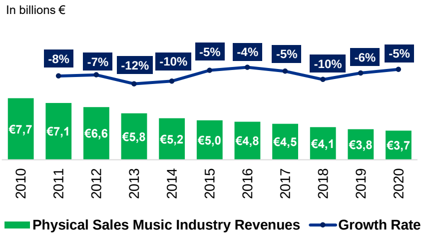
Source: IFPI

Figure 17 – Historical **Publishers Revenue from Music Streaming**



Source: IFPI

Figure 18 – Historical **Physical Sales Music Industry Revenues**



Source: IFPI

Industry Overview

Music Market Overview

From the audio recording industry perspective (right-holders), the global recorded music market can be segregated into five different segments: physical sales, streaming, download & other digital, performance rights, and synchronization. Going back to the period between 2010 and 2014, physical sales were dropping at a CAGR of 9,4%[17], mainly due to the rise of illegal downloading, making the whole industry drop from €13,0 billion to €12,2 billion, during the same period. However, the rise of music streaming seems to have given a "second-life" to the global recorded music market, making it grow at a CAGR of 7,5% from 2014 to 2020. In 2020 the market reached €18,8 billion, with music streaming revenues accounting for 62,1%.

Looking at the market from the point of view of the music streaming platforms, specifically of their premium segments, the ones used the most are Spotify, Apple Music, Amazon Music, Tencent Music Entertainment, and YouTube Music. Market revenues reached €17 billion in 2020[18], with a CAGR of 22% since 2017. Furthermore, there were 552,8 million monthly active users paying an average of €2,57 per month. These values showed that 7% of the world population are currently subscribers of a platform. The US market is worth €7,12 billion and is the biggest one, where more than 30% of its citizens have a paid subscription. The Chinese and the UK market follow the US market, being the second and

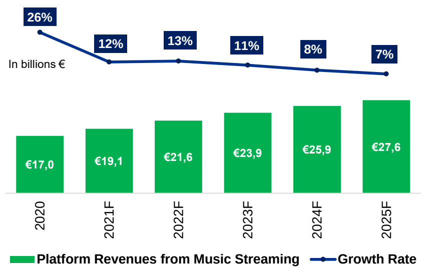
[17] This and further data on the global recorded music industry can be found in: IFPI Global Music Report 2021. https://www.ifpi.org/ifpi-issues-annual-global-music-report-2021/.
[18] This and further data related directly to the music streaming market can be found in: Statista Digital Outlook, Music Streaming. https://www-statista-com.eu1.proxy.openathens.net/outlook/dmo/digital-media/digital-music/music-streaming/worldwide.

Figure 19 – Country **Market Revenue Comparison**

Revenue Comparison (Billions)	EUR (€)
1. United States	7,12
2. China	1,79
3. United Kingdom	1,30
4. Germany	1,09
5. Japan	1,06

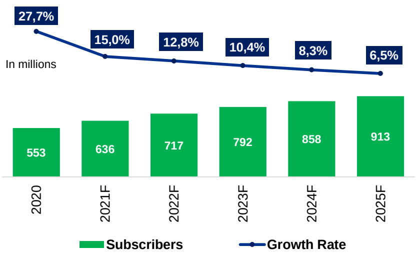
Source: Statista

Figure 20 – **Platform Revenues** from Music Streaming Outlook



Source: Statista

Figure 21 – **Subscribers** Outlook



Source: Statista

third-biggest markets, worth around €1,79 billion and €1,30 billion, respectively. The platforms that the American and United Kingdom citizens use the most are Spotify, Amazon Music, and Apple Music, while in China, QQ Music, Kugou Music, and NetEase Cloud Music dominate the market.

Europe and North America are the two regions where the population penetration rate of premium subscriptions (taking the whole regions' population into account) is higher - 13% and 26%, respectively. This is a consequence of these regions' higher internet and smartphone penetration rates. At the same time, these regions will hit a saturation point first, while there will still be growth opportunities in Latin America and the Rest of the World as their internet and smartphone penetration rates increase.

Going forward, it is expected that by 2025 the music streaming revenue (from a subscription-model standpoint) will reach €27,6 billion, a CAGR of 10,2% since 2020. The main driver for this increase will be the subscribers' growth to 913,2 million, a CAGR of 10,6% since 2020. One reason for the increase in subscribers is the growth of internet and smartphone penetration rates, especially in less developed countries. ARPU from the premium segment is expected to grow at the inflation rate.

Looking at each region, the regions expected to increase the most in revenues until 2025 are Latin America and the Rest of the World, with a CAGR of 12,4% and 12,5%, respectively. It's essential to note that since the music streaming sector is part of the entertainment industry, its growth correlates in a certain way with the business cycle. As such, it may be affected by contractions and expansions of the economy.

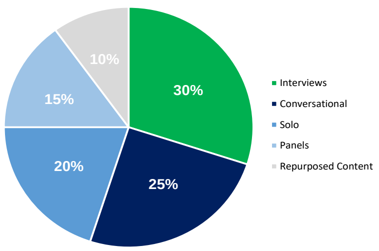
Podcast Market Overview

Podcasts first appeared two decades ago, but the format gained popularity during the last five years. The key driver that led to this market growth is that they are a source of entertainment during commutes or multitasking with easy accessibility through smartphones, smart speakers, or any other smart gadget. Also, the involvement from celebrities, the proliferation of shows, their usefulness in teaching and educational learning, minimal entry barriers for creators, and the investment from large companies like Spotify have jointly helped the podcast market grow. Furthermore, the introduction of blockchain technologies, artificial intelligence, the internet of things, and other advanced technology allowed advertisers to hyper-contextualize their data, ensuring that they reach the customer with the right content at the right time, growing the monetization of the market. Finally, as people started to stay more in-home due to the COVID-19 pandemic and its mandatory confinements, the industry experienced an expansion that can be further enhanced as users change their consumption habits.

Listeners tend to be younger, more educated, and open to podcasting advertising. It is a way for advertisers to target a younger audience that tends to use ad blockers in other forms of digital media, while in podcasts, they don't have an effect since the ad records on the audio file. The key players in the podcasting market tend to be the same as in the music streaming market, including Amazon Music, Apple Music, Spotify, iHeartMedia, and Pandora Media. This year, Spotify became the most popular podcast platform in the US, having 28,2 million US internet users listening to podcasts monthly against 28 million listeners from Apple[19].

The global podcasting market was valued at €10,04 billion in 2020. It is expected to grow at a CAGR of 31,1% until 2028.[20] Advertisers are expected to accelerate their shift in budgets from traditional radio into podcasts, as they see greater effectiveness in targeting audiences, with higher possibilities of increasing brand awareness. As of 2020, podcast ad sales were relatively small compared to traditional radio in the US – €1 billion vs. €11 billion[21], respectively. This shows the potential of such shift in terms of ad revenues to the podcasting and audio market in general, with Spotify aiming to be in the frontline. According to Bloomberg Intelligence's analysts, podcast campaigns deliver an average return of €2,42 per euro spent. This is highly motivating for the advertiser's shift. Adding to this, there were estimated monthly U.S listeners of podcasts of around 90 million. The growth trend suggests that this could increase to approximately 140 million by 2024.

Figure 22 – **Podcast Format** by type



Source: Statista

Based on the content[22], the politics and news segment had the larger revenue share of 30%, while content such as lifestyle, meditation, personal wellness, and health has seen increased demand. Due to the popularity and influence of sports worldwide, the sports segment is expected to have the highest growth moving ahead. Leading podcast platforms, like Spotify, are acquiring studios focused on this category to enhance their content, such as "The Ringer".

Based on the format, the interview format had the larger revenue share of around 30% and is expected to stay dominating the podcasting market, as it stimulates a series of viewpoints, opinions, and discussions from different guests. The solo

[19] eMarketer: "Spotify poised to overtake Apple Podcasts this year". https://www.emarketer.com/content/spotify-poised-overtake-apple-podcasts-this-year?ecid=NL1001.
[20] Grand View Research. "Podcast market analysis report". https://www.grandviewresearch.com/industry-analysis/podcast-market.
[21] Bensaid, A. (Bloomberg Intelligence - 2021). "Spotify Technology Research". Retrieved through the Bloomberg Terminal (no URL available).
[22] Content, Format and Region Analysis retrieved from the Grand View Research: Podcast market analysis report.

segment, recorded by a podcaster who has knowledge and expertise in a specific field, is expected to grow at a higher CAGR since it is the most accessible format to start, requiring minimal software and equipment to record.

Looking at the regions, North America contributed around 40% to the revenue share and is expected to maintain its dominance, justified by the rapid adoption of digital devices coupled with the rising popularity and accessibility of podcast content. Latin America is expected to record the fastest growth, with a CAGR of 35% between 2021 and 2028, due to the increasing internet penetration rate and popularity of digital devices coupled with the accessibility of podcasting content offered in Spanish.

Competitors Analysis

	Spotify	iHeartRadio	SiriusXM	Youtube Music	Amazon Music	Apple Music	Tidal	Deezer	Pandora
Free Option	Yes	Yes	No	Yes	Yes, 2M Music	No	Yes	Yes	Yes
Free Trial Period	3 Month	1 Month	3 Month	1 Month	1 Month	3 Month	1 Month	No	1 Month
Premium Monthly Fee	$9.99	$9.99	$10.99	$9.99	$9.99	$9.99	$9.99	$9.99	$9.99
Student Plan	$4.99	No	$4.00	$4.99	$0.99	$4.99	$4.99	$4.99	$4.99
Family Plan	$15.99	$14.99	$16.99	$14.99	$14.99	$14.99	$14.99	$14.99	$14.99
Size of Music Library	70 Million	30 Million	40 Million	70 Million	75 Million	75 Million	70 Million	73 Million	40 Milllion
Size of Podcasts Library	3 Million	400 Thousand	600 Thousand	No	70 Thousand	500 Thousand	250 Thousand	60 Thousand	600 Thousand
Live Radio Stations	No	Yes	Yes	No	No	Yes	No	Yes	Yes

*All Family Plans allow up to six accounts.

Source: Respective Websites

Table 10 – **Competitor Analysis**

The audio streaming market comprises a small number of platforms owned by large companies. These include Spotify, iHeartRadio, SiriusXM, YouTube Music, Amazon Music, Apple Music, Tidal, Deezer, and Pandora. The comparison in table 10 was made in dollars as some of these platforms only operate in the United States. Taking each platform's characteristics and subscription plan into consideration, the one that comes on top is Spotify. It is able to offer 70 million music songs (only 5 million short of Amazon Music), with a much more extensive podcast library than its competitors, all these at similar prices, giving them a comparative advantage. A podcast library of 3 million podcasts has high value since this segment has a higher expected growth within the audio streaming industry. Tencent Entertainment and NetEase are also large companies within the sector. Still, a direct comparison wasn't drawn between them since they only operate in the Chinese market, where Spotify and most platforms don't.

Figure 23 – **Competitor Analysis**

	Spotify	SiriusXM	iHeartMedia	Tencent Entertainement
Revenues	7880	6583	2414	3658
Gross Margin	25,6%	55,5%	60,5%	31,9%
EBITDA Margin	-2,2%	29,3%	13,7%	15,3%
Net Margin	-7,4%	1,6%	-65,0%	14,3%

Source: Bloomberg

Concerning profitability, as we can see in figure 23, a comparison was drawn between the publicly listed ones having audio as their core segment[23]. Although Spotify had higher revenues, SiriusXM was the most efficient. However, the comparison is not fair because, although they have audio streaming as their core segment, they are still very different companies with additional segments, such as radio.

[23] We didn't include the remaining peers in the comparison, as they don't provide the financials or any data for their audio streaming segment.

In terms of subscribers, Spotify has the highest market share, with approximately 29%, followed by Apple Music with 16%, and then Amazon Music, Tencent Entertainment, and YouTube Music with 13%[24].

Peers

For Spotify's peers, the companies chosen were the ones that are listed and either offer a similar service or share similarities in terms of its business model. Based on these characteristics, we divided them into 2 Tiers. Tier 1 is composed of SiriusXM, Tencent Music Entertainment, and iHeartMedia, which have audio streaming as their core segment. Tier 2 is composed of Alphabet, Amazon, Apple, Netflix, AMC, and Walt Disney, which have as one of their segments audio or video streaming, operating in the entertainment sector, and by Meta Platforms and Twitter, which have advertisement as a source of revenue in their business-model. These will be the tiers we will use to perform the relative valuation.

It's worth noting that we believe that none of these companies can't be considered a "perfect peer" for this kind of analysis. Some of them are either in a different growth phase or have different growth expectations for the future. However, considering all these factors, they are still somewhat comparable, and a relative valuation can still be valid.

Opportunities and risks

Opportunities

Emerging Markets

Spotify is still in the process of expansion and establishment in new markets. However, it is already providing its services across the globe and to a very high number of countries. Spotify is available in 178 countries as of the date of this report.

The most recent and significant geographic expansions include the launch in July 2020 in Russia, the Commonwealth of Independent States, and the Balkans, adding to the launch, in the first half of 2021, in 86 new countries. These include South Korea, one of the biggest music markets globally (6th in the world). This 80+ countries expansion taps into a potential market of around 1 billion people. Also, most of these additional countries come from Asia, Africa, and the Middle East. Previously, these markets represented less than 20% of total Spotify's MAUs, which shows the existent opportunity in both the eastern and the least

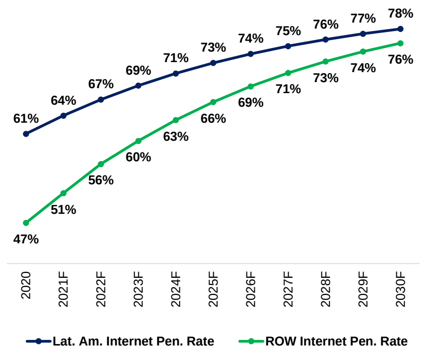
[24] MIDiA Research. "Streaming music subscriber market shares, Q1 2021, global". "https://www.midiaresearch.com/blog/global-music-subscriber-market-shares-q1-2021

developed countries. Along with product expansion and growth within existing markets, geographic expansion to unexplored markets is one of the primary sources of growth and size for Spotify. These countries tend to be the where streaming is not explored to its fullest, giving a massive opportunity to widen its user base.

As Spotify settles in and starts establishing itself in Europe and North America, new goals are set in the remaining regions. Spotify is successfully establishing itself in Latin America, with a penetration rate in the targeted population of 18% in 2020[25]. However, ROW[26] region is seen as one of the main sources of growth for Spotify – with only 2% targeted population captured, split in 1,5% in ad-supported and 0,5% in premium. Being many of the 86 new countries in this region, Spotify has a considerable opportunity to win these markets and grow MAUs and Revenues at even greater rates for the foreseeable years.

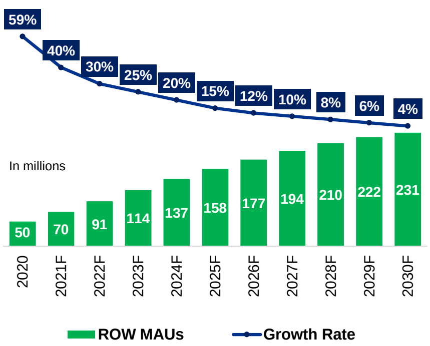
Spotify adjusts its pricing to each market to accommodate different purchasing powers[27], in order to deliver premium service to a broader population since willingness to pay for a premium service is different between regions. An example of the effort to attract users to a subscription-based plan is the testing of Spotify+, which enables users to get all the functionalities of the premium service while still being exposed to advertisements. Spotify is charging $0,99 for it monthly in the U.S, and it may be an excellent solution for countries with a lower purchasing power. With this, we expect an increasing share of revenues coming from ROW and Latin America.

Figure 24 – Latin America and R.O.W **internet penetration rate** forecast



Also, there is capital being allocated to increase internet penetration in where internet is not a given. An example is Elon Musk's Starlink venture for Wi-Fi delivery through drones/satellites, increasing the internet access in remote regions. Spotify also takes into account that internet reach may be lower in some countries, along with the fact that there are fewer next-generation mobile phones, by creating Spotify Lite[28]. It is a simplified version of the Spotify app, which uses less storage, data, and battery for older devices to run the app.

Figure 25 – **R.O.W MAUs** forecast & yearly growth rate



It's forecasted that by 2025 the Rest of the World region will reach an internet penetration rate of 71% (vs. 56% in 2020). With this, we forecast that by 2025 Rest of the World reaches 177 million company-wide MAUs, with a 22% CAGR - split into 137 million ad-supported MAUs and 40 million premium subscribers, with a respective CAGR of 22% and 20%.

[25] We consider the target population to be the population within each region with internet access.
[26] ROW - Rest of the World
[27] Source: Spotify's 2020 annual report
[28] Source: Spotify Newsroom

Figure 26 – **Latin America MAUs** forecast & yearly growth rate

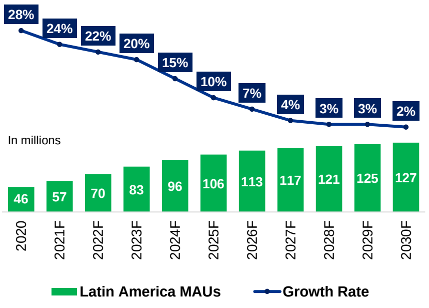


Figure 27 – **Revenue split** per regions **(2020)**

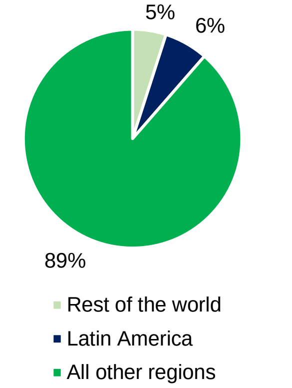
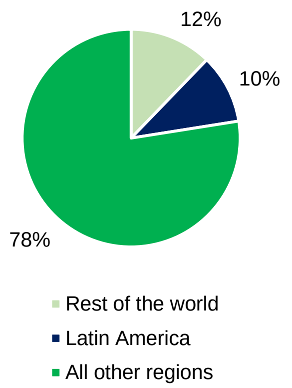


Figure 28 – **Revenue split** per regions **(2025 Forecast)**



As the internet penetration rate is also forecasted to rapidly increase in Latin America (from 61% to 73% between 2020 and 2025), the growth trend in MAUs is also expected to be observable in this region for the forecasted years. Hence, we forecast Latin America will reach 172 Million company-wide MAUs in 2025 (with a CAGR of 18% from 2020 to 2025), split into 106 ad-supported MAUs (18% CAGR) and 67 premium subscribers (16% CAGR).

As Spotify expands its presence in these markets, internet access increases, and streaming gains further strength as being the primary go-to for audio content, we expect that emerging markets will be a key focus and a critical segment in Spotify's business for the upcoming years, as shown by our forecasts. We expect growing importance in revenues and MAUs coming from Latin America and ROW regions, forecasting it to be 10% and 12% of total revenues by 2025, respectively.

One noticeable omission in Spotify's business is China, the second-largest economy globally. This is a market with high difficulties in terms of penetration, with a quite established player already present (Tencent Music Entertainment, publicly listed, along with fierce competition from NetEase, soon to complete an IPO), and with many other big tech companies failing to tap in this market (e.g., Alphabet, Meta Platforms and Uber). For this reason, in 2017, TME and Spotify entered into a stock swap agreement, in which both Spotify and TME exchanged a 9,1% stake in both ways. Spotify has a stake of around 8% currently.[29] Hence, Spotify has exposure to the Chinese audio streaming market, with a massive player in it being related to the company, which would otherwise become a competitor. As of the 3rd quarter of 2021, the Chinese equities market was hit hard by Evergrande's financial struggles and the increasing government control on China's biggest companies. Spotify saw its TME Ltd. stake's fair value decrease more than 60% in 2021 (from €2228 Million to €885 Million). The majority of analysts' view is that large-cap Chinese stocks are somewhat discounted today, continuing to believe in the potential of being exposed to the Chinese stock market, especially in the tech sector. There is no foreseeable change for Spotify's presence in the Chinese market through its TME ownership, as it is highly strategic.

Investment in Podcasts

The investment in Podcasts is entirely rational and purposeful. It is a market in extreme growth, with podcast usage rising over 200% on Spotify, in 2020,

[29] Source: Spotify's 2020 annual report

according to Magna Global[30]. Spotify believes that the industry landscape found in podcasts today is very similar to music and streaming in the 2000s. Spotify's recent investments communicate their main goal in this market - to be the number one podcast/audio content provider in the world, and own the whole supply chain within the market. It owns exclusive content, provides distribution and metric-tracking solutions for podcast creators (through Anchor and Megaphone), and, most importantly, connects advertisers to content creators. Financially, this purpose can be observed with even higher expectations, and here's why.

Figure 29 – **Ad-supported gross margin** forecast

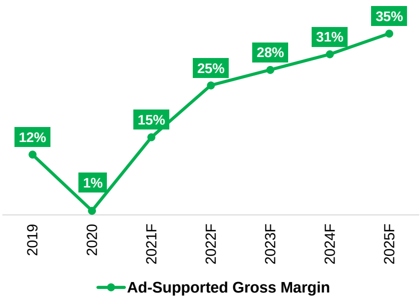
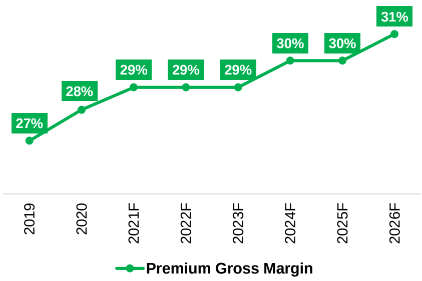


Figure 30 – **Premium gross margin** forecast



Spotify has an issue specifically in the music streaming market - it is challenging to decrease the costs of revenue as a percentage of revenue. Rightsholders are quite powerful, with royalties composing most of Spotify's cost of revenue (which are around 70% of revenues historically). It is improbable that fees and royalties related to music differ a lot in the future from their level now[31]. Podcast market rise, and being the market leader in it, enables Spotify to achieve higher profit margins mainly in two ways. First, by boosting ad-supported gross margin, since podcasts are far more profitable than music. This is not only because of the increased podcast listening time (which decreases the weight of music royalties paid as % of revenues in this segment) but also because the cost of revenue associated with advertising can be considered to have fixed nature since the cost of providing advertising does not increase significantly for each incremental dollar of advertising revenue. The second way is by expanding premium segment gross profit, as the share of time dedicated to music listening decreases.

It may take time for margins improvement to become apparent, but they are becoming visible. As of 2021's third quarter, the ad-supported segment increased its weight on overall revenues to 13%, compared to 9% in the previous year, mainly coming from a higher contribution from podcasts in the platform and boost in advertiser spending allocated to audio through Spotify Audience Network.[32] [33] More specifically, the higher demand for this advertising-marketplace platform enabled Spotify to increase its path of monetizing further its podcast segment, which allowed a 75% YoY increase in Spotify's ad-supported revenue in the 3rd quarter of 2021. The potential of this product is observable, as Spotify sees positive signs while it is only available for advertisers in 4 markets: United States,

[30] Bensaid, A. (Bloomberg Intelligence - 2021). "Spotify Technology Research". Retrieved through the Bloomberg Terminal (no URL available)
[31] Further explored in Challenges section
[32] **Spotify Audience Network** enables creators to make meaningful revenue from podcasts. It is an audio advertising marketplace, where advertisers connect with podcast distributors creating content in the platform (which includes Spotify's owned studios as well), facilitating the process for content creators to monetize their work, while at the same time being a powerful platform for enabling advertisers target specific audiences, in both music and podcast content, by leveraging Spotify's data and audience metrics tracking.
[33] Bensaid, A. (Bloomberg Intelligence - 2021). "Spotify Technology Research". Retrieved through the Bloomberg Terminal (no URL available)

Figure 31 – **Revenue split** per segment – 2020 vs 2025 forecast

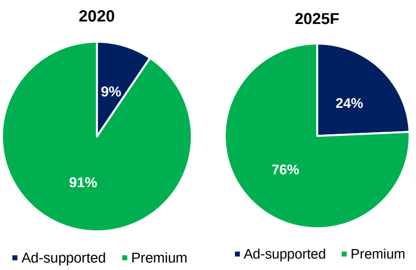


Figure 32 – **Ad-supported revenue forecast**

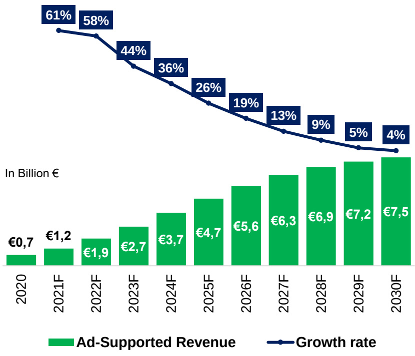
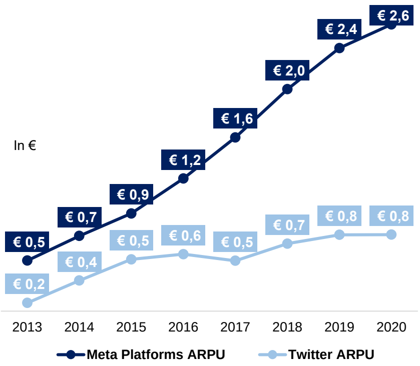


Figure 33 – **Facebook and Twitter monthly advertising ARPU evolution**



Canada, United Kingdom, and Australia. Only in the United States, 60% of all podcast advertiser base was already using this platform in the first three months after launch[34]. As of the end of 2021, podcast creators of all sizes and types within these four markets can get advertisement inventory in their content. Spotify expects to expand its availability much further across all regions in which it operates, which can translate into an even more significant increase in ad-supported revenues. With this being said, we expect that the split of revenues from each segment changes significantly (ad-supported moving from a 9% weight in 2020 to 24% in 2025), with advertisement revenue growing at a CAGR of 44% between 2020 and 2025.

Spotify has also been investing heavily in owning podcast content, becoming exclusive in the platform. The multi-million-dollar acquisitions and deals with podcast creators attempt to remove the risk of content owners having high bargaining power, which is a reality in the music segment. Its major acquisitions regarding exclusive podcast content were Gimlet Media, Cutler media, and The Ringer, with a total amount of €391 Million spent. While owning these widely popular podcast studios, Spotify fully captures its advertisement revenues. Adding to this, Spotify signed a multi-year, multi-million-dollar exclusivity deal with one of the most favourite podcasts globally, The Joe Rogan Experience [35].

To better capture the shift to podcasts as a reliable way of advertisement, Spotify made two very strategic acquisitions. Anchor and Megaphone, acquired both for a total of $385 Million, are being highly leveraged for the whole podcast supply-chain. Anchor technology is mainly being used by creators, to produce content and upload it directly to the platform. Also, Megaphone-backed technology is being used to further develop Spotify's Audience Network and enable better targeting and advertisement experience for creators, advertisers, and listeners.

We expect ad-Supported ARPU to increase significantly, as advertisers show increasing spending and interest in this form of advertising. It is expected to grow similarly to tech-companies advertising ARPU (e.g., Meta Platforms and Twitter). With ad-Supported ARPU in 2021's third quarter already reaching €0,41, which translates into a YoY growth of 32%, we expect the ad-supported ARPU will reach €0,91 by 2025 (24% CAGR 2020-2025).

With this in mind and observing Spotify's developments and investments, while also considering the effort to remain the number 1 platform for all audio content in the world, we expect this to be translated mainly in the ad-supported segment, with a considerable growth being expected in this segment for the foreseeable

[34] Spotify Technology S.A (2021). "Taking the Spotify Audience Network On the Road". *https://ads.spotify.com/en-US/news-and-insights/spotify-audience-network-global-launch/*
[35] Final deal value undisclosed

years. At the same time, the premium segment may also take advantage from this by consistently converting users from free to premium historically. However, as Spotify establishes itself in countries with lower purchasing power, we expect company-wide conversion rates to decrease slightly. Hence, it is even more important for Spotify to leverage opportunities from its faster-growing number of users in the ad-supported segment worldwide, monetizing it successfully.

Challenges and Risks

Rising competition

Spotify largely owns the audio streaming market. However, the competitive landscape is becoming riskier.

Being one of its most concerning risks, Spotify currently faces its fierce, powerful, cash-heavy, and rising competitors. Not only does it impose challenges in retaining current MAUs, and keeping them engaged in the platform, it also affects the ability to attract users from both new and established markets. Tech giants Apple, Amazon, Alphabet, and also smaller players such as Pandora and Tidal are increasing their presence in the audio streaming market, using different strategies - pricing, marketing, exclusive content, or prioritizing their service in their own produced devices. Additionally, conflicting online liability laws are creating a value gap in the market. Some services, such as Alphabet's YouTube, can claim that they are not responsible for the content published on their platforms, questioning the long-term sustainability of the industry and the market.

Music streaming platforms from tech-giants Alphabet, Amazon, and Apple pose the most considerable risk for Spotify's market leadership. As these platforms are a very small portion of their revenues, it is not crucial that this segment is immensely profitable in an expansion phase of their products. As such, these companies are able to reduce their pricing and operate at lower margins on its music streaming segment, or even at a loss for some years, which may attract users more effectively and steal market share from Spotify. Additionally, since their financial slack is much more significant than Spotify's, these companies may have an advantage in M&A activities in the market, being able to pay more significant premiums for other companies.

This posts a major uncertainty on whether Spotify will keep its market leadership and retention of users in the long term. Decreasing conversion rates to premium subscriptions, increasing churn rate or decreasing ad-supported MAUs growth rate are the most relevant drivers that may be affected by this. It may translate into an overall decrease in both ad-supported and premium MAUs, which ends up impacting Spotify revenue and ability to sustain its growth expectations.[36]

Emerging markets risk

As mentioned before, Spotify has recently made a significant investment in its international expansion, which included 80+ countries, mainly under-developed ones. Such countries present very different purchasing habits (even though Spotify adapts its pricing strategies with this in consideration). This leads to consumers in such markets having smaller budgets for entertainment expenditure, which presents further challenges in converting customers to its premium segment and having a significant penetration rate in such markets. Also, there are already small and local players providing music streaming services[37], with much more local content and deals with local artists in some of these markets. Although Spotify invests on "going local" when expanding its operations to new markets, in some countries it may be harder (or more expensive) to own rights for local content, which ultimately would impact its ability to attract new users.

An example of this risk is Spotify's expansion to India. Initially, its penetration in the market was fast – after its launch at the beginning of 2019, India added 2 million MAUs by the end of the first quarter. As the pandemic worsened and India became one of the most affected countries, subscribers' growth rates started to go lower than expected in 2021, when this number was only expected to grow stronger for a considerable period (2Q growth in MAUs moderated to 22% vs. 1Q 25% growth). Although the investment in such markets has a quite significant upside, with the possibility of being a large source of growth, this is a representative example when considering this risk as broader. This risk may translate into Spotify's investments not translating into significant growth rates in subscribers and conversion to the premium segment, making the investments not being compensated by revenue growth through MAUs acquisition. Also, by expanding to countries with lower purchasing power, both company-wide premium and ad-Supported ARPUs are likely reduced, which imposes further pressure in attracting MAUs.

Right holders and competitors bargaining power

With Spotify's dependency obtaining licenses on its music content, the risk that these increase their costs is widely concerning. It can cause a significant disruption in its business – since the cost of revenue has historically been around 70% of revenues. Although right holders and artists are also very dependent on

[36] Further explored in "Scenario Analysis"
[37] An example of this situation is India's Gaana, with a wide variety of local music and with popularity among consumers in the country

streaming for their growth and sustainability (after many years of industry decline), there is the risk that regulation increases the costs to right holders, which may translate into further increases in costs for streaming companies. An upward shift in expenses with right holders would very much directly impact Spotify's cost structure, drastically reducing its margin and affecting the ability to grow its profits. Also, the audio streaming segment from Spotify's biggest competitors is only a small portion of their business (e.g., Amazon, Apple, Alphabet), and being them companies with a vast financial slack, it means that they can put pressure on Spotify by incurring into deals more advantageous for rightsholders and run their business at lower margins (or even losses) for more extended periods. This may pressure Spotify's financials at a level that can be unbearable to support in the long term.

Covid-19 Impact

Just as in many markets, Covid-19 emergence affected Spotify and may continue to impact. However, it has a proven two-sided effect on the company.

On the negative side, there was and may continually exist a decrease in advertisers' spending. Also, the reduction of overall income may lead to a decrease in premium subscribers and a lower willingness to pay for the service. Travel limitations and the decline in the commuting necessity shifted consumers' listening habits, and Spotify may not be able to adapt to these changes. Artists may also have less availability/opportunities to create content and make it available in the platform, which ultimately would negatively impact the platform's content quality and users' retention.

On the positive side, lockdowns and social distancing made consumers increase podcast listening drastically. For example, 90% of podcast listening occurs at users' homes, which was already happening before the pandemic[38]. Also, using U.S adults as an example, 22 percent of them confirmed that they were listening to podcasts much more due to social distancing and staying at home[39]. This caused podcast listening to accelerate further in 2020 and 2021, which may cause a quicker shift to podcast listening.

[38] Bensaid, A. (Bloomberg Intelligence - 2021). "Spotify Technology Research". Retrieved through the Bloomberg Terminal (no URL available)
[39] According to a Morning Consult survey conducted in early 2021.

Valuation

DCF Method

As we built a deeper knowledge of the company, market trends, and metrics evolution, we believe that the DCF method is the most advantageous to value the company. We used a forecasting period of 14 years until 2035, as we believe that only by that time the growth associated with the industry and Spotify, especially in emerging economies, will be at steady-state. By then, in order to get the terminal value, we applied an annuity growth rate of 4,5% for five more years[40] and applied the perpetuity growth rate aligned with the long-term global GDP growth rate, of 2,5%[41], to 2040's core free-cash-flow.

WACC Model

Spotify raised financial debt for the first time, adding to leases held before. Its cash reserves are strong and growing, making net debt negative negligible compared to its equity market value. Currently, Spotify's market value equity is €37 billion, while its net debt is €-1085 million. We forecast the Net Debt-to-Equity ratio to remain stable, with Net debt weighting -1% and Equity 101% on the Enterprise Value. We expect Spotify to keep its high ratios of cash in its balance sheet, which should compensate slightly for the amount of debt. As such, we believe the best approach to discount cash-flows is by obtaining the discount rate through the WACC model.

Inputs and assumptions

To obtain Spotify's beta, we regressed the last three years' weekly returns with the MSCI World Index, as Spotify operates globally, which resulted in an **equity beta of 0,96**, with a 95% confidence interval between 0,58 and 1,3. This interval is quite wide, and as such, we observed the unlevered betas of our assumed peers to get a better sense of Spotify's levered beta.

as of 15/12/2021	Beta Equity	R.F rate	MRP	Re	Rd	Beta Debt	Unlevered Beta
Netflix	0,67	1,4%	4,3%	4,3%	1,8%	0,08	**0,64**
Sirius XM	1,13	1,4%	4,3%	6,3%	1,3%	-0,03	**0,82**
iHeart Radio	1,52	1,4%	4,3%	7,9%	2,5%	0,25	**0,72**
Apple Inc.	1,05	1,4%	4,3%	5,9%	1,3%	-0,03	**1,07**
Alphabet Inc.	0,89	1,4%	4,3%	5,2%	1,3%	-0,03	**0,95**
Amazon Inc.	0,68	1,4%	4,3%	4,3%	1,3%	-0,03	**0,66**
Tencent Music Entertainment	0,71	1,4%	4,3%	4,4%	3,3%	0,44	**0,71**

Source: Bloomberg

Table 11 – **Peers' Unlevered Beta analysis**

[40] The steady state growth rate isn't sustainable in the long run (4,5%). As such, we apply an annuity formula for an additional five years before defining a long-term perpetuity growth rate more in line with the long-term real GDP growth rate.
[41] OECD (2021). "Real GDP long-term forecast". https://data.oecd.org/gdp/real-gdp-long-term-forecast.htm#indicator-chart

Figure 34 – **Peers' beta analysis output**

Average peers Unlevered Beta	0,80
Spotify Beta Debt	0,23
Weight Debt	-1%
Weight Equity	101%
Spotify Levered Beta	**0,80**

The peers observed in this comparison were Netflix, Sirius XM, iHeart Media, Apple, Alphabet, Amazon, and Tencent Music Entertainment. The observed unlevered betas are presented in table 11[42]. The resulting average unlevered beta is 0,8. When levering this beta to Spotify's capital structure, we observe a 0,8 beta. Also, to better evaluate our confidence in the regressed beta, we calculated the average one-year rolling beta, which is 1,1. With both these values, our confidence interval is narrowed to between 0,81 and 1,1. As such, we rely on our regressed equity beta, maintaining it as **0,96**. We believe that this beta fits the company after evaluating Spotify's exposure to systematic risk and business cyclicality. We considered the entertainment industry to have much more factors accounted for in its beta due to very different segments compared to Spotify. As such, we believe this to be a better approach compared to using the industry-wide beta.

Figure 35 – **CAPM model inputs**

Equity risk premium	5,70%
Risk-free rate	1,44%
Market risk premium	4,26%
Equity Beta	0,96
Return on Equity	**5,53%**

By relying on NYU Stern's widely used Professor Aswath Damodaran's **Equity risk premium (5,7%)[43]** and being the last U.S. government 10-year treasury bond **1,44%[44]**, which we considered the **risk-free rate**, we obtained the **Market Risk Premium of 4,26%**. Using the CAPM Formula, the calculated Return on Equity is 5,53%.

As Spotify doesn't have coupon-bearing bonds nor an attributed credit rating, we computed the interest coverage ratio[45] for 2022 of 7,46. According to figure 36, this translates into a credit rating of AA, being the resulting spread of 1%. Hence, using a synthetic credit rating approach, our calculated Spotify's cost of debt is assumed to be 2,44%. When comparing Spotify's credit rating with its peers, we considered this rating to be in line.

Figure 36 – **Synthetic credit rating** estimation metrics

Interest Coverage Ratio	*Rating*	*Spread*
> 8.5	AAA	0.75%
6.5-8.5	AA	1.00%
5.5 �6.5	A+	1.50%
4.25- 5.5	A	1.80%
3- 4.25	A-	2.00%
2.5-3	BBB	2.25%
2- 2.5	BB	3.50%
1.75-2	B+	4.75%
1.5-1.75	B	6.50%
1.25-1.5	B-	8.00%
0.8-1.25	CCC	10.00%
0.65-0.8	CC	11.50%
0.2-0.65	C	12.70%
<0.2	D	14.00%

Source: NYU Stern

As mentioned before, we assumed a Debt weight of -1% and Equity weight of 101%. Hence, our Weighted Average Cost of Capital is assumed to be **5,64%.**

After obtaining the Core NPV, by summing the core free-cash-flows, each discounted to 2022, we added the non-core book value of €1,4 billion. Hence, the Enterprise Value computed is €54,9 Billion, which by subtracting 2022's negative net debt (excess cash above gross debt) results in Spotify's equity value of €55,9 Billion. With 190,8 million shares outstanding, our base-case scenario price target for fiscal year 2022 is €293,17 per share. As of 15th of December, 2021, Spotify's current price stands at €199,64, which translates into a 47% total return for shareholders in such scenario.

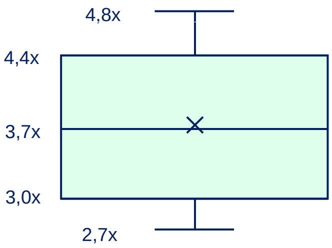
[42] While not visible in the table, the unleveraging of each peers' beta was done taking into account their current capital structure retrieved on Bloomberg, not presented in the table for formatting purposes
[43] Damodaran. A. (2021). Implied Equity Risk Premium dataset. *"https://pages.stern.nyu.edu/~adamodar/"*
[44] As of 15/12/2021. Retrieved through the Bloomberg terminal.
[45] 2022's EBIT Forecast divided by 2022 Annualized Interest Expense.

Relative Valuation

As a complementary method to the DCF Valuation, a relative valuation was performed based on the peers we chose earlier in the report. The common EV/EBITDA multiple was not used since Spotify's EBITDA is still too unstable to be reliable. After all, the company is still finding its way to more stable profitability. Although more reliable, the EV/Gross Profit multiple has some of the same flaws since Spotify is still trying to increase its margins, not being at the levels of their future expectations. Note that the platforms that we expected to have a similar gross margin to Spotify would be Apple Music, Amazon Music and, YouTube Music. However, as these platforms are a small portion of their parent companies' revenues, and their audio-streaming financials are not disclosed, we cannot obtain a reliable multiple that can be thoroughly compared to Spotify. Hence, the multiples associated with these companies have much more into account than their audio streaming segment. To overcome this situation, we decided to use EV/Sales multiple because it is also a way to access the company's economic value based on its operational performance.

Using the peers defined for Tier 1, we got an EV/Sales median multiple of 3,7x and an EV/Gross Profit median multiple of 7,1x. Both correspond to a share price of €238 and €131, respectively.

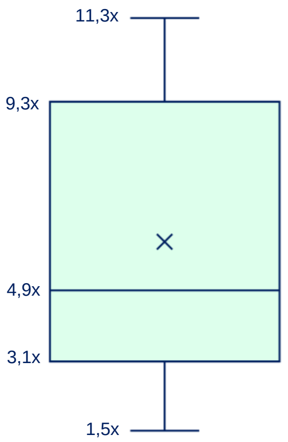
Figure 37 – **Box and Whisker Tier 1 EV/Sales**



Tier 1	EV / Sales	EV / Gross Profit
Sirius XM Holdings Inc.	4,3x	6,7x
Tencent Music Entertainement Group	2,7x	7,5x
iHeartMedia Inc	3,1x	5,6x
Spotify Technology SA	4,8x	16,5x
Mean	3,7x	9,1x
Median	**3,7x**	**7,1x**
# Sample	4	4

Table 12 – **Tier 1 Peers** Source: Bloomberg

Figure 38 – **Box and Whisker Tier 2 EV/Sales**



Grouping Tier 1 and Tier 2 together, we got an EV/Sales median multiple of 4,9x and an EV/Gross Profit median multiple of 13,6x. Both correspond to a share price of €319 and €250, respectively.

Tier 2	EV / Sales	EV / Gross Profit
...	...	...
Alphabet Inc	10,2x	19,0x
Amazon.com Inc	4,7x	11,8x
AMC Networks Inc	1,5x	
Apple Inc	7,9x	27,5x
Discovery Inc	2,7x	4,3x
Walt Disney Co	4,9x	15,0x
Netflix Inc	11,3x	29,0x
Meta Platforms, Inc.	10,1x	12,6x
Twitter Inc.	9,3x	14,7x
Mean	6,0x	14,2x
Median	**4,9x**	**13,6x**
# Sample	13	12

Table 13 – **Tier 1 and 2 Peers** Source: Bloomberg

Scenario Analysis

Adding to our base-case discussed throughout our report, we consider that there are two main situations that may affect Spotify's future performance with a higher probability, each of them with a different effect on the stock price.

Best-Case Scenario: Ad-supported ARPU growth intensified

As discussed earlier in "Opportunities", Spotify's ad-supported segment is expected to gain much more relevance, mainly through its ARPU growing heavily in the future. We compared this growth with companies in which advertising revenue grew at double (or even triple) digit rates while its business was expanding, and expected Spotify to follow this trend as their ad-supported business is expanded. However, our growth rates are more conservative in our base-case when compared to the ones observed with Facebook and Twitter from 2014 to 2020. This is because Spotify's advertising content is very different from both of them, as it is audio-based, and the growth trend may differ from them. However, we consider that there's still some possible upside compared to our forecasts, and that is precisely what we address as our best-case scenario for Spotify. In table 14 and 15 we can observe our base-case and best-case assumptions for Spotify's ad-supported ARPU compared.

Base-case ad-supported ARPU	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Europe	€ 0,61	€ 0,82	€ 1,03	€ 1,21	€ 1,39	€ 1,53	€ 1,62	€ 1,67	€ 1,70	€ 1,72
North America	€ 0,70	€ 0,95	€ 1,13	€ 1,34	€ 1,54	€ 1,69	€ 1,80	€ 1,87	€ 1,89	€ 1,92
Latin America	€ 0,20	€ 0,28	€ 0,38	€ 0,49	€ 0,61	€ 0,70	€ 0,78	€ 0,84	€ 0,86	€ 0,88
Rest of the World	€ 0,21	€ 0,29	€ 0,39	€ 0,51	€ 0,64	€ 0,73	€ 0,80	€ 0,87	€ 0,89	€ 0,91

Table 14 – Base-case scenario ad-supported ARPU forecast

Best-case ad-supported ARPU	2021F	2022F	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F
Europe	€ 0,63	€ 0,85	€ 1,11	€ 1,38	€ 1,66	€ 1,82	€ 1,93	€ 1,99	€ 2,02	€ 2,05
North America	€ 0,73	€ 0,98	€ 1,27	€ 1,59	€ 1,91	€ 2,10	€ 2,23	€ 2,32	€ 2,35	€ 2,39
Latin America	€ 0,20	€ 0,28	€ 0,38	€ 0,49	€ 0,61	€ 0,70	€ 0,78	€ 0,84	€ 0,86	€ 0,88
Rest of the World	€ 0,21	€ 0,29	€ 0,39	€ 0,51	€ 0,64	€ 0,73	€ 0,80	€ 0,87	€ 0,89	€ 0,91

Table 15 – Best-case scenario ad-supported ARPU forecast

With this scenario, Spotify's revenue is impacted in every region, being considerably higher. Hence, Spotify's price per share reaches a value of €408,58. We attribute a probability of 15% to this scenario.

Worst-Case Scenario: Intensified Competition affecting MAUs growth

As mentioned in more detail throughout the report, in the "Challenges" section, Spotify's competitors pose risks to the company's sustained market leadership. If competitors enter with a more aggressive strategy, we expect this to affect quarterly churn rate, conversion to premium rates, and ad-supported MAUs growth rate, which overall impacts Spotify's market share as the audio-streaming market grows.

Spotify's price per share reaches, hence, a value of €190,4 under this outlook. We attribute a probability of 10% to this scenario occurrence.

Sensitivity Analysis

As in many models, our valuation is subject to some input risk. As such, we analysed our model's sensitivity to some of the most critical inputs and assumptions in our research to understand how our price target would change with changes in our inputs.

As such, we conducted a sensitivity analysis with the WACC (which values we considered according to our beta range defined earlier) and the perpetuity growth rate.

Hence, in table 16 and 17 we can observe the different combinations of both parameters' ranges and the resulting price target in each combination.

		Perpetuity Growth Rate				
	293,17 €	**1,5%**	**2,0%**	**2,5%**	**3,0%**	**3,5%**
WACC	**4,91%**	306,32	338,62	384,31	453,87	572,65
	5,24%	278,34	303,58	338,04	387,91	466,52
	5,64%	249,29	268,22	293,17	327,56	378,01
	5,88%	234,92	251,10	272,07	300,33	340,47
	6,20%	217,74	230,96	247,75	269,79	299,99

Table 16 – **Sensitivity Analysis –** WACC and Perp. Growth rate effect on share price

		Perpetuity Growth Rate				
	48%	**1,5%**	**2,0%**	**2,5%**	**3,0%**	**3,5%**
WACC	**4,91%**	55%	71%	94%	129%	190%
	5,24%	41%	53%	71%	96%	136%
	5,64%	26%	36%	48%	66%	91%
	5,88%	19%	27%	38%	52%	72%
	6,20%	10%	17%	25%	36%	52%

Table 17 – **Sensitivity Analysis –** WACC and Perp. Growth rate effect on total return for shareholders

Figure 39 – **Beta range** considered sensitivity analysis' WACC

Beta	WACC
0,81	4,91%
0,885	5,24%
0,96	5,64%
1,035	5,88%
1,11	6,20%

Looking at the table, we can see that the resulting WACC's range is not wide, obtained with the previously mentioned equity beta range. We also infer from the sensitivity analysis that our model has a more upside character than a downside one, as by changing our inputs the total return for shareholders increases more drastically than it decreases table 17. In our 25 different input combinations, we can observe that all our combinations would keep our recommendation on "Buy", with total return for shareholders ranging between 10% and 190%.

Final Recommendation

Figure 40 – **Scenario Analysis Result**

Scenario Analysis		
Scenario	Probability	Share-Price
Base-Case	75%	€293,17
Best-Case	15%	€408,58
Worst-Case	10%	€190,40

Bundling together our base, best, and worst-case scenarios, with each respective probability of occurrence, we reach our final price target for year-end 2022 of **€300,2** per share, which translates into a total return for shareholders of 52%.

In table 18 we can observe the result of all the valuation methods done throughout our report.

	Price (€)	Price ($)	Total return (%)	Recommendation
Current (15th December 2021)	199,64	225,4		
Discounted Cash-Flows (base-case)	293,2	331,0	46,8%	**Buy**
Discounted Cash-Flows (with scenarios)	300,2	338,9	50,4%	**Buy**
Multiple EV/Sales - Tier 1	238,4	269,1	19,4%	**Buy**
Multiple EV/Sales - Tier 2	319,1	360,3	59,8%	**Buy**

Table 18 – **Valuation methods summary**

Our final recommendation is based solely on the valuation through the DCF method, with all scenarios considered, being the relative valuation only a complementary method to assess our valuation based on Spotify's peers.

With our price target translating into a return above 10%, our final recommendation is "Buy". Although the market is already considering significant growth for Spotify at its current price, our vision is that the upside coming from its advertising segment and expansion in emerging markets is not being fully embedded in its current market value, particularly in its ad-supported ARPU and emerging markets MAUs outlook. Even though the competitive landscape is risky, we expect Spotify's market leadership to be sustained and to continue to be able to attract new users, as well as keeping its current user base engaged, by continuously improving and adapting its service.

Appendix

Financial Statements

Revenue (in millions)

Company Wide	2017	2018	2019	2020	2021			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Worldwide					Q1	Q2	Q3										
Revenues	€ 4 090	€ 5 259	€ 6 764	€ 7 880	€ 2 147	€ 2 331	€ 2 501	€ 10 365	€ 12 249	€ 14 415	€ 16 784	€ 19 181	€ 21 388	€ 23 420	€ 25 247	€ 26 837	€ 28 309
Europe																	
Revenues	€ 2 228	€ 2 647	€ 3 430	€ 4 046				€ 5 134	€ 5 970	€ 6 943	€ 8 063	€ 9 232	€ 10 170	€ 11 005	€ 11 733	€ 12 387	€ 13 010
North-America																	
Revenues	€ 1 538	€ 2 067	€ 2 591	€ 2 941				€ 3 700	€ 4 270	€ 4 816	€ 5 264	€ 5 634	€ 5 976	€ 6 287	€ 6 581	€ 6 850	€ 7 123
Latin America																	
Revenues	€ 196	€ 330	€ 439	€ 510				€ 773	€ 986	€ 1 268	€ 1 620	€ 1 972	€ 2 351	€ 2 692	€ 2 993	€ 3 235	€ 3 445
Rest Of The World																	
Revenues	€ 128	€ 210	€ 303	€ 391				€ 758	€ 1 023	€ 1 388	€ 1 838	€ 2 343	€ 2 891	€ 3 436	€ 3 940	€ 4 364	€ 4 730

Ad Supported	2017	2018	2019	2020	2021			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Worldwide					Q1	Q2	Q3										
Revenues	€ 416	€ 542	€ 678	€ 745	€ 216	€ 275	€ 323	€ 1 197	€ 1 891	€ 2 719	€ 3 689	€ 4 662	€ 5 560	€ 6 296	€ 6 863	€ 7 238	€ 7 534
Final Ad Supported MAUs	93	116	153	199	208	210	220	241	288	336	382	419	449	475	496	515	530
Monthly Ad-Supported ARPU	€ 0,37	€ 0,39	€ 0,37	€ 0,31	€ 0,35	€ 0,44	€ 0,49	€ 0,41	€ 0,55	€ 0,67	€ 0,81	€ 0,93	€ 1,03	€ 1,11	€ 1,15	€ 1,17	€ 1,19
Europe																	
Revenues	€ 188	€ 221	€ 297	€ 337				€ 523	€ 812	€ 1 136	€ 1 461	€ 1 781	€ 2 018	€ 2 182	€ 2 281	€ 2 350	€ 2 421
Final Ad Supported MAUs	31,0	38	48	62				72	82	92	101	107	110	112	114	115	117
Monthly Ad-Supported ARPU	€ 0,51	€ 0,48	€ 0,52	€ 0,45				€ 0,61	€ 0,82	€ 1,03	€ 1,21	€ 1,39	€ 1,53	€ 1,62	€ 1,67	€ 1,70	€ 1,72
North-America																	
Revenues	€ 191	€ 247	€ 241	€ 252				€ 357	€ 506	€ 632	€ 768	€ 900	€ 1 010	€ 1 092	€ 1 159	€ 1 200	€ 1 242
Final Ad Supported MAUs	31	35	38	40				42	45	46	48	49	50	51	52	53	54
Monthly Ad-Supported ARPU	€ 0,51	€ 0,59	€ 0,53	€ 0,52				€ 0,70	€ 0,95	€ 1,13	€ 1,34	€ 1,54	€ 1,69	€ 1,80	€ 1,87	€ 1,89	€ 1,92
Latin America																	
Revenues	€ 25	€ 50	€ 77	€ 73				€ 136	€ 233	€ 378	€ 565	€ 745	€ 941	€ 1 096	€ 1 219	€ 1 294	€ 1 343
Final Ad Supported MAUs	20,3	27	36	46				57	70	83	96	106	113	117	121	125	127
Monthly Ad-Supported ARPU	€ 0,10	€ 0,15	€ 0,18	€ 0,13				€ 0,20	€ 0,28	€ 0,38	€ 0,49	€ 0,59	€ 0,69	€ 0,78	€ 0,84	€ 0,86	€ 0,88
Rest Of The World																	
Revenues	€ 13	€ 25	€ 64	€ 83				€ 180	€ 340	€ 574	€ 895	€ 1 235	€ 1 591	€ 1 925	€ 2 204	€ 2 395	€ 2 528
Final Ad Supported MAUs	10,5	16	32	50				70	91	114	137	158	177	194	210	222	231
Monthly Ad-Supported ARPU	€ 0,10	€ 0,13	€ 0,17	€ 0,14				€ 0,21	€ 0,31	€ 0,42	€ 0,54	€ 0,65	€ 0,75	€ 0,83	€ 0,88	€ 0,90	€ 0,91

Premium	2017	2018	2019	2020	2021			2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Worldwide					Q1	Q2	Q3										
Total Revenue	€ 3 674	€ 4 717	€ 6 086	€ 7 135	€ 1 931	€ 2 056	€ 2 178	€ 9 168	€ 10 358	€ 11 696	€ 13 096	€ 14 519	€ 15 828	€ 17 124	€ 18 384	€ 19 599	€ 20 775
Premium Subscribers	71	96	124	155	158	165	172	183	205	231	258	286	313	339	364	387	409
Monthly Premium ARPU	€ 4,31	€ 4,09	€ 4,09	€ 3,84	€ 4,07	€ 4,15	€ 4,22	€ 4,17	€ 4,21	€ 4,21	€ 4,22	€ 4,23	€ 4,22	€ 4,21	€ 4,21	€ 4,22	€ 4,23
Europe																	
Total Revenues	€ 2 040	€ 2 426	€ 3 134	€ 3 709				€ 4 611	€ 5 158	€ 5 807	€ 6 602	€ 7 451	€ 8 152	€ 8 823	€ 9 452	€ 10 037	€ 10 589
Monthly Premium ARPU	€ 5,98	€ 5,26	€ 5,26	€ 4,99				€ 5,49	€ 5,61	€ 5,69	€ 5,78	€ 5,86	€ 5,95	€ 6,04	€ 6,13	€ 6,22	€ 6,32
Final Premium Subscribers	28	38	50	62				70	77	85	95	106	114	122	128	134	140
North-America																	
Total Revenues	€ 1 347	€ 1 820	€ 2 350	€ 2 689				€ 3 343	€ 3 764	€ 4 185	€ 4 496	€ 4 733	€ 4 965	€ 5 194	€ 5 422	€ 5 651	€ 5 881
Monthly Premium ARPU	€ 5,10	€ 5,26	€ 5,26	€ 4,99				€ 5,49	€ 5,61	€ 5,70	€ 5,78	€ 5,87	€ 5,96	€ 6,05	€ 6,14	€ 6,23	€ 6,32
Final Premium Subscribers	22	29	37	45				51	56	61	65	67	69	72	74	76	78
Latin America																	
Total Revenues	€ 170	€ 281	€ 363	€ 436				€ 636	€ 752	€ 890	€ 1 055	€ 1 227	€ 1 410	€ 1 596	€ 1 774	€ 1 942	€ 2 102
Monthly Premium ARPU	€ 1,00	€ 1,22	€ 1,22	€ 1,14				€ 1,44	€ 1,47	€ 1,49	€ 1,51	€ 1,53	€ 1,56	€ 1,58	€ 1,60	€ 1,63	€ 1,65
Final Premium Subscribers	14	19	25	32				37	43	50	58	67	76	84	92	99	106
Rest Of The World																	
Total Revenues	€ 115	€ 185	€ 239	€ 307				€ 578	€ 683	€ 814	€ 943	€ 1 108	€ 1 300	€ 1 511	€ 1 736	€ 1 969	€ 2 203
Monthly Premium ARPU	€ 1,50	€ 1,61	€ 1,61	€ 1,57				€ 1,87	€ 1,90	€ 1,93	€ 1,96	€ 1,99	€ 2,02	€ 2,05	€ 2,08	€ 2,11	€ 2,14
Final Premium Subscribers	6	10	12	16				26	30	35	40	46	54	61	70	78	86

Income Statement

Core	2017	2018	2019	2020	2021 Q1	Q2	Q3	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Cost of Revenue	(€3 241)	(€3 906)	(€5 042)	(€5 865)	(€1 599)	(€1 668)	(€1 833)	(€7 526)	(€8 772)	(€10 262)	(€11 712)	(€13 194)	(€14 368)	(€15 593)	(€16 803)	(€17 866)	(€18 855)
Research and development	(€396)	(€493)	(€615)	(€837)	(€196)	(€255)	(€208)	(€999)	(€1 181)	(€1 390)	(€1 618)	(€1 850)	(€2 062)	(€2 258)	(€2 435)	(€2 588)	(€2 730)
Sales and marketing	(€567)	(€620)	(€826)	(€1 029)	(€236)	(€279)	(€280)	(€1 140)	(€1 286)	(€1 514)	(€1 762)	(€2 014)	(€2 246)	(€2 459)	(€2 651)	(€2 818)	(€2 972)
General and administrative costs	(€264)	(€283)	(€354)	(€442)	(€102)	(€117)	(€105)	(€529)	(€606)	(€665)	(€708)	(€752)	(€840)	(€912)	(€991)	(€1 056)	(€1 125)
Core Result before taxes	**(€378)**	**(€43)**	**(€73)**	**(€293)**	**€14**	**€12**	**€75**	**€170**	**€403**	**€585**	**€983**	**€1 372**	**€1 872**	**€2 197**	**€2 368**	**€2 510**	**€2 627**
EBIT Margin	-9%	-1%	-1%	-4%	1%	1%	3%	2%	3%	4%	6%	7%	9%	9%	9%	9%	9%
Core Statutory Taxes	€102	€11	€18	€73	(€3)	(€3)	(€19)	(€42)	(€100)	(€146)	(€245)	(€342)	(€467)	(€548)	(€591)	(€626)	(€655)
Statutory Tax	27%	26%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
(OCI) Exchange differences on translation of foreign operations	(€3)	(€8)	€4	(€43)	€41	(€17)	€28	€52	€0	€0	€0	€0	€0	€0	€0	€0	€0
Core Result	**(€279)**	**(€40)**	**(€51)**	**(€263)**	**€52**	**(€8)**	**€84**	**€179**	**€302**	**€439**	**€738**	**€1 030**	**€1 405**	**€1 649**	**€1 778**	**€1 884**	**€1 972**
Net Margin	-7%	-1%	-1%	-3%	2%	0%	3%	2%	2%	3%	4%	5%	7%	7%	7%	7%	7%

Non-core	2017	2018	2019	2020	2021 Q1	Q2	Q3	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Fair value movements on derivative liabilitites	(€206)	€16	(€53)	(€258)	€22	€0	€26	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Fair value movements on convertible notes	(€524)	(€201)	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Interest Income	€19	€25	€31	€17	€3	€2	€3	€18	€18	€18	€18	€18	€18	€18	€18	€18	€18
Other financial income	€2	€11	€1	€8	€1	€2	€2	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Foreign exchange gains/losses	(€143)	€26	€6	(€129)	€29	(€12)	€16	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Share in losses of associate	€1	(€1)	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Non-Core result before taxes	**(€327)**	**€77**	**(€15)**	**(€362)**	**€55**	**(€8)**	**€47**	**€18**	**€18**	**€18**	**€18**	**€18**	**€18**	**€18**	**€18**	**€18**	**€18**
Non-Core Statutory Taxes	€89	(€20)	€4	€90	(€14)	€2	(€12)	(€5)	(€5)	(€5)	(€5)	€0	(€5)	(€5)	(€5)	(€5)	€0
Statutory Tax	27,1%	26,0%	24,9%	24,9%	24,9%	24,9%	24,9%	24,9%	24,9%	24,9%	24,9%	0,0%	24,9%	24,9%	24,9%	24,9%	0,0%
Non-Core Tax Adjustment	(€336)	€50	(€88)	(€49)	(€42)	(€26)	(€120)	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
(OCI) Change in net unrealized gain or loss on short term inv	(€1)	€1	€5	€4	(€2)	(€1)	(€1)	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
(OCI) Change in net unrealized gain or loss on cash flow hedg	€0	(€1)	(€3)	€1	(€6)	€5	€2	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
(OCI) Gain/(loss) in the fair value of long term investments	(€11)	€572	(€117)	€615	€195	(€495)	(€654)	(€954)	€82	€89	€95	€102	€109	€117	€125	€134	€143
Non-Core Result	**(€586)**	**€679**	**(€214)**	**€299**	**€186**	**(€523)**	**(€738)**	**(€940)**	**€96**	**€103**	**€109**	**€120**	**€123**	**€130**	**€138**	**€147**	**€161**

Financing	2017	2018	2019	2020	2021 Q1	Q2	Q3	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Interest expense on lease leabilities	€0	€0	(€38)	(€41)	(€10)	(€10)	(€10)	(€42)	(€43)	(€45)	(€43)	(€49)	(€55)	(€60)	(€65)	(€69)	(€73)
Interest, bank fees and other costs	(€4)	(€6)	(€5)	(€13)	(€3)	(€3)	(€1)	(€13)	(€13)	(€13)	(€13)	(€13)	(€13)	(€13)	(€13)	(€13)	(€13)
Fair Value movements on exchangeable Notes	€0	€0	€0	€0	€49	€17	€51										
Transactions costs on issuance of exchangeable notes	€0	€0	€0	€0	(€18)	€0	€0	(€18)	€0	€0	€0	€0	€0	€0	€0	€0	€0
Financial result before taxes	**(€528)**	**(€207)**	**(€43)**	**(€54)**	**€18**	**€4**	**€40**	**(€73)**	**(€56)**	**(€58)**	**(€56)**	**(€62)**	**(€68)**	**(€73)**	**(€78)**	**(€82)**	**(€86)**
Financial Statutory Taxes	€143	€54	€11	€13	(€4)	(€1)	(€10)	€18	€14	€14	€14	€16	€17	€18	€19	€20	€21
Statutory Tax	27%	26%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
Financial Result	**(€385)**	**(€153)**	**(€32)**	**(€41)**	**€14**	**€3**	**€30**	**(€55)**	**(€42)**	**(€43)**	**(€42)**	**(€47)**	**(€51)**	**(€55)**	**(€59)**	**(€62)**	**(€65)**
Total comprehensive income	**(€1 250)**	**€486**	**(€297)**	**(€4)**	**€251**	**(€528)**	**(€623)**	**(€816)**	**€357**	**€498**	**€805**	**€1 103**	**€1 476**	**€1 725**	**€1 858**	**€1 969**	**€2 068**

Balance Sheet

In Millions €

Core	2017	2018	2019	2020	2021 Q1	Q2	Q3	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Fixed Assets	€73	€197	€780	€757	€789	€792	€812	€812	€833	€865	€839	€959	€1 069	€1 171	€1 262	€1 342	€1 415
Goodwill	€135	€146	€478	€736	€815	€851	€869	€871	€1 124	€1 322	€1 540	€1 760	€1 962	€2 148	€2 316	€2 462	€2 597
Internal development costs and pattents	€12	€14	€26	€33	€33	€33	€33	€35	€42	€49	€57	€65	€73	€80	€86	€91	€96
Acquired Intangible Assets	€15	€14	€32	€64	€64	€64	€64	€83	€98	€115	€134	€153	€171	€187	€202	€215	€226
Restricted cash (Lease deposits and guarantees)	€41	€52	€54	€48	€50	€49	€49	€54	€55	€57	€56	€64	€71	€78	€84	€89	€94
Deferred tax assets	€9	€8	€9	€15	€14	€17	€13	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Trade and other receivables	€360	€400	€402	€464	€440	€492	€571	€596	€705	€829	€966	€1 104	€1 231	€1 347	€1 453	€1 544	€1 629
Cash and cash equivalents	€82	€105	€135	€158	€43	€47	€50	€207	€245	€288	€336	€384	€428	€468	€505	€537	€566
Other current assets	€29	€38	€68	€151	€186	€201	€224	€207	€245	€288	€336	€384	€428	€468	€505	€537	€566
Deferred tax liabilities	(€3)	(€2)	(€2)	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Trade and other payables	(€341)	(€427)	(€549)	(€638)	(€660)	(€705)	(€774)	(€813)	(€948)	(€1 109)	(€1 266)	(€1 426)	(€1 553)	(€1 685)	(€1 816)	(€1 930)	(€2 037)
Deferred revenue	(€216)	(€258)	(€319)	(€380)	(€424)	(€439)	(€440)	(€466)	(€551)	(€649)	(€755)	(€863)	(€962)	(€1 054)	(€1 136)	(€1 208)	(€1 274)
Accrued fees to rights holders	(€639)	(€832)	(€1 153)	(€1 265)	(€1 292)	(€1 225)	(€1 299)	(€1 355)	(€1 874)	(€2 192)	(€2 502)	(€2 819)	(€3 070)	(€3 331)	(€3 590)	(€3 817)	(€4 028)
Accrued Salaries, Vacation and related taxes	(€34)	(€41)	(€54)	(€65)	(€69)	(€91)	(€91)	(€87)	(€104)	(€104)	(€116)	(€130)	(€143)	(€153)	(€164)	(€172)	(€181)
Other Core Invested Capital	(€8)	(€3)	(€5)	(€5)	(€7)	(€5)	(€5)	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Core Invested Capital	**(€485)**	**(€589)**	**(€98)**	**€73**	**(€18)**	**€81**	**€76**	**€180**	**(€90)**	**(€189)**	**(€319)**	**(€300)**	**(€223)**	**(€195)**	**(€207)**	**(€219)**	**(€233)**

Non-Core	2017	2018	2019	2020	2021 Q1	Q2	Q3	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Long Term Investments	€910	€1 646	€1 497	€2 277	€2 522	€1 897	€1 090	€1 090	€1 177	€1 271	€1 373	€1 483	€1 602	€1 730	€1 868	€2 018	€2 179
Other non-current assets	€12	€10	€14	€29	€31	€28	€27	€28	€28	€28	€28	€28	€28	€28	€28	€28	€28
Short term investments	€1 032	€915	€692	€596	€644	€612	€725	€612	€612	€612	€612	€612	€612	€612	€612	€612	€612
Other Accrued Liabilities	(€56)	(€85)	(€20)	(€42)	(€38)	(€36)	(€37)	(€36)	(€36)	(€36)	(€36)	(€36)	(€36)	(€36)	(€36)	(€36)	(€36)
Other Accrued Expenses	(€121)	(€139)	(€167)	(€249)	(€225)	(€258)	(€269)	(€258)	(€258)	(€258)	(€258)	(€258)	(€258)	(€258)	(€258)	(€258)	(€258)
Accrued social costs for options and RSU's	(€87)	(€64)	(€64)	(€169)	(€129)	(€133)	(€92)	(€133)	(€133)	(€133)	(€133)	(€133)	(€133)	(€133)	(€133)	(€133)	(€133)
Non-Current Provisions	(€59)	(€42)	(€13)	(€20)	(€20)	(€20)	(€16)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)
Derivative liabilities (Foreign Exchange Forwards)	(€5)	(€6)	(€13)	(€16)	(€38)	(€20)	(€12)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)	(€20)
Other Non-Core Invested Capital	(€5)	(€5)	(€1)	(€1)	(€2)	(€1)	(€2)	€0	€0	€0	€0	€0	€0	€0	€0	€0	€0
Non-Core Invested Capital	**€1 621**	**€2 230**	**€1 925**	**€2 405**	**€2 745**	**€2 069**	**€1 414**	**€1 263**	**€1 350**	**€1 444**	**€1 546**	**€1 656**	**€1 775**	**€1 903**	**€2 041**	**€2 191**	**€2 352**
Total Invested Capital	**€1 136**	**€1 641**	**€1 827**	**€2 478**	**€2 728**	**€2 148**	**€1 484**	**€1 443**	**€1 261**	**€1 255**	**€1 227**	**€1 356**	**€1 552**	**€1 708**	**€1 834**	**€1 971**	**€2 118**

Financing	2017	2018	2019	2020	2021 Q1	Q2	Q3	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Excess Cash	€395	€786	€930	€993	€2 399	€2 393	€2 462	€2 424	€2 934	€3 463	€4 276	€5 123	€7 393	€8 696	€10 127	€11 627	€13 192
Gross Debt	(€349)	(€333)	(€720)	(€666)	(€1 883)	(€1 842)	(€1 829)	(€1 877)	(€1 849)	(€1 873)	(€1 853)	(€1 947)	(€3 232)	(€3 311)	(€3 382)	(€3 444)	(€3 502)
Lease Liabilities	€0	€0	(€622)	(€577)	(€587)	(€576)	(€582)	(€633)	(€650)	(€674)	(€654)	(€748)	(€834)	(€913)	(€984)	(€1 046)	(€1 104)
Debt	€0	€0	€0	€0	(€1 229)	(€1 199)	(€1 175)	(€1 199)	(€1 199)	(€1 199)	(€1 199)	(€1 199)	(€2 398)	(€2 398)	(€2 398)	(€2 398)	(€2 398)
Derivative liabilities (Warrants)	(€349)	(€333)	(€98)	(€89)	(€67)	(€67)	(€72)	(€45)	€0	€0	€0	€0	€0	€0	€0	€0	€0
Net Debt	**(€898)**	**€453**	**€210**	**€327**	**€516**	**€551**	**€633**	**€547**	**€1 085**	**€1 590**	**€2 422**	**€3 176**	**€4 161**	**€5 385**	**€6 744**	**€8 183**	**€9 690**
Common Equity	**€238**	**€2 094**	**€2 037**	**€2 805**	**€3 244**	**€2 699**	**€2 117**	**€1 989**	**€2 346**	**€2 844**	**€3 649**	**€4 532**	**€5 713**	**€7 092**	**€8 578**	**€10 154**	**€11 808**
Transactions with shareholders	-	€1 370	€240	€772				€0	€0	€0	€0	(€221)	(€295)	(€345)	(€372)	(€394)	(€414)
Financing Capital	**€1 136**	**€1 641**	**€1 827**	**€2 478**	**€2 728**	**€2 148**	**€1 484**	**€1 443**	**€1 261**	**€1 255**	**€1 227**	**€1 356**	**€1 552**	**€1 708**	**€1 834**	**€1 971**	**€2 118**

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Buy	Expected total return (including expected capital gains and expected dividend yield) of more than 10% over a 12-month period.
Hold	Expected total return (including expected capital gains and expected dividend yield) between 0% and 10% over a 12-month period.
Sell	Expected negative total return (including expected capital gains and expected dividend yield) over a 12-month period.

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