Equity Valuation: Spotify

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Abstract

Title: Equity Valuation: Spotify; **Author**: Giuseppe Carriere Della Giusta
Key Words: Equity Valuation; Spotify; DCF: CLTV; CCA; Sell

The aim of this dissertation is to determine a target price for the shares of Spotify, a Swedish streaming media audio platform, and provide an investment recommendation. The stock has been very volatile in the last 2 years, passing from all time high value of €315 to all time low of €78. Since its IPO it is down of 12,86%. It is therefore of interest to understand if the stock is now trading at a fair price.

Three valuation methods are presented, the discounted cash-flow method, comparable company analysis, and customer lifetime value. Within the DCF, a 10 year forecast was computed with the model estimating financials in the period 2023 to 2033. The analyst has made assumptions that best fit the current macroeconomic and geopolitical landscape, considering, for example, increases and impact of inflation, and digitalization of developing countries. The discount rate used was the Weighted Average Cost of Capital using the Capital Asset Pricing Model method to forecast the cost of equity. Within the comparable company analysis, multiples utilized were computed on a forward-looking and backward-looking basis, these being: EV/Sales; EV/EBITDA; P/S; EV/GP.

With regards to Customer Lifetime value, the mode was run on the period 2020-2040, with forecast of Spotify financials extended by 7 years compared to the DCF.

The research results in a **SELL** investment recommendation, with a **target price set of €118,18,** representing a 9,18% overvaluation relative to the price the stock was trading at on July 27th, 2023 (€130,91).

Abstrato

Título: Avaliação de acções: Spotify; **Autor**: Giuseppe Carriere Della Giusta
Palavras-chave: Equity Valuation; Spotify; DCF: CLTV; CCA; Sell

O objetivo desta dissertação é determinar um preço-alvo para as acções do Spotify, uma plataforma sueca de streaming media áudio, e apresentar uma recomendação de investimento. As acções têm sido muito voláteis nos últimos 2 anos, passando de um máximo histórico de 315 euros para um mínimo histórico de 78 euros. Desde a sua IPO, registou uma descida de 12,86%. Por conseguinte, é interessante perceber se a ação está agora a ser negociada a um preço justo.

São apresentados três métodos de avaliação: o método Discount Cash Flow (DCF), Comperable Company Analysis (CCA), Customer Lifetime Value (CLTV). No âmbito do DCF, foi calculada uma previsão a 10 anos com o modelo a estimar as finanças no período de 2023 a 2033. O analista fez suposições que melhor se adaptam ao atual cenário macroeconómico e geopolítico, considerando, por exemplo, o aumento e o impacto da inflação e a digitalização dos países em desenvolvimento. A taxa de desconto utilizada foi o WACC, utilizando o método CAPM para prever o custo do capital próprio. No âmbito da análise das empresas comparáveis, os múltiplos utilizados foram calculados numa base prospetiva e retrospetiva.

No que diz respeito ao CLTV o modo foi executado no período 2020-2040. O estudo resulta numa recomendação de investimento de **VENDA**, com um **preço-alvo fixado em 118,18 euros**, o que representa uma sobrevalorização de 9,18% em relação ao preço a que a ação estava a ser negociada em 27 de julho de 2023 (130,91 euros).

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1. Executive Summary

The following dissertation aims at assessing the fair price for Spotify, evaluate how much it differs from its market price, and give a recommendation to potential or actual investor on whether to BUY, HOLD or SELL the company's stock.

Spotify is a Swedish audio streaming and media services provider founded on 23 April 2006 by Daniel Ek and Martin Lorentzon. Spotify offers customers two types of services. The first one is a free service, which allows the customer to listen to music randomly and with ad interruptions. The other is a subscription-based service which allows the customer to listen and download infinite music by paying Spotify a monthly or annual fee.

During its short life, Spotify was able to revolutionize the global music market, allowing it to rebirth from its ruins. It was the first audio streaming company to become mainstream and played a starring role in the establishment and growth of a market which now counts more than 20 companies' world widely and generates yearly revenues for $40Bn. Yet, despite being the market leader and one of the most influential companies of the twenty-first century, Spotify never recorded a profitable year, and presented many issues within its financial performances. This contradiction between the company reputation and actual financial performance has been material for debate, and its consequences have been noticeable in the stock performance of company since its IPO in April 2018. Many investors believe that Spotifys' business model is not sustainable in the long run and expect Spotify to inevitably fail in the future due to the high market costs and low margin. On the other hand, many analysts believe Spotify represents the present and future of the music industry and consider its forthcoming bright and dominant.

Since its market debut Spotify experienced a price drop of 12,86%. This value might mislead an investor in believing Spotify stock to be constant around its initial value. Spotify experience in the stock market has, however, been a roller coaster with peaks reaching $315 and lows to $78. For this reason, it is of general interest determining Spotify fair price and try to understand which future is reserved for this company.

The valuation started with a review of the literature concerning the different methodologies to value companies. The three most pertinent models selected to conduct the valuation on Spotify were: Discounted Cash Flow, Client Life-Time Value and Comparable Company Analysis.

Thereafter a study of the industry was conducted to understand which trends drive this market and what is the role of Spotify in it. Industry historical data and forecasts were analyzed. Then a regional breakdown of performance was done to understand the different trends. Finally, a Market players overview, with a brief analysis of Spotify competitors was shared.

Following, Spotify history was analyzed. More specifically the company strategy, and a thorough enquiry of its financials; assessing the revenue streams and trends, and incidence of the different costs to assess why its performance has been oscillating. It is important to mention that a capitalization of historical and forecasted R&D as CAPEX was computed as considered beneficial to the computation of the DCF analysis, and because of Spotify's nature of business.

To get further insight, a financial analysis was computed. The main profitability ratios were compared to Netflix. Next, solvency and liquidity ratios were calculated to assess Spotifys financial strength and capture possible trends.

The valuation chapter therefore combined what learnt in the company and industry overview with the methodologies outlined in the literature review. The first model computed was the DCF. The model started by forecasting Spotify main KPI, Monthly Active Users (MAUs). They were forecasted for each region Spotify operates in, these being Europe, North America, South America, and Rest of the World. This was done by assessing historical trends and by outlining various assumptions backed by data, reports, and company statements. Then revenues per MAU were computed to obtain the revenue forecast. So, all operating costs were forecasted to obtain the EBIT for the period going from 2022 to 2033. All these estimates were computed following the assumptions that best fit the company and the future economical, geopolitical, and industrial landscape where Spotify operates in. As discount rate, the Weighted Average Cost of Capital was used, with the Capital Asset Pricing Model as method to compute cost of equity.

The Customer Life-Time Value model was run due to its accuracy and efficiency in assessing subscription-based companies. Furthermore, it allowed to compute a clear comparison with the equity report by Wells Fargo. The lifetime of the customer was determined to be 20 years. Therefore, the forecast of financials was extended until 2040 and the period assessed being 2020-2040. The main assumption driving the extension was that Spotify would have reached a steady state by 2033, and it would have kept its margin and growth rates constant for the following 7 years. EBITDA values of the period 2020-2040 were aggregated and divided by the expended number of estimated MAUs in 2040 to obtain a Customer Life-Time value of €42.

Finally, a comparable company analysis was conducted with various ratios compared to a limited number of peers. Finding appropriate peers resulted difficult for a company like Spotify due to the limited segment where it operates and the unique business model it operates.

To conclude the valuation a final target price was given to Spotify. The three models abovementioned were assigned a weight representing their appropriateness in evaluating Spotify. DCF was given 60% due to its assumption driven methodology and global reputation, while CLTV was assigned 40% due to its suitability in assessing subscription-based companies. On the other hand, no weight was given to CCA. This was because of very different results deriving from this method, mainly because of inconsistent values in ratios between the peer companies selected.

The final investment recommendation was a **SELL**, with a target price in December 31st, 2022 of **€118.88**, representing a **9.19% downside** compared to the **current price at July 27th of €130.91**.

2. Literature Review

This literature review aims at explaining and analyzing the various methods used in finance to attribute the value to a share of a given company. Obtaining and giving a correct value to a company stock is of fundamental importance for both the financial environment comprising traders and investors, as they can identify mispriced stocks and take an investment decision accordingly, and to the company itself, which aims at having its value truly expressed through its stock price.

Market Value vs Intrinsic Value

Price and value are not the same thing, but both are very important when assessing a stock. When referring to the price of a stock, Market Value is used, which corresponds to the current price at which the stock is currently trading for in the market. On the other hand, Intrinsic value is the true value of the stock, therefore the price at which the company should trade at, if the stock price perfectly represented the value of the company. This said, the difference between Market Value and Intrinsic Value represents the fundamentals of value investing. When Value Investing, investors seek to find this difference, defining the stock either undervalued or overvalued. An undervalued stock is a stock which Market Value is lower than the Intrinsic Value, which means that the current price attributed to the stock by the market is less than its actual value. On the other hand, an overvalued stock is a stock which Market value is higher than its Intrinsic Value, and therefore its current market price is greater than the actual value of that stock.

Introduction to Valuation

Financial analysts utilize a variety of models with varying degrees of sophistication on a daily basis. These models frequently employ assumptions that are relatively varied yet share significant similarities, allowing us to group them into bigger categories. Damodaran, Investment Valuation, 2011, distinguishes three types of models:

First, he identifies the Discounted Cash Flow (DCF) methodology, which effectively restores the value of an asset/business as the Present Value of the Future Cash Flows estimated to be generated by that company over the next few years.

Secondly, he highlights the Relative Valuation methodology, which calculates the worth of an asset by looking at the price of comparable companies, that are filtered bearing in mind criteria such as "earnings, cash flows, book value, sales".
Finally, he mentions Contingent Claim Value, which effectively employs option pricing models to determine the value of assets with option characteristics; however, this technique will not be explored in this dissertation. Yet, Customer Lifetime Value Model will be utilized.

Valuation Models

2.1 Discounted Cash Flow Model

The Discounted Cash Flow is considered by many academics and for many years now, the finest technique to assess and value a business asset. Luehrman, 1997 defined the Discounted Cash-Flow as the present and future cornerstone of most formal value analyses. According to Koller et al. (2015, p.313), the Discounted Cash Flow (DCF) model is the "most accurate and flexible tool for valuing projects, divisions, and companies," Yet, due to the enormous number of assumptions and forecasts made during the valuation, the author emphasizes the possibility of making mistakes due to inaccuracies in estimating essential components utilized for evaluating a firm. The Discounted Cash-Flow Analysis is based on projections. It is assumed that a company's value may be calculated using the present value of predicted free cash flows discounted at a risk-adjusted rate.

The formula:

$$Discounted\ Cash\ Flow = \sum_{t=1}^{t=n} \frac{FCF_t}{(1+r)^t}$$

Where:

- $n = number\ of\ periods\ generating\ freecashflows\ over\ the\ venture's\ life.\ (For\ a\ 5-year\ venture\ with\ quarterly\ cash\ flows, n = 20)$
- $t = time\ period$
- $r = risk-adjusted\ discount\ rate\ (\%). To\ be\ adjusted\ according\ to\ the\ periods\ of\ the\ cash-flows\ (monthly, quarterly, semi-annual, annual).$

- $FCF = Expected\ Free\ cash - flows\ in\ time\ t$

A company's predicted free cash flows are calculated based on a variety of "assumptions and judgements about its expected financial performance, such as sales growth rates, profit margins, capital expenditures, and net working capital requirements" (Rosenbaum & Pearl, 2009). Also, Rosenbaum and Pearl said that based on the industry the business works in, where it is in its growth, and how predictable its financial performance is, the Free Cash-Flows are often forecast for a period of five years, which is the period the firm is considered to attain its steady state. Damodaran said in his 2012 "Investment Valuation" book that when a firm grows, it will ultimately grow at a rate that is either lower than or equal to the growth rate of the economy in which it operates since maintaining high growth becomes more difficult as it expands. He went on to say that using a rising perpetuity formula, it is conceivable to estimate the worth of all future free cash flows after the company is deemed to have achieved a steady state.

Following Damodaran perpetuity theory, the formula thus becomes the following:

$$Discounted\ Cash\ Flow = \frac{FCF_1}{(1+r)} + (\dots) + \frac{FCF_s}{(1+r)^s} + \frac{FCF_s * (1+g)}{(r-g) * (1+r)^s}$$

$$= \frac{FCF_1}{(1+r)^1} + (\dots) + \frac{FCF_s}{(1+r)^s} + \frac{Terminal\ Value}{(1+r)^s}$$

$$= \sum_{t=1}^{t=s} \frac{FCF_t}{(1+r)^t} + Terminal\ Value_0$$

Where:

- *s=number of periods generating free cash-flows until the firm reaches its steady-state.*
- *FCF_s=Expected Free Cashflow when firm reaches its steady state*
- *"g=growth rate of the Expected Free Cash flow after the firm reaches its steady state. Must not be greater than the expected growth rate of the economy over the long run."*
- *r= risk adjusted discount rate(%). Should be adjusted according to the seasonality of the cash flows*

(monthly, quarterly, semi-annual, annual).

Through this equation, both enterprise value (EV) or the equity value can be calculated.
As stated by Cegłowski, B., & Blażej, 2012:

- The Enterprise Value may be calculated by discounting the Free Cash Flows to the Firm (FCFF) by the firm's weighted average cost of capital (WACC).

- The Equity Value of the business, on the other hand, may be calculated using the Free Cash-flows to Equity discounted at the firm's cost of equity.

Based on the firm under consideration, an analyst may decide to use FCFF or FCFE. FCFE is more straightforward and easier to employ than FCFF if the company's capital structure is generally steady. Working using FCFF to evaluate equity may be easier in the case of a leveraged corporation with negative FCFE (Pinto, Stowe, Robinson, & McLeavey, 2007). The authors also state that for enterprises with fluctuating leverage, a growth rate in FCFF is likely to produce more accurate findings than those utilizing FCFE.

Free Cash-Flows to Firm (FCFF)

The FCFF are the cash flows accessible to common, debt, and preferred shareholders following the removal of operating and investment costs. (Pinto, 2014)
They may be calculated using the following formula (Rosenbaum & Pearl, 2013):

$$FCFF = EBIT * (1 - t) + D\&A - Capex - Change\ in\ NWC$$
$$= NOPAT\ +\ D\&A - Capex - Change\ in\ NWC$$

Where:

- $EBIT = Earning\ Before\ Interest\ and\ Tax$
- $D\&A = Depreciation\ and\ Ammortization$
- $CAPEX = Capital\ Expenditure$
- $Change\ in\ NWC = Change\ in\ Net\ Working\ Capital$

To calculate the FCFF, remove the taxes from the firm's Earnings Before Interest and Taxes (EBIT), resulting in the Net Operating Profit After Tax (NOPAT). Depreciation and amortization are then placed back in, and Capex is deducted. This occurs because when a capital cost occurs (for example, an acquisition made to extend the overall life of an asset or enhance its capacity/use), the amount is capitalized on the balance sheet and only a portion of the investment, equivalent to the entire amount spent divided by the useful life of the asset, is expensed on the income statement in the form of depreciation and amortization. Consequently, unlike depreciation, capital expenditures represent actual cash withdrawals, and as a result, to compute FCFF in the year in which the purchase is made, it must be removed (Rosenbaum & Pearl, 2009).

Finally, remove the absolute change in Net Working Capital (NWC), which shows the firm's yearly usage or retention of cash. The NWC is calculated by subtracting non-cash current assets from non-interest-bearing current liabilities.

Free Cash-Flows to Equity (FCFE)

As previously stated, the equity value of a firm can be evaluated using the FCFE as an input in a DCF model, given that it is discounted at the needed return on equity, also known as the cost of equity (Koller, Goedhart, & Wessels, 2015). The FCFE are the cash flows available to the company's common stock investors after all operating expenditures, interest and principal payments, and essential working and fixed capital investments have been made. FCFE is the cash flow from operations minus capital expenditures minus payments to (and plus revenues from) debtholders.

The FCFE may be calculated as follows (Damodaran, Investment Valuation, 2012):

$$FCFE = Net\ Income - Capex + D\&A - Change\ in\ NWC + Net\ Borrowing$$

Where:

- $Net\ Borrowing = New\ debt\ issued - Debt\ repayments$

2.2 Inputs for DCF Model

Terminal Value

Because projecting a corporation's long-term free cash flows can be challenging, the terminal value is used to estimate how much worth a company has beyond the projection period. The Terminal Value accounts for a sizable portion of the firm's worth in a DCF analysis. There are two methods for calculating a company's terminal value (Rosenbaum & Pearl, 2009). The perpetuity growth method calculates the terminal value by treating the firm's terminal year FCF as a perpetual growing at an assumed rate (g), whereas the exit multiple method calculates the firm's remaining value after the projection period by multiplying the target's terminal year EBITDA by a multiple of the target's terminal year EBITDA (or EBIT). Just the perpetual growth approach was used for this investigation.

The following is the formula:

$$Terminal\ Value = \frac{FCFF_s\ or\ FCFE_s * (1+g)}{(r-g)}$$

Where:

- $s = terminal\ year$
- *g= perpetuity growth rate, chosen typically based on the long term industry growth rate,*
- *r= Weighted average cost of capital, or cost of equity, depending on whether determining the Enterprise Value or Equity Value, respectively*

Growth Rate

There are three ways to find the company's growth rate:

1) Estimation based on company historical values
2) Equity analyst growth rate
3) Study the company fundamentals

As stated by Koller, 2015, growth rate should incorporate industry growth and inflation, and should never be higher than the economy in which it operates.

Cost of Debt

There are two ways to compute cost of debt: using as proxy yield on company commercial bonds (Cooper & Davydenko, 2007) or using synthetic credit rating and apply according spread to risk-free rate (Damodaran).

Cost of Equity

Cost of equity is the rate of return investors expect when holding a firm equity in order to bear the risk over the risk-free rate.

There are various methodologies to compute the cost of equity. In this dissertation only the CAPM will be explored.

$$E(R_i) = R_f + \beta_i\left[E(R_m) - R_f\right]$$

Where:

- $E(R_i) = Expected\ rate\ on\ return\ of security\ i$
- $R_f = Risk - free\ rate$
- $\beta_i = beta\ of\ security\ i$
- $E(R_m) - R_f = Equity\ RIsk\ Premium$

Weighted Average Cost of Capital (WACC)

As previously noted, when employing the FCFF to assess the value of a company, the WACC is employed as discount rate.

It is calculated by taking the weighted average of the returns required for shareholders and debtholders to invest capital in the firm, taking into account local and effective tax rate (Farber, Gillet, & Szafarz).

Whatever the case, the WACC is calculated as follows:

$$WACC = Cost\ of\ Equity * \frac{E}{D+E} + Cost\ of\ Debt * \frac{D}{D+E} * (1-t)$$

Where:

- $E = market\ value\ of\ equity$
- $D = debt\ market\ value$
- $t = marginal\ tax\ rate$

To asses equity and debt capital, market values are to be used. (Booth 2002)

2.3 Customer Life-Time Value

Kotler (1974) first defined Customer Lifetime Value (CLTV) as the present value of the future profit stream projected over a specified time horizon of interacting with the client. CLTV is now commonly defined as the present value of a customer's future cash flows (Pfeifer, Haskins, & Conroy, 2005). It is also formally defined as the sum of the discounted cash flows generated by an individual or a segment/group of individuals during his/her relationship with the company (Berger & Nasr, 1998), in other words, is the net present value of benefits associated with each customer, once acquired, after subtracting incremental costs associated with each customer (e.g., marketing, selling, production, and service), over his or her entire life time with the company. (Blattberg, Kim & Neslin, 2008; Dywer, 1997).

CLTV is mostly based on contemporary asset valuation principles, specifically the discounted cash flow (DCF) method.

Berger et al. (2006) established a basic model for calculating CLTV of individual customers that does not account for acquisition cost. CLTV is a function of a customer's future gross profits (revenue after deducting cost of goods sold and other marginal/variable costs) in its most basic form. Future expenses are those that are charged to specific customers, such as the cost of services (Estrella-Ramón, A.M. and Sánchez-Pérez, M., 2013). The formula for this model is as follows:

$$CLV = \sum_{i=1}^{n} \frac{(Future\ Gross\ Profits - Future\ Costs)}{(1+d)^t}$$

Where:

$$d = Discount\ Rate$$
$$t = Cuistomer\ Life\ time$$

To determine the Average Customer Life-Time period (t) you need either compute the Churn Rate

$$Churn\ Rate = \frac{(\#of\ customer\ end\ of\ period\ -\ \#\ \text{of customers beginning of period})}{\#\ of\ customers\ beginning\ of\ period}$$

or the Customer Retention Rate

$$Custer\ Retention\ Rate = \frac{(\#of\ customer\ end\ of\ period\ -\ \#\ \text{of customers acquired})}{\#\ of\ customers\ beginning\ of\ period}$$

Once obtained either of these two ratios, you convert the data accordingly. (Appendix – Table 1). Once Customer Life-Time value is computed, it is multiplied by the current number of customers to obtain Enterprise value. Subsequently by subtracting market value net debt (Market value net debt plus cash) Equity value is obtained. To reach the target price Equity Value is divided by outstanding shares. Investors, analysts, and corporate management can all benefit from the CLTV model's insightful recommendations when determining an appropriate target price for a stock. The approach gives a more accurate and thorough estimate of the company's worth by evaluating the long-term revenue potential of the customer base, taking into consideration aspects that directly affect future profitability (Fader & Hardie, 2010).

2.4 Comparable Company Analysis (CCA)

A similar company study is intended to represent current valuation based on market conditions and sentiment at the moment (Rosenbaum & Pearl, 2009). The heart of this analysis is the selection of a universe of comparable companies, with the assumption that comparable companies provide a highly relevant reference point for valuing a given company because they share the same industry

segments, performance drivers, financing structure, geographic focus, and riskiness to achieve most accurate results. (Koller, 2005).

Multiples

Trading multiples are then produced for all similar firms, using a measure of value in the numerator and an operating metric in the denominator.

The following are some of the most commonly used (Koller, 2005):

$$\frac{EV}{Sales}\ ;\ \frac{EV}{EBITDA}\ ;\ \frac{EV}{EBIT}\ ;\ \frac{equity\ value}{net\ income}\ ;\ \frac{stock\ price}{sales\ per\ share}$$

They can be estimated using either historical or prospective data.

2.5 Final consideration

Considering the research discussed, the DCF valuation, CLTV model and Comparable Companies Analysis to be the best course of action for Spotify. The DCF valuation is the most often used among practitioners even though it is heavily assumption-based and offers a thorough company analysis. Terminal value was computed by using FCFF, as it was considered Spotify to be a company with fluctuating leverage and therefore as previously stated, more likely to produce more accurate findings than those utilizing FCFE.

With regards to the CLTV model, the EBITDA model was used as it will give a clear measure of company profitability per user. However, it wasn't divided by a discount rate. What computed was dividing the Aggregate EBITA for the period 2020-2040 by the number of Monthly active users in 2022. Also, this was done as it is valuation model computed in the equity research of Wells Fargo, which was used for comparison.

The following multiples are employed for the Comparable Companies Analysis: EV/Sales, EV/EBITDA, P/S, and EV/GP.

The DDM is not used because the corporation doesn't pay dividends.

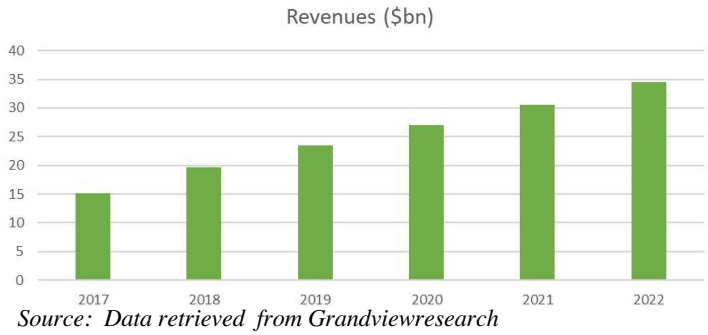
3. Industry Overview

To analyze thoroughly Spotify's valuation and its position in the market, it is important to analyze the audio streaming providers industry, which represents Spotify's specific industry of belonging.

3.1 The Audio Streaming Industry

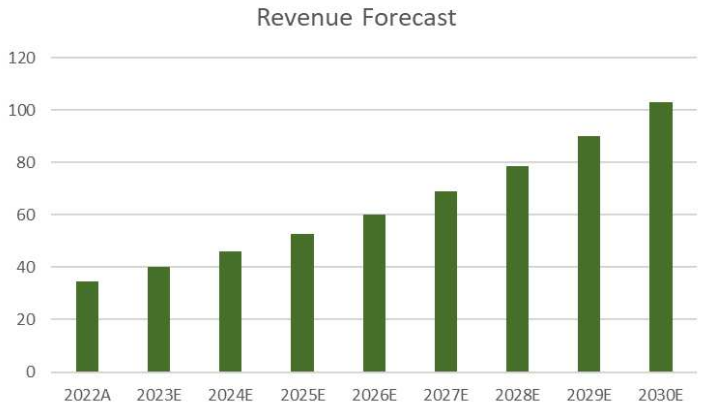
In 2022, streaming, particularly paid subscription streaming, was once again the primary driver of total growth in the global music market.

Music streaming is often seen as the salvation of the formerly struggling music business. Streaming revenues continued to climb in 2022, with double-digit (+11.5%) growth and reaching US$34.53 billion, marking the eighth year of straight growth, and expected to reach $40 Billion in 2023. 86,4% of revenues were accounted to the application segment accounted. This is due to the desire for simple accessibility with applications over browsers and several features that improve the entire user experience while streaming music. Customizable playlists, high-quality audio streaming, offline playback, social sharing options, and connection with other programs and gadgets are a few of its standout features. Over the course of the projected period, these features are expected to boost segment growth.



Source: Data retrieved from Grandviewresearch

Although growth was slower than the previous year (+23.9%), the picture varied throughout the world, with certain regions reporting considerable gains in streaming revenues. Subscription streaming income climbed 10.3% globally in 2022, hitting US$25 billion.



Source: Data retrieved from Grandviewresearch

The Audio streaming industry accounted for more than 67% of global recorded music income in 2022, vs 65% in 2021. Revenue is expected

to show an annual growth rate (CAGR 2023-2027) of 14.4% (GrandViewResearch, 2023), resulting in a projected market volume of US$103.07bn by 2030.

3.2 Regional Breakdown

- **North America**: Retaining its position as the world's largest recorded music area, revenues in the United States and Canada climbed by 5.0% in 2022, a slower rate than the previous year (+21.8%), when remarkable market growth was fueled in part by a post-pandemic surge. Both the United States (+4.8% in 2022) and Canada (+8.1%) remained among the world's top ten markets, with the United States being the world's single largest national market, topping US$10 billion for the first time. Altogether, the United States and Canada accounted for 34.1% of the audio streaming worldwide market.

- **Europe**: Revenues in Europe rose by 7,5% in 2022, less compared to the 15.4% rise in 2021, but still a considerable increase on 2020 growth of 3.2%. In 2022 Europe remained the world's second largest region for the streaming market revenues. Sales from streaming accounted for more than a quarter of revenues from the format internationally (26.0% share) and accounted for the biggest proportion of revenues from performance rights (54.9% of global performance rights revenues). UK, Germany, and France were still the region's three largest markets. Each held their positions in the global top 10 despite their decreasing growth rate with passed from double digit percentage revenue growth of 13.2%, 12.6% and 11.8% respectively in 2021, to 5,4%, 2,2%, 7,2% in 2022. Italy returned to the top 10 markets after growth of 27.8% in 2021 but lost its position back to the 11th place in 2022. In all four of the European markets in the global top ten, growth was largely driven by gains in streaming revenues.

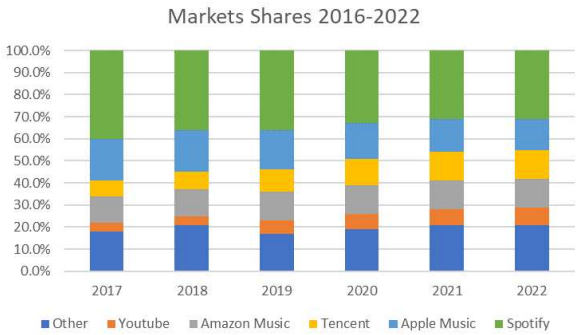
- **Latin America**: Latin American revenue increased by 25.9%, maintaining a decade-long upward trend. Every market grew by double digits, including the region's two largest, Brazil (+15.4%) and Mexico (+24.3%).

- **Asia:** There was double digit percentage revenue growth in Asia of 15,4% in 2022, a good result in line with the 16.1% growth in 2021, up from 2020 growth of 10.7%. Japan, the region's largest market, grew for the second year in a row (+5.4%), while China, the region's second largest market, increased by 28.4%, propelling it into the top five markets internationally for the first time. Asia's total revenues accounted for 22.9% of the worldwide market in line with 23% in 2021.

- **Africa:** Current fastest growing markets are in Africa (leaded by Nigeria and South Africa) and Middle East. Their CAGR is expected to be 17.5% from 2023 to 2030. This growth is stimulated by the increasing digitalization in these regions, with rising trend of smartphone adoption and increasing internet penetration. This is allowing the population to access music through smartphones, boosting therefore the market. Revenues in South Africa, the region's largest market, increased significantly (+31.4% vs a modest 2.4% increase the previous year).

3.3 Market Players

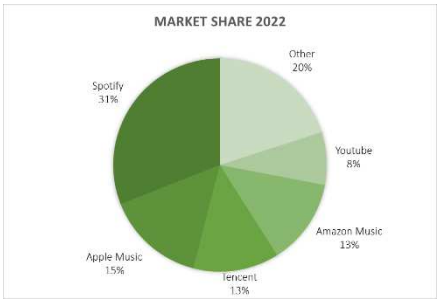
As digitization accelerates, emerging markets are anticipated to grow faster. The competition for audio streaming services is regarded to be fierce. Because there are only 12 other music streaming services that provide a substantial audio streaming catalogue (+50m tracks), the danger of alternative products is mild, and customer bargaining power is limited. Although the switching cost for consumers is low, subscription revenue is sticky and less price sensitive. Because the obstacles to entry are reasonably low, the threat of new entrants is modest.



Source: Data retrieved from MiDia annual reports

Apple Music, Amazon Music, Tencent Music, YouTube (Alphabet), and other corporations such as Soundcloud and Sirius XM, which owns Pandora, dominate the sector, benefiting from economies of scale and brand loyal subscribers.

The initial financial requirements for entering the industry are substantial, and the competing IT titans have other business divisions where they can fund their efforts. Even though Spotify is the largest music streaming service, artists have moderate bargaining leverage since their music is distinctive, they have dedicated followers, and they have the option not to renew contracts.



Source: Data retrieved from MiDia 2022 report

Sirius XM, a significant radio entertainment firm in the United States, Tencent Music, a leading music streaming company in China, and Deezer, a French audio streaming company which has more than tripled its worldwide subscriber base in the last few years (but is still too little to be compared to Spotify), are the main publicly listed counterparts identified.

- Sirius XM has a market valuation of $24 billion, sales of $6 billion, and 63 million MAUs. Sirius XM formerly concentrated on satellite radio in the United States, but since acquiring US streaming startup Pandora in 2019, they have become a more direct rival of Spotify.

- Tencent Music is a Tencent spin-off with a market valuation of $6 billion, sales of $4.5 billion, and 831 million MAUs.

While having comparable business objectives (subscription-based and ad-based income, royalty cost structure), the firms face various financial problems. Both Sirius XM and Tencent Music are profitable due to their supporting business divisions, in contrast to Spotify (which has never achieved a full-year positive net income), yet Spotify has a greater growth rate.

4. Company Overview

It is of fundamental importance to understand the strategy and history of a company when computing an Equity Valuation. Accuracy in assumptions is driven by thorough analysis of a company, as it allows it to capture its trend and impact on the future.

Daniel Ek and Martin Lorentzon launched Spotify, a Swedish music streaming and media services company, in 2006. It provides audio material such as music, podcasts, and videos from several labels and media businesses, as well as independent artists. As of December 31, 2022, the firm employed over 6,300 people in over 50 offices throughout the world (Spotify, 2022).

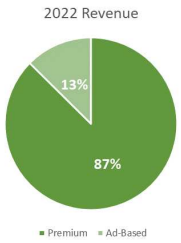
Spotify's Vision and Strategy

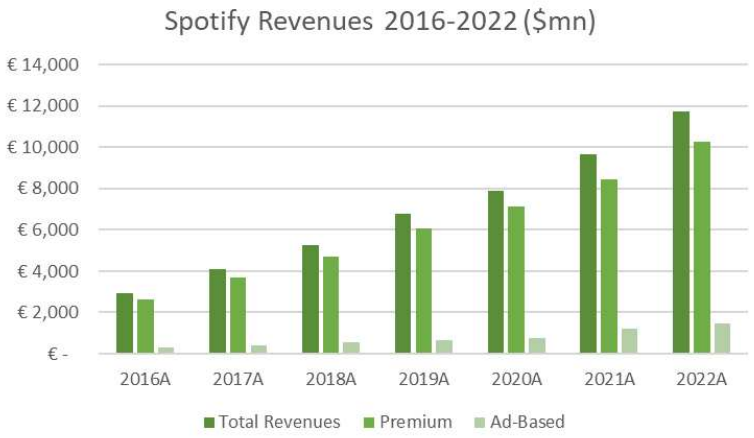
Spotify's aim is to "unlock the potential of human creativity by allowing a million creative artists to make a living from their art and billions of followers to enjoy and be inspired by it" (Spotify, 2022). The major goal of Spotify is to grow its user base, engagement, and time spent on the site. This will be accomplished by investing in content production and acquisition, customization and discovery tools, and technical infrastructure. It also intends to use its data and analytics skills to provide its users with tailored experiences and suggestions. Spotify also intends to broaden its worldwide reach and influence by entering new markets and forming alliances with content producers, record labels, and other media firms. The organization has also stated a desire to investigate other revenue streams such as live events, retail sales, and podcast sponsorships.

4.1 Revenue Streams

Spotify has become one of the world's most popular audio streaming platforms, with over 500 million active users in more than 180 regions globally (Spotify, 2022). Spotify's income strategy is divided into two categories: premium and ad-supported. Premium is a paid service that includes ad-free listening, unlimited skips, offline playback, and high-quality music. Ad-Supported is a free service with restricted functionality that is sponsored by advertising. Revenue is generated through charging for Premium memberships, selling advertising space, and collecting royalties on the material that is streamed.

Premium revenue contributed 87% of overall revenue in 2022, with Ad-Supported revenue accounting for the remaining 13%. The company's overall sales in 2022 was €11.73 billion, a 21% increase over the previous year. Revenue increased by 21% due to a 20% rise in Monthly Active Users (MAUs) and a 14% increase in Premium Subscribers. In the period going from 2016 to 2022, Spotify experienced a Revenue CAGR of 21.78%.

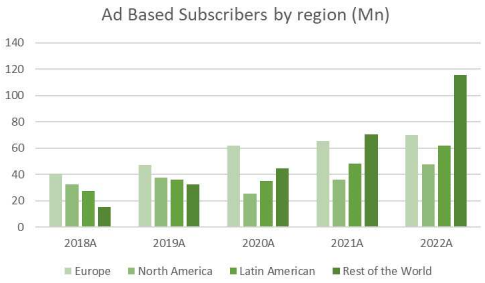




Source: Data retrieved from Spotify Annual Reports

Revenue by Region

Spotify's global revenues are separated into four sections: Europe, North America, South America, and the Rest of the World (ROW). Most of Spotify revenues come from Europe and North America. Despite not being the two regions with the higher amount of Monthly Active Users, they respectively account for 39% and 28% of Premium Monthly active users. South America and Rest of the World have been increasing at a very steady pace the number of users, with a CAGR of 41% in the last 5 years for Rest of the World and of 18% for South America, compared to 11% of North America and 14% of Europe.



Source: Data retrieved from Spotify Annual Reports

Source: Data retrieved from Spotify Annual Reports

4.2 Cost Analysis

COGS

YoY Growth Revenue	v	COGS
2017A	39%	27%
2018A	29%	21%
2019A	29%	29%
2020A	16%	16%
2021A	23%	21%
2022A	21%	24%

Source: Data retrieved from Refinitiv

COGS have been representing the main issue within Spotify financials. Since its IPO in 2016 up until 2022 they have been representing almost a constant for Spotify since its IPO, settling between 70% and 75% of the company's revenues. This occurs as COGS for Spotify are directly linked to its revenues, as they derive from the royalties they have to pay to music labels and artists. These agreements are fixed percentages calculated on Spotify revenues deriving from streams of these artists. Music streaming is currently the main activity conducted by Spotify users, therefore Spotify's main revenue stream. This leads to a situation where if revenues for Spotify grow, because of increase in its user base, music streams increase, leading to COGS to increase due to increased cost of royalties to pay. For this reason, COGS grow at almost the same rate as revenue.

	2016	2017	2018	2019	2020	2021	2022
COGS ($Mn)	2551	3241	3906	5042	5865	7077	8801
% of Rev	86%	79%	74%	75%	74%	73%	75%

Source: Data retrieved from Refinitiv

SG&A

SG&A has been very impactful on Spotify's financials. In the period 2016-2022 they had an average of 18% as percentage of revenues. Similarly to COGS, SG&A Expenses have been linked to Revenues, and didn't vary considerably during this time, passing from highs of 20% of total revenues to lows of 16%. This has occurred due to the high investments that Spotify had to sustain to back its growth. SG&A are mainly represented by marketing expenses, which in 2022 represented the 70% of total SG&A. The other 30% is covered by General and Administrative expenses. Within the total of SG&A, 86% is derived by personnel expenses. Spotify employees passed from 1,581 in 2016 to 8,500 in 2022. This figure increased exponentially in the last two years, increasing by 49% (it was 5.500 in 2020). In this period, wages expenditure passed from $ 220 million to $ 1.9 Billion, a 50% increase compared to 2020 (where it was $1.2 B). Furthermore, they passed from 5 offices in 2016 to 43 offices in 2022.

	2016	2017	2018	2019	2020	2021	2022
SG&A ($Mn)	543	831	903	1180	1466	1582	2196
% of Rev	18%	20%	17%	17%	19%	16%	19%

Source: Data retrieved from Refinitiv

R&D

Research and development costs have been increasing in the last 7 years, as the firm goal was to expand as much as possible in order to consolidate Spotify position as leading company in the music streaming industry. To do so, Spotify invested on average 9% of its revenues on R&D. This investment was fundamental to Spotify to constantly improve the user experience, add new features and increase its revenues. Since 2016 Spotify developed strong algorithm enhancing user experience and developed podcast segment by acquiring other companies and developing intra-company technology and introduced features like Wrap, Radio, Storyline and Canvas.

	2016	2017	2018	2019	2020	2021	2022
R&D ($Mn)	207	396	493	601	819	887	1347
% of Rev	7%	10%	9%	9%	10%	9%	11%

Source: Data retrieved from Refinitiv

4.3 Capitalized R&D

As accounting standards require to consider R&D as an operating expense, Spotify treated them as such. Within this valuation, however, it was decided to capitalize R&D and treat them as CAPEX. This is because it was believed that they are designed to generate future growth and therefore belong to CAPEX.

Year	R&D	Yearly Amm	TOTAL Amm
2016	207	41.4	41.4
2017	396	79.2	120.6
2018	493	98.6	219.2
2019	601	120.2	339.4
2020	819	163.8	503.2
2021	887	177.4	639.2
2022	1347	269.4	829.4

Source: Data retrieved from Refinitiv, own computation

By capitalizing R&D, Operating Income, EBITDA, and EBIT increase, as only the R&D yearly total amortization is deducted from the Income Statement (generally, Amortization expenses are lower than R&D cost). Given the nature of the company, and the supposed fast implementation of R&D, to compute the yearly amortization cost for each R&D expense an arbitrary amortization time of 5 years was assigned. Therefore, each item was multiplied by 0.2 and summed up to obtain annual Total Amortization, until each yearly R&D expense was fully amortized. As data for Spotify is available only from 2016, it was assumed 2016 to be the first year of amortization and R&D expenses. Furthermore, an ignored tax benefit is to be accounted, equal to difference between R&D and the yearly amortization times tax rate. On the other hand, CAPEX increases by the difference between R&D and the yearly amortization. With regards to the Balance Sheet, Assets increase by the total value of unamortized R&D and is equalized by increase on Book Value Equity.

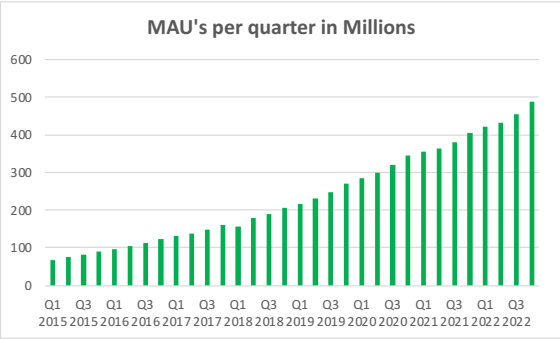
4.4 Key Non- Financials

Business Development

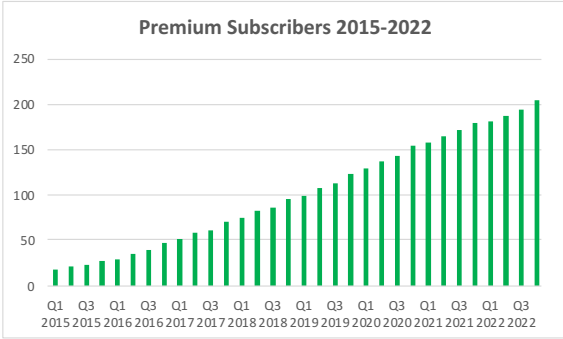
Spotify has defined clear strategic targets for commercial development in recent years, focused on growing its reach and enhancing the user experience. Many significant projects are part of Spotify's commercial growth plan. Currently, Spotify is available in 180 countries. It has grown its presence to 80+ countries since 2020. Spotify was accessible in only 61 markets globally in 2017.

Monthly Active Users (MAUs)

Spotify had great growth in various non-financial performance measures in 2022. The firm completed the year with 500 million monthly active users (MAUs), a 20% increase year on year. The number of premium members climbed by 14% year on year, reaching 205 million. Furthermore, Audiences continued to flock to podcasting in 2022, with podcasts downloads increasing 38% globally. Traditional areas such as the United States, Germany, and the United Kingdom had consistent gains in downloads, but the most notable increases came from regions new to podcasting, such as Spain, Italy, and France. The company's mobile use has also increased significantly, with 89% of its MAUs accessing the platform via mobile devices.



Source: Data retrieved from Refinitiv



Source: Data retrieved from Refinitiv

Podcasts

Spotify has made significant investments in content production in order to engage users with exclusive podcasts and original programs. Spotify's recent acquisitions of podcast networks such as The Ringer and Gimlet Media have allowed the firm to extend its podcast offerings and reach a larger audience (Spotify, 2021a). Furthermore, to lure customers to its platform, Spotify has struck exclusive arrangements with high-profile producers such as Joe Rogan and Michelle Obama. Spotify began its podcasting journey three years ago, with a database of over 180,000 episodes (Shewale, R., 2023). Today, Spotify has over 5 million podcasts on its platform, representing a growth rate of over 1500% compared to its launch in 2018. Only in 2021 it added 1.2 million podcasts to its library. It ranks 2nd among the podcast platforms in the United States, with 40% of people using it on a regular basis. Spotify, is the most popular app along with Youtube for podcast listening among Android phone users in the United States, accounting for a 26% share in the market (a 23% increase since 2020).

Artist and Record Labels

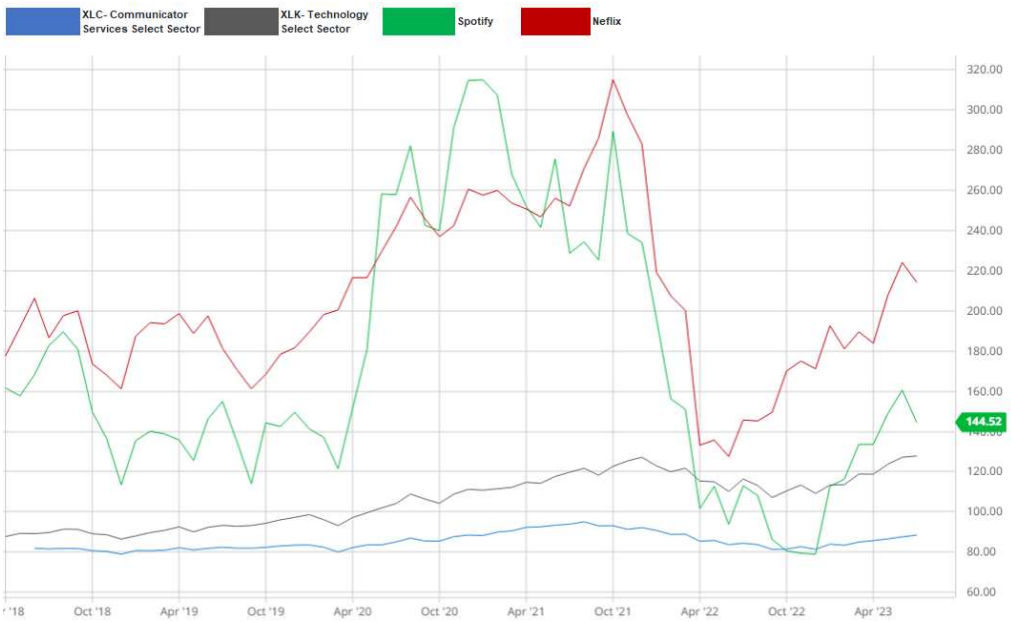
Spotify has increased its position in the music business by opening new income channels for artists and record companies. The company's latest "loud and clear" campaign attempts to increase openness and justice in music streaming, allowing musicians to earn a more equal portion of money (Spotify, 2021a).

User Experience

Spotify has introduced new features such as “Canvas” and “Storyline” to improve the user experience and provide artists additional tools to communicate with their audience. Spotify is constantly broadening its worldwide reach by entering new areas and forming strategic alliances with telecom providers and device makers. In 2022, Spotify signed an exclusive sponsorship agreement with one of the World’s most famous football clubs in the World, FC Barcelona, with the aim of increasing its popularity and promote activities with football fans. Spotify has been working to improve its technical infrastructure to improve the user experience and drive growth. To tailor content suggestions and improve search results, the corporation has invested in machine learning and artificial intelligence (Spotify, 2021a). In addition, to improve the user experience, Spotify has included additional features such as “Group Session” and “Enhanced Sound Quality.”

4.5 Share Price Development

Spotify went public on the New York Stock Exchange (NYSE) on April 3, 2018, with a direct listing under the ticker code “SPOT.” The stock opened at $165.90, and the business had a market valuation of $29.5 billion (Spotify, 2018). The share price has varied since then, with highs of $387.44 in February 2021 and lows of $71 in November 2022. (Yahoo Finance). At the end of 2022 the company had 193,077,334 shares outstanding. Institutional investors own most of the firm, including The Vanguard Group, Inc. (8.91%), Morgan Stanley (5.09%), and T. Rowe Price Associates, Inc. (4.47%). (Yahoo Finance, 2021). In 2022, the average daily trading volume of Spotify shares was 2,438,248. Despite the COVID-19 pandemic’s hurdles, Spotify’s share price has remained reasonably constant, with the company’s “stay-at-home” business strategy allowing it to capitalize on strong market momentum. In the last year Spotify experienced a downfall. On December 31, 2022, Spotify’s share price finished at $78,9, up from $234.03 at the start of the year (Yahoo Finance, 2021). Spotify YTD has reported +53,79%. This was mainly due to the recovery from the drop that occurred in 2022. SPDR S&P500 recorded YTD of +14,45%, whilst competitor Netflix a YTD of +93,93%.



Source: Data and Chart retrieved on www.barchart.com

This graph shows Spotify stock performance from its inception in April 2018 until July 27 price of $144.52 (€130.91). It compares to competitor Netflix and uses Technology Sector Select Market Index and Communication Services Select Sector SPDR Fund (XLC) as benchmarks. As shown in the graph, performance followed almost in symbiosis Netflix, with Spotify experiencing greater and longer loss in 2021 during the tech companies' crisis, and only currently recuperating the loss value. The trajectory compared to Technology Sector Select Market Index, which tracks the performance of companies in the technology sector of the S&P 500 index is quite similar, with Spotify currently and historically outperforming. Performance has been different compared to the Communication Services Select Sector SPDR Fund (XLC). XLC includes companies that provide communication services, including media and entertainment companies.

5. Financial Ratios Analysis

To assess Spotify's financial status, it is crucial to examine different ratios, spot patterns, and eventually comprehend the logic behind. Considering this, ratios for liquidity and solvency were evaluated. Due to the historical nature of Spotify Profitability, the analysis couldn't be evaluated as Spotify recorded only positive EBITDA in 2021. However, if Capitalized R&D financials are considered, a trustworthy analysis of Spotify profitability can be computed. With regards to efficiency ratios, they are of no means to Spotify due to the lack of inventories.

5.1 Liquidity

The current ratio in 2022 was 1.24 and has been above 1 four times in the last six years. This means that the company in 2022 would have been able to use its current assets to pay off its short-term obligations. This is despite a YoY fall of current assets of 0,45% against a YoY increase of current liabilities of 9%. To compare with peer company Netflix, Spotify has done slightly better in the last two years (Netflix recorder a current ratio of 1.17 in 2022, 0.95 in 2021), but historically worst (Netflix recorder 1.25 in 2020, 1 in 2019 and 1.49 in 2018). Quick Ratio in 2022 was 1.1, meaning Spotify would have the ability to cover 110% of current liability using all its cash and accounts receivables. Netflix in comparison only presented a quick of 0.76 in 2022.
Finally, Cash Ratio in 2022 was of 0,95 meaning Spotify could cover 95%, almost its entirety, of current liabilities with only cash. This highlight Spotify huge cash reserves. In comparison Netflix presented a Cash Ratio of 0,76.

LIQUIDITY RATIOS	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Quick Ratio	0.96	0.97	0.84	0.71	1.22	1.10
Current Ratio	1.02	1.05	0.91	0.82	1.36	1.24
CashRatio	0.81	0.84	0.72	0.60	1.08	0.95

Source: Own computation using data from Refinitiv

5.2 Solvency

In the last two years, Spotify financed mainly with debt, whilst in the two previous years it financed mainly through equity. Total debt decreased 6% with respect to 2021, but so did equity which fell

by 8%. Debt to Equity increased, passing from 1,42 to 1,48, meaning that for every Euro invested in the company 0.57 comes from debt and 0.43 from equity. Net debt/ EBIT or EBITDA weren't computable, due to negative values of Spotify historical EBIT or EBITDA. Only Net Debt/EBITDA can be computed for 2021, and it amounts to 84.6. Therefore, it would take 85 years to pay back debt with constant EBITDA. Spotify needs to become more mature to assess this ratio. Total Assets to Debt have been decreasing in the last two years, passing from 2020, passing from 10,96 in 202o to 4,56 in 2022, meaning the dependance on debt to finance assets has decreased. It is still very high.

Finally proprietary ratio decreased considerably in the last two years, passing from 3,68 in 2020 to 0,67 in 2022, meaning assets financing from equity has decreased.

SOLVENCY RATIOS	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
D/D+E	0.96	0.00	0.29	0.21	0.59	0.60
D/E	24.87	0.00	0.41	0.27	1.42	1.48
Total Asset to Debt	3.29	0.00	8.14	10.96	4.03	4.54
Proprietary Ratio	0.04	0.00	2.45	3.68	0.70	0.67

Source: Own computation using data from Refinitiv

5.3 Profitability Ratios

With Capitalized R&D. Spotify presents mostly positive profitability ratios. Spotify Gross Margin has been increasing over the years, passing from 13.6% in 2016 to 25% in 2022. Since 2018 it has stabilized between 25% and 26.8%. Comparing these values to competitor Netflix, it is noticeable how Netflix is much more profitable and was able to decrease considerably more its COGS. With regards to EBITDA Margin, Spotify presented since 2017 always positive data. It passed from -3.6% in 206 to 7.7% in 2022. Since 2019 it stabilized around 9%. Compared to Netflix it is still very low, given Netflix incredible high margins.

Finally, EBIT Margin managed to become positive for 5 years straight, from 207 to 2021. In 2022 it turned negative to -3.5%. Compared to Netflix, in some years Spotify was able to have higher margins.

Profitability Ratios	2016A	2017A	2018A	2019A	2020A	2021A	2022A
Gross Margin	13.6%	20.8%	25.7%	25.5%	25.6%	26.8%	25.0%
Netflix	24.0%	24.1%	34.7%	36.6%	37.3%	32.0%	31.2%
EBITDA Margin	-3.6%	1.8%	9.1%	9.3%	8.3%	11.7%	7.7%
Netflix	60.1%	58.3%	58.6%	59.6%	62.0%	64.1%	64.3%
EBIT Margin	-35.9%	2.2%	17.0%	11.8%	2.0%	14.2%	-3.5%
Netflix	4.3%	7.2%	10.2%	12.9%	18.3%	20.9%	17.8%

Source: Own computation using data from Refinitiv

6. Valuation

The valuation of Spotify is performed by taking into considerations data from Q4 2022 when referring to the Discount Cash Flow Valuation, dating at December 31st, 2022 (which coincides with the end of Spotify annual accounts). It was decided to use this data as when the valuation started it was the most recent. Whilst computing the valuation data from Q1 was disclosed, data which helped me compute a more accurate valuation. The Comparative Company Analysis was computed using multiples retrieved through the Bloomberg portal and dating in June 2023. The stock price used to assess the difference between Spotify's relative and intrinsic value was taken in June 2023 as well. The DCF valuation considers a forecast period of 10 years, from 2023 to 2033, as Spotify was considered still a company at an early age, which requires 10 years to reach its steady state. To compute the CLTV model further 7 years were forecasted (until 2040), assuming growth rates to remain constant. The following paragraph will outline each specific item which was analyzed and forecasted to obtain the target price.
(Forecasted Income Statement 2022- 2024 at Appendix – Table 2)

6.1 Revenues

Forecasting accurately Spotify's Revenues was certainly one of the most important tasks in computing the valuation. To make an accurate forecast, the two components which constitute Spotify Revenues had to be forecasted separately: Revenue per User type, which is computed by dividing the revenue per user type by the number of users per type, and Users (which are divided in Premium Subscribers and Ad-Based Users).

Forecast of Revenue per premium user

To forecast if Spotify is planning to increase the subscription cost, various factors were considered, with both industry and the specific economy analyzed thoroughly. Firstly, however, it was important to analyze the historical behavior of Spotify's subscription cost. Since 2016 Spotify has never increased its subscription costs. On the other hand, by analyzing competitors' behavior, it can be seen that Apple and YouTube have been increasing their subscription prices by 10% in 2021. With regards to the economy, it was assumed that inflation will possibly and to some extent

affect Spotify subscription costs by increasing them. This will be a direct consequence of the increasing costs of music production which will be reflected in Spotify COGS, and which will lead Spotify to increase prices. Because of increasing costs, and because of competitors increases, Spotify announced it will increase prices by 10% from June 2023. Being this increase in the middle of the year, it was forecasted to have a 5% growth rate for revenue per premium user both in 2023 and 2024. Following 2024 a period of 5 years where price per user stays constant was forecasted, as the just announced increment in prices is Spotify first ever actuated in its history, and therefore it was assumed there won't be another in the next future. A growth rate starting from 2029 of 3% was applied on revenues, which aims at reflecting the inflation target of most of the economies where Spotify operates, and therefore capture possible subscription raises in next years.

Forecast of Revenue per ad-based user

To forecast the trend that this segment will undertake the investments made by Spotify internal decision making were considered. In the last years Spotify's objective has been to increase the revenue per ad-base user and has been doing so by investing important high capital in improving and increasing its Podcasting service. Podcasts in fact allow Spotify to increase considerably the amount of ad time on the app, and even if results from this strategy have not yet been clearly seen up to 2022, this valuation considers an increase of earnings by advertisement in the next 10 years. Therefore, it was forecasted to have a yearly increasing rate of 5% for the next 10 years. This rate was calculated considering the Podcast data calculated in 2022, where Spotify monetized only 14% (Spangler, T., 2022) of podcast revenues. CFO stated: "the company has room to expand the podcast advertising business". Following this statement, a sustained and organic growth was forecasted, which will allow Spotify to reach around 9$ per user within the next 10 years, and therefore approach the potential of monetizing the 100% of podcast advertisement revenues.

Revenue per MAU type	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Premium	€ 52.51	€ 55.13	€ 55.13	€ 55.13	€ 55.13	€ 55.13	€ 56.78	€ 58.49	€ 60.24	€ 62.05	€ 63.91
Ad-Based	€ 5.25	€ 5.52	€ 5.79	€ 6.08	€ 6.39	€ 6.71	€ 7.04	€ 7.39	€ 7.76	€ 8.15	€ 8.56

Source: Own computation

Forecast of Number of Users (Monthly Active users – MAUs)

To forecast Spotify revenues, assumption were focused on Spotify main KPI which is Monthly Active Users (MAUs). Each region's growth rate was forecasted in terms of Premium and Ad-

based Users, added them up to obtain Total Number of Premium Users and Total Number of Ad-based users, and applied the abovementioned Revenues per User.

The forecast was driven by the main assumption: Spotify reaching 1 billion users by 2033, as stated by Spotify CEO in 2022 during the investor day. Therefore, each growth rate was weighted to obtain a value close to 1 billion towards 2030.

The statement was taken seriously and implanted within the valuation as Spotify always had very high growth rates and still many markets to expand to. Especially considering emerging markets, which Spotify represents as Rest of the world (RoW), has already overcome Europe as region with the most monthly active users. By entering markets such as Asia and Africa which are on the verge of digitalization, it was estimated that Spotify will be able to reach 1 billion users and consolidate its position as market leader.

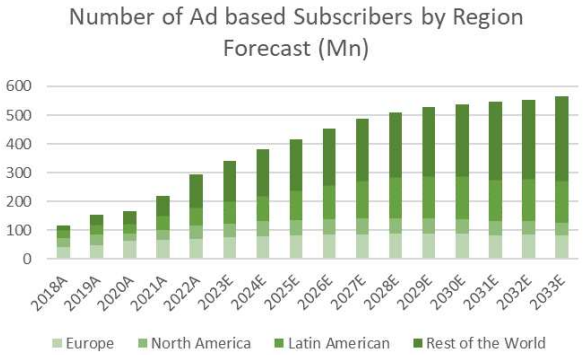
On the other hand, it could be argued that Spotify will experience what occurred to Netflix and their recent struggle in continued subscriber growth as market leader. Still, because the music streaming industry is much less saturated than video streaming and audio represents a much more constant and ubiquitous role than video, Spotify should be able to achieve this goal.

Revenue Forecast - By region

Spotify revenues are reported divided between 4 macro regions, these being: Europe, North America, South America, and Rest of the World. It was investigated Spotify portion of revenues coming from each region, and within these regions how much they were accountable for revenues in each of the two sources of income. The obtained data represented the % of premium users in Europe, North America, etc… and the % of Ad-Based Users in Europe, North America, etc…In order to forecast Spotify revenues, the historical growth rates in each region and for each segment was calculated and a forecast of their future growth rates was computed by following two assumptions. The first assumption was that Rest of the World and South America would have greater growth rates compared to Europe and North America, which on the other hand would still grow for the next 5 years and then stabilize. This assumption was backed by historical data, industry and analyst data which project emerging countries to increase vertiginously their streaming consumption in the next ten years. The second assumption was that premium subscribers would initially decrease and then increase at a greater pace compared to ad based. As demonstrated by

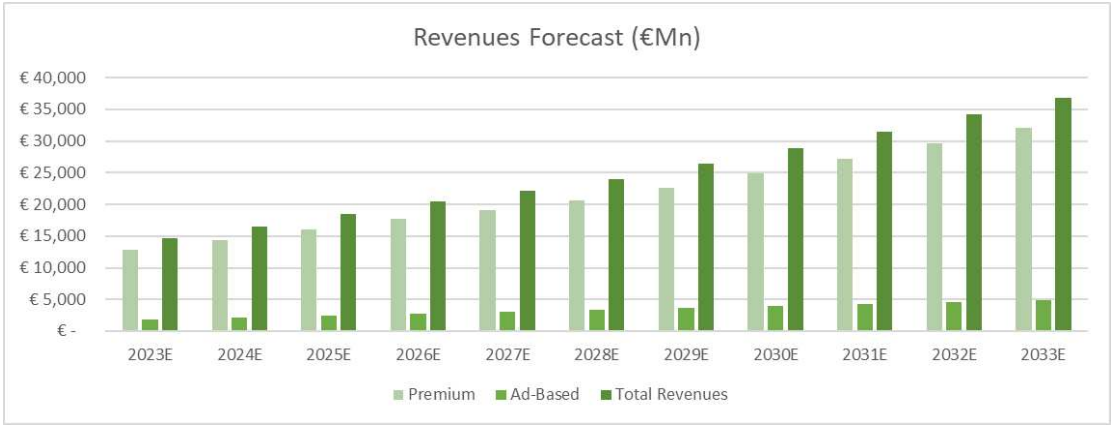
data from 2016 to 2018, premium users increased at a rate of 3% annually, to then decline from 2019. Spotify business model implies cycles. As new markets are tackled ad-based users tend to increase at first, then gradually move to the premium service. Starting from 2027 it was assumed that as Spotify will enter less markets, and users from markets where Spotify operates will gradually shift towards premium subscriptions. More specifically, higher rates of growth to premium MAUs from the Rest of the World segment were applied, as it is the highest pacing segment and is the one which will have the highest conversion rate ad-based to premium. Thereafter, the growth rates were weighted with the main assumption of 1 billion users by 2033 and multiplied by the revenue per MAU previously computed to obtain the total revenue forecast.

(All raw data can be seen in Appendix – Table 3)



Source: Until 2022 Refitiv then Own computation

Source: Until 2022 Refitiv then Own computation



Source: Own computation

6.2 Costs Forecast

COGS

During Spotify Investor Day of 2022, CEO Daniel Ek presented to the public a table displaying the goals for Gross Margin Targets in 3 to 5 years and for the long run. Spotify aim is therefore to reach within 3 to 5 years Gross Margins for music of 30% (currently 24%) whilst for podcast of 30-35% (compared to the current -57%). Eks goals for the long run are achieving 35% gross margin for music and 40-50% for podcast. Despite not taking these values as the values for the forecast, this statement gave this valuation a prompt on the direction the company is aiming to undertake decreasing the weight of COGS as % of revenues. These assumptions weren't taken for granted as figures presented seemed too high and within this valuation it was assumed that podcasts will not reach that level of Gross Margin in the next 3-5 years or even in the long run. Still, it was estimated that Gross margin will increase considerably but a lower rate.

The Cost of Goods Sold and the consequent increase in margin forecasts were based on two assumptions.

Source: Own computation

The first assumption is that Spotify has reached a potential and strength that allows it to leverage its position against Music Producers and renegotiate the current deals it has. This thesis has been backed up by several articles and analyst reports. Furthermore, Spotify introduced a function called Marketplace where Labels and Artists can sell their own merchandise and tickets directly from Spotify. This will give Spotify leverage in possible rearrangement of terms with Labels, given the potential of this tool which can allow music labels revenues to boost.

The second assumption is that with the advent of Podcasts, Spotify is trying actively to loosen its dependance on external producers, and increase its exclusive production, which will eventually decrease the amount to be paid for royalties. The same occurred to Netflix, which prior to 2012 (year when they established their own production company) had COGS impacting gratefully on their financials. This is because Netflix experienced as Spotify a dependency on royalties' payments and couldn't' therefore increase its margins. Following the introduction of own original produced products (Movies, TV Series etc.) Netflix was able to renegotiate deals with their

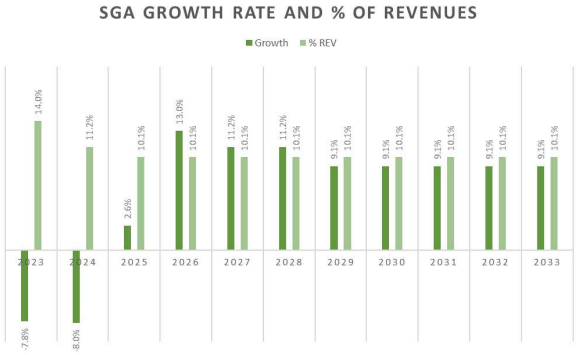
suppliers of contents (Movie distribution Enterprises). Offering to the public their own products, therefore allowed them to lower COGS as % of Revenues from 73% 2012 to 60% in 2022.

This can be replicated by Spotify, as streams to music are intended to decrease in favor of increased time spent on Podcasts (hopefully own produced by Spotify). While only 7% of Spotify users listened to a podcast in 2018, more than 30% of Spotify users listened to a podcast 2022 (Martenstyn, J., 2022). Yet, as the business models of Netflix and Spotify aren't the same, this shift in product offerings and subsequent decrease in % of COGS per revenue will most likely occur with a slower impact and lower rate.

Given these two reasons it was forecasted a decreasing rate in COGS, with COGS per Revenue yearly decreasing at a rate of 1% on the percentage of COGS over Revenues, which will eventually stabilize at around 67%.

SG&A

SG&A have an average of 18% as percentage of revenues, with many highs and lows. Following the high investments that occurred in the previous years and the important increase of both employees and headquarters around the World, CEO stated and acted, by cutting the workforce and closing branches and HQs around the World.



Source: Own computation

It was news of January 2023 that Spotify proceeded with layoffs accounting to 6% of the entire workforce (around 600 employees). Despite resulting in an increase of around €35Mn in severance it will result in a fall in SG&A of around 7/8% being that cost of personnel accounted for 90,5 % of total SG&A in 2022. Given the probable and imminent recession this valuation estimated further layoffs to take place in 2024 resulting in negative growth rates. Next, a bounce back is believed to occur starting from 2025, being Spotify expansion towards further and existing markets inevitable.

Therefore, it was forecasted to have a strong declining rate for the next two years, which will however stabilize in 2025 at 12,4% of revenues. This rate is also backed by what was stated during investor day by Spotify CFO, which announced a target Sales and marketing percentage of revenues of between 6% and 8% whilst a G&A between 6 and 4%.

R&D

"The next era of Spotify is one where we're adding speed plus efficiency — not just growth at all costs — that's a big shift...but now we're going to have to live up to that,". This is what Daniel Ek, Spotify CEO stated on January 31st, 2023. Having entered the podcast segment and having the app going on and established in the last 10 years now, a decreasing R&D costs as % of Revenues was forecasted. For this reason, it was assumed for the R&D % of revenues to increase still in 2023 and then start a declining rate which will stabilize the % at around 8,5% in 10 years. (Starting from 12,5%) A value of 8,5% of total revenues was an appropriate figure if compared to competitor company Netflix which present an R&D expense of 6,5%.

For the DCF analysis R&D was then Capitalized as a Capital Expenditure. By using the adjusted for capitalized R&D after tax EBIT (comprising the ignored tax benefit) and subtracting the net Capex (R&D yearly expense – yearly R&D amortization) same value of FCFF than without capitalized R&D is obtained. On the other hand, for the Client Lifetime Value model,

R&D was kept as an operating cost. This is because since the model in the CLTV is computed using EBITDA (to compare it with the Investment Bank report), this value would have resulted too high and unrealistic.

PPE, Depreciation and Amortization

Depreciation was forecasted as % of Property Plant and Equipment. A decreasing PPE as % of revenues was projected. According to the forecast PPE will reach and stabilize at 1% of revenues in the next 2 years (from 3% in 2022). It was believed so, as PPE is to be considered fixed for Spotify because of their business. No equipment is required, and all PPE is derived from offices, which are already there if not decreasing. By analyzing the historical % of Depreciation over PPE a rising trend can be noticed with an increase of 2% each year. This increase was expected to occur also in 2023. The year after depreciation was estimated to stick at the value of 34% of PPE.

Amortization has been stable at 4% of Intangible goods and Goodwill and therefore assumed to stay constant.

Capex

Spotify CAPEX without R&D as part of it, has always been very low and decreasing over the last three years. Following the capitalization, where the difference between the estimated R&D expense was added together with its yearly amortization, Net CAPEX increased considerably. Yet, it was estimated Net Capex to increase in the next two years due to high R&D. Once Amortization stabilizes at similar rates to R&D expense, it was forecasted for Capex to decrease and stabilize at around 0,5% of revenues.

Change in Operating Working Capital

As Spotify has no Inventories, only Trade Receivables and Other current Assets constitute Current Assets. Trade receivables were constant at 6% of revenues whilst other current assets at 2%. On the current liability side, Trade Payables represented always between 30 and 25 % of whilst Other Current Liabilities around 7% of sales. Items in the currents assets and current liabilities are always very constant. Trade receivables were forecasted to stay constant at 6% of sales, as it is its historic value. Same can be said about other current assets, which have always been 2 % of sales. With regards to Trade Payables, they were assumed to oscillate between 23% and 25% of revenues due to their historical behavior. Finally, other current liabilities were assumed to stay constant at their historic rate of 7% of total revenues.

Working Capital Estimated	2020A	2021A	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
Inventories	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% of revenues	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Trade Receivables	468	626	695	833	978	1098	1213	1316	1424	1526	1673	1773	1879	1969
% of revenues	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Other Current Assets	104	172	218	261	307	344	380	413	447	479	525	556	589	618
% of revenues	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Trade Payables	2363	2375	2681	3978	4671	5246	5793	6289	6805	7291	7994	8471	8976	9407
% of revenues	30%	25%	23%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%
Other Current Liabiulities	537	851	835	995	1168	1312	1448	1572	1701	1823	1999	2118	2244	2352
% of revenues	7%	9%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Opertaing Working Capital	-2328	-2428	-2603	-3879	-4554	-5115	-5648	-6132	-6635	-7109	-7795	-8260	-8752	-9172
Change in Operating Working Capital	-370	-100	-175	-1276	-676	-560	-534	-484	-503	-474	-685	-465	-493	-420

Source: Data until 2020 Refinitiv Aikon then Own computation

6.3 WACC Inputs

Cost of Debt

To calculate Spotify after tax cost of debt the synthetic rating by Damodaran (Appendix – Table 4) was used. Since Spotify presented a negative EBIT in 2022, the interest coverage ratio was computed through the 2022 EBITDA (Interest Coverage Ratio = EBITDA/Interests Expense). Interest Coverage Ratio resulted in 15.5 as EBITDA was equal to €899mn and interest expense to

€58mn. Converted on the table of synthetic rating, this gives a rating of AAA, indicating a spread of 0.75%. The risk-free rate was then added (10year German government bond equal to 2.48%) and multiplied by 1- the Luxemburg effective tax rate of 24.94%, in order to obtain a final value of 2.42% as after-tax cost of debt. This method was used since Spotify never issued a bond. Furthermore, no comparable senior unsecured bond of company within the same industry was found.

Cost of Equity

To compute the cost of equity, CAPM was used. As risk-free rate the Germany 10 years Long Term Yields was taken. Asset beta was retrieved from Yahoo Finance. The beta retrieved represents the unlevered 5 years monthly returns beta regression against the S&P 500. Therefore, the Blume's equation (Blume, 1975) was applied:

$$Adjusted\ Beta = \frac{2}{3} * (regression\ Beta) + \frac{1}{3} * (1.0)$$

Finally, to compute the Country Risk Premium the Damodaran database was used. Starting from the raw data of equity risk premium, a weighted average of each region according to the weights each region has on revenues was computed. (Appendix - Table 5)

Market Value of Equity

The Market Value of Equity was calculated by using the closing share price as of 27/07/2023. Price was €130,91 which multiplied with shares outstanding (193.42mn) resulted in a market value of €25.321Bn.

Market Value of Debt

For the non-current debt, the market value was calculated by applying the bond pricing formula by Damodaran. According to this formula, the total amount of long-term debt consisting of bonds and loans is treated as a single bond with a coupon. The coupon has been defined to represent the most recent interest expense from the income statement, while the weighted average of all maturities of the debt represents the maturity. As a result, the market value of the company's long-term debt is EUR 2.41Bn.

$$Debt_{MV} = Interest * \left[\left(1 - \frac{\left(\frac{1}{(1+Kd)^t}\right)}{Kd}\right)\right] + \left[\frac{Debt_{BV}}{(1+Kd)^t}\right]$$

Damodoran Debt MV formula

6.4 Summary

WACC Assumptions		
WACC	**11.95%**	*Inputs below*
D/V	8.69%	*Market Value of Debt €2.408bn (31 July 2023)*
E/V	91.31%	*Market Value Equity €25.321bn (31 July 2023)*
Tax rate	24.94%	*Luxemburg Corporate Marginal Tax Rate, Spotify AR*
Cost of Equity	12.92%	*CAPM-based, see below*
After Tax Cost of Debt	2.42%	
CAPM		
Cost of Equity	12.92%	*CAPM, below inputs*
Risk-free rate	2.48%	*10yr Germany Long-Term Yields*
Asset Beta	1.50	*Levered Beta 5yr monthly beta regression against S&P500 (Yahoo Finance Nov 2021), assuming no change in industry/sector*
Market Risk Premium	6.96%	*(Damodaran July 2023)*

Source: Own computation

6.5 Discounted FCFF

Considering all the assumptions explained above, Spotify discounted FCFF can be found below. The discount rate used was 11.95%, calculated using the WACC model.

Free Cash Flows to the Firm (€m)	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E
EBIT	-101.40	568.52	1,177.70	1,163.47	1,334.76	1,574.94	1,900.23	2,262.49	2,794.99	3,227.53	3,714.93	4,190.33
Less tax	0.00	-141.79	-293.72	-290.17	-332.89	-392.79	-473.92	-564.27	-697.07	-804.95	-926.50	-1,045.07
Add CAPEX tax Benefit	129.09	153.76	145.09	122.74	90.41	67.48	55.01	44.30	49.49	37.19	27.12	13.14
Add D&A	171.00	169.90	136.78	110.92	94.01	198.76	196.50	192.23	184.83	178.68	165.80	150.90
Less Net CAPEX	542.60	641.48	606.69	538.68	434.36	348.60	305.00	268.06	297.62	254.22	220.08	169.39
Less change in OWC	-160.00	-304.97	-506.47	-420.15	-400.00	-362.52	-377.31	-355.39	-513.88	-348.64	-369.26	-314.67
FCFF	-183.91	413.88	1,065.63	988.43	1,151.92	1,462.31	1,750.14	2,022.09	2,548.50	2,732.88	3,130.52	3,454.58
Discount Factor FCF		1.12	1.25	1.40	1.57	1.76	1.97	2.20	2.47	2.76	3.09	3.46
Discounted Cash Flows		369.69	850.22	704.42	733.28	831.47	888.87	917.33	1,032.70	989.17	1,012.11	997.62
Terminal Value												45,170.23
Discount Factor TV												3.46
Discounted TV												13,044.39
FCFF % Change		325%	-157%	-7%	17%	27%	20%	16%	26%	7%	15%	10%

Source: Data until 2020 Refinitiv Aikon then Own computation

Terminal Value

The TV was computed through the perpetuity growth method. The Long-term growth rate for the FCFF was assumed to be of 4%. This value represents the expected nominal GDP growth, and it was chosen as it is within the range of 2% to 4%, as per Rosenbaum & Pearl (2009). This value was chosen due to the increasing weight forecasted of emerging countries in Spotify total revenues.

6.6 DCF Target Share Price

The Enterprise Value was obtained by adding the discounted FCFF and the TV. To obtain the equity value, the market value of debt was subtracted, and both cash and cash equivalents were added. The equity value was then divided by the number of shares outstanding.
Target share price using the Discounted Cash Flow Model, resulted for 31st December 2022 equal to €120.53. This implies a downside of -7.93% compared to price on July 27, 2023.

The sensitivity analysis shown below allows us to understand the importance of assumptions. A slight change of ±0.5% for growth rate results in a change in price of around 5€. The impact of a change in WACC is even greater, with price estimate shifting of €20 following a change of ±1%. The total price range is between €87.8 and €192.5 with a growth between 3% and 5% and WACC between 9.95% and 13.95%

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Sensitivty Analysis

Target Price

		Growth rate				
		3.00%	3.50%	**4.00%**	4.50%	5.00%
WACC	9.95%	152.4	160.1	169.1	179.7	192.5
	10.95%	129.8	135.1	141.2	148.2	156.4
	11.95%	112.4	116.2	120.5	125.4	131.0
	12.95%	98.8	101.6	104.7	108.2	112.1
	13.95%	87.8	89.9	92.2	94.8	97.6

Enterprise Value

		Growth rate				
		3.00%	3.50%	**4.00%**	4.50%	5.00%
WACC	9.95%	28,532.7	30,022.8	31,763.2	33,822.7	36,298.0
	10.95%	24,156.0	25,186.3	26,364.9	27,726.0	29,315.7
	11.95%	20,803.0	21,540.7	22,371.3	23,313.2	24,390.6
	12.95%	18,161.9	18,704.8	19,308.4	19,983.4	20,743.2
	13.95%	16,034.9	16,443.4	16,893.0	17,390.1	17,942.8

6.7 Client Lifetime Value

To compute the Client Lifetime Value, forecast of the P/L was extended until 2040. Capitalized R&D wasn't used due to the value of EBITDA which would have been too big and therefore not reliable. A customer life of 20 years was assigned to Spotify users. The period taken into consideration was therefore the period going from 2020 until 2040. This 20 years' timeframe was established by computing the Customer Retention Rate which resulted in 96% (Martenstyn, J. ,2022) (as mentioned in the literature review)

Assuming Spotify would have reached a steady state by 2033, to forecast the period going from 2033 to 2040 rates were kept constant when considering growth rates in revenues, COGS, SG&A and R&D. As shown in the table above, rates from 2033 to 2040 were forecasted to be the same.

Key Assumption	2020A	2025E	2030E	2033E	2040E
Premium Subscribers (mn)	155	292	427	527	625
Ad-supported (mn)	199	417	538	578	742
COGS as % of Total Revenues	74%	73%	69%	67%	67%
COGS as rev premium	*0.82*	*0.84*	*0.81*	*0.78*	*0.80*
COGS as rev ad supported	*7.87*	*5.59*	*4.91*	*4.84*	*4.14*
SG&A as % rev	19%	12%	12%	12%	12%
R & D as % rev	10%	11%	9%	8%	8%

Source: Data until 2020 Refinitiv Aikon then Own computation

The Aggregate EBITDA of the period 2020-2040 was divided by the expected number of customers in 2040. The value obtained was €43.15. As this model is done to forecast the target price of Spotify for December 31st, 2022, CLV was multiplied by the estimated number of monthly active users in the end of 2022. An Enterprise Value of €21,575M was reached.

Output Highlights	2020A	2025E	2030E	2035E	2040E
Revenue per Premium MAU	46.0	55.1	56.8	58.5	58.5
Revevenue per Ad-Supported MAU	3.7	5.8	7.4	8.6	9.5
Total Revenue	€ 7,880	€ 18,528	€ 28,235	€ 37,172	€ 43,637
Gross Profit	€ 2,015	€ 5,036	€ 8,682	€ 12,195	€ 14,315
Gross Profit Margin	26%	27%	31%	33%	33%
EBITDA	-€ 182	€ 782	€ 2,781	€ 4,940	€ 5,797
EBITDA Margin	-2%	4%	10%	13%	13%
Aggregate EBITDA 2020-2040E					58975
÷ 2040 Estimaed subscribers					1,366.70
Customer Life Time Value					43.15
Total MAUs 2022					500.00
Enterprise Value € Mn					**21,575.84**

Source: Data until 2020 Refinitiv Aikon then Own computation

Market Value debt was then subtracted, Cash added, resulting in an Equity value of €28,609.79M. By dividing by the current No. of Shares Outstanding, a target price of €147.91 for December 31st , 2022 was obtained, which results in a Implied Downside of -11.07% compared to the current price at July 27 of €130.91.

CLV Valuation for 2022	
Customer Life Time Value	43.15
Total MAUs 2022	500.00
Enterprise Value €m*	**21,575.84**
Less: Net MV Debt €m	-2,408.35
Less: Options €m	0.00
Plus: Cash	3,350.00
Less: Minority Interests	0.00
Equity Value €m	**22,517.48**
No. Shares Outstanding (m)	193.42
Target Share Price €	**116.42**
Implied Upside/Downside	-11.07%
Current Share Price	130.91

Source: Own computation

6.8 Comparable Company Analysis (CCA)

The selection of peers to Spotify has been difficult and very limited. This is because Spotify operates in a niche market with few direct competitors. Furthermore, almost none are listed (Youtube) or if they are, in many of the cases, they are integrated into larger tech companies (Apple, Amazon) which principal business isn't audio streaming. Given the uniqueness of the business Spotify operates in and the services it offers, the selection of comparable companies was made using a bottom-up approach. The criteria were as follows:

1. Industry: Streaming in general
2. Revenues: similar revenues
3. KPIs and trends: similar KPI and trends.

Peer table	Market Data		Operating Metrics (2022)				
	Market Cap ($m)	Country	Sales (Bn)	Sales CAGR 3yr	EBITDA margin	D/E	Equity Betas
Spotify	14,248	Sweden	11,727	23.45%	-4.16%	72.51%	1.39
Netflix	122,207	US	31,62	22.01%	20.19%	81.49%	1.34
Sirius XM	21,215	US	9.00	10.63%	29.38%	/	0.80
Tencent Music	26,531	China	4,21	20.88%	17.26%	12.14%	1.11

Source: Data retrieved on Bloomberg

To value Spotify with the comparable company method, four multiples were considered: EV/Sales, EV/EBITDA, Price/Sales, EV/ Gross Profit. The analysis was performed on the last 2022 available data (June 2023) and in 2023 and 24 estimates.

Peer table	EV / Sales			EV /EBITDA			P / S			EV/GP		
	2022A	2023E	2024E	2022A	2023E	2024E	2022A	2023E	2024E	Hist 18-23	present	Mid Point
Spotify	2.23	2.03	1.76				73.71			7.5	8.9	8.2
Netflix	4.50	6.06	5.38	22.28	28.01	22.41	4.15	5.79	5.14	11.10	16.70	13.9
Sirius XM	3.61	3.15	3.07	12.28	10.36	10.20	2.54	2.06	2.01	6.40	5.80	6.10
Tencent Music	5.31	4.90	4.38	10.26	14.46	13.12	5.07	4.76	4.26	12.00	8.80	10.4
Mean	2.23x	4.70x	4.28x	14.94x	17.61x	15.24x	3.92x	2.06x	3.80x	9.83x	10.43x	10.13x
Median	3.61x	4.90x	4.38x	12.28x	14.46x	13.12x	4.15x	2.06x	4.26x	11.10x	8.80x	10.40x
Max	5.31x	6.06x	5.38x	22.28x	28.01x	22.41x	5.07x	5.79x	5.14x	12.00x	16.70x	13.90x
Min	3.61x	3.15x	3.07x	10.26x	10.36x	10.20x	2.54x	2.06x	2.01x	6.40x	5.80x	6.10x

Source: Ratios retrieved on Bloomberg

All the ratios presented very different results, with target prices either too low or too high compared to the other models investigated in this dissertation (DCF and CLTV). The only ratio which reported similar figures is EV/EBITDA, which as mean reported €70.2 and max of €97.3

Multiple Valuation EV / EBITDA	mean	median	min	max
EV / EBITDA 2024E	15.24x	13.12x	10.20x	22.41x
EBITDA 2024E	733	733	733	733
EV	11169	9614	7474	16421
Less Net MV Debt	-2408.35	-2408.35	-2408.35	-2408.35
Less Options	0.00	0.00	0.00	0.00
Equity Value	13577.74	12021.89	9882.29	18829.03
Shares outstanding	193.42x	193.42x	193.42x	193.42x
Target Share Price	**70.2**	**62.2**	**51.1**	**97.3**
Upside	-56.19%	-61.21%	-68.11%	-39.24%

7. Final Target Price

The DDM is not used because Spotify does not pay dividends to its shareholders. Furthermore, due to the industry's distinctiveness, it is extremely difficult to value the company using market multiples with an insufficient peer group. Because of this, and because the share price findings were much lower than the WACC-based estimate and of the CLTV estimate, it was decided to not utilize CCA as a valuation model for Spotify. Therefore, a weight of 0% was assigned. On the other hand, the CLTV model was given a 40% weight. This is because it gave very similar results to the DCF and because it is a very good model to estimate the value of subscription-based companies. Furthermore, it was the model used by the Investment Banking Report which will be compared in the following chapter. Yet a limitation could be the oversimplistic methodology of the model specifically used in this valuation as it doesn't apply any discount factor. Still, this was done to compare exactly to what computed in Wells Fargo analysis. Finally, DCF was given the resulting 60% as weight, being the most exhaustive model, and generally recognized as the most accurate.
The final target price for **December 31st,2022** is **€118.18** which implies a downside of **-9.19%** compared to July 27th price of **€130.91**. This results in a personal recommendation of **SELL**.

Weighted Target Price	
DCF Weight	60.00%
DCF Target Price	120.53
CLTV Weight	40.00%
CLTV Target Price	116.42
Multiples Weight	0.00%
Multiple Target Price	70.20
Weighted Target Price	**118.88**
Upside	-9.19%
Recommendation	**Sell/Hold**
Current Price	130.91

Source: Own computed data

8. Comparison With Investment Bank Report

Comparing DCF (Philip Capital and Pivotal Research Group)

Philip Capital released equity research on July 27, 2023, assigning Spotify a target price of $162 (€147.27). This value was obtained through a DCF model. They indicate a WACC of 7.5% which is considerably lower compared to mine (11.95%), and a terminal growth rate of 4% (same as mine). They, however, don't disclose how the WACC was computed, as they don't give cost of equity or of capital. Furthermore, they did not disclose any forecast further than 2024.

Pivotal Research Group released an equity research on July 25, 2023, assigning a price target of $140 (€127.27) with a recommendation of HOLD. This value was obtained through a DCF model. They only disclose that valuation was done by utilizing 15x multiple on EBITDA and 1.3x multiple on revenue in a forecast to 2027, with a discount of 10%.

Comparing CLTV Model (Wells Fargo Valuation)

Comparison With Wells Fargo	2033		2040	
	Wells Fargo	Mine	Wells Fargo	Mine
Revenues	30,667	33,224	41,372	43,637
MAUs	1,036	1,068	1,341	1,367
of which premium	*452*	*502.36*	*582*	*624.99*
of which ad-supported	*584*	*565.16*	*759*	*741.72*
Revenue per premium	58.32	56.78	60.36	58.49
Revenue per ad	7.32	8.31	8.04	9.55
COGS as % of Rev	65.79%	67.19%	63.98%	67.19%
SG&A as % of Rev	10.13%	12.4%	9.71%	12.4%
R&D as % of Rev	10.49%	8.0%	10.49%	10.5%
EBITDA	3,857	4,289	6,538	5,797
EBITDA Aggregate '20-'40			61,875	58,975
CLTV			45.00	43.00
Target Price CLTV			180	116
Target Price Valuation			**180.00**	**118.18**

Source: Own computed data compared to Wells Fargo Equity research of February 6 2023

The aim of this chapter is to make a comparison on the derived valuation estimated in this dissertation with the valuations computed by Wells Fargo dated February 2022. This equity valuation estimates a fair value of €180 and issues a buy recommendation. The models used by the Investment Bank are the Customer Lifetime Value on 20 years forecast period (2020-2040) and a multiple valuation using only Netflix as peer and Enterprise Value / Gross Profit as multiple. As shown on the table, forecasts regarding Revenues are similar. The difference is mainly driven by the number of premium MAUs. This valuations forecast is more optimistic, driving the revenues up. On the other hand, Wells Fargo is more optimistic with regards to Revenues per premium user, whilst I was more optimistic on revenues per ad supported user. With regards to Costs, values for COGS as % of revenues were very similar in 2033 forecst, whilst they differ by a considerable about in 2040. This is because within this valuation it was believed Spotify to reach a steady state by 2033 and therefore keep Gross Margin constant. SG&A forecasts from Wells Fargo are lower, as their marketing and personnel costs will keep being high due to continuous expansion in different regions and the need for the workforce in the long run. R&D costs were forecasted to be lower from this valuation analysis in 2033, due to decreased investments, while they become similar by 2040. With regards to EBITDA, higher EBITDA was forecasted for 2033 in this analysis whilst Wells Fargo was more optimistic for 2040, as they believe Spotify hasn't reached a steady state and will further grow following 2033.

Finally with regards to the valuation, Wells Fargo computed the target price by multiplying the CLVT (€45) by the number of estimated 2024 subscribers. It wasn't specified why they did so, and therefore this valuation was computed by multiplying CLTV by the number of subscribers in 2022.

With regards to multiple valuation with Netflix they obtained a target price of 130€ using present ratio, €196 at historical ratios resulting in €163 as mid-point. However, they disregarded this valuation method as no mention is given to this model in their summary and final recommendation, which gives the value of the CLTV model of €180.

9. Appendix

Table 1: Converting Retention Rate and Churn Rate to Average Customer Life Time Value

Converting Churn Rate to Average Customer Lifetime Period		
Customer Retention Rate (% pa)	Customer Churn Rate (% pa)	Avg Customer Lifetime Period (in Years)
5%	95%	1.05
10%	90%	1.11
15%	85%	1.18
20%	80%	1.25
25%	75%	1.33
30%	70%	1.43
35%	65%	1.54
40%	60%	1.67
45%	55%	1.82
50%	50%	2.00
55%	45%	2.22
60%	40%	2.50
65%	35%	2.86
70%	30%	3.33
75%	25%	4.00
80%	20%	5.00
85%	15%	6.67
90%	10%	10.00
95%	5%	20.00
100%	0%	Ongoing

Table 2: Income Statement forecast: 2022A – 2040E

Income Statement (€m)	2022A	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E	2039E	2040E
Revenue	11,727	14,050	16,498	18,528	20,460	22,212	24,035	25,752	28,235	29,920	31,704	33,224	34,819	37,172	38,691	39,996	41,353	42,471	43,637
% growth	*21%*	*20%*	*17%*	*12%*	*10%*	*9%*	*8%*	*7%*	*10%*	*6%*	*6%*	*5%*	*5%*	*7%*	*4%*	*3%*	*3%*	*3%*	*3%*
COGS	8,801	10,439	12,135	13,492	14,750	15,853	16,982	18,014	19,553	20,512	21,518	22,325	23,397	24,978	25,998	26,875	27,787	28,538	29,321
% growth	*24%*	*19%*	*16%*	*11%*	*9%*	*7%*	*7%*	*6%*	*9%*	*5%*	*5%*	*4%*	*5%*	*7%*	*4%*	*3%*	*3%*	*3%*	*3%*
% Rev		*74%*	*74%*	*73%*	*72%*	*71%*	*71%*	*70%*	*69%*	*69%*	*68%*	*67%*	*67%*	*67%*	*67%*	*67%*	*67%*	*67%*	*67%*
Gross Profit	2,926.00	3,611.18	4,362.70	5,035.82	5,710.11	6,359.08	7,052.55	7,738.36	8,681.98	9,407.14	10,185.46	10,899.42	11,422.75	12,194.63	12,692.94	13,120.86	13,566.27	13,933.05	14,315.35
% Rev	*25%*	*26%*	*26%*	*27%*	*28%*	*29%*	*29%*	*30%*	*31%*	*31%*	*32%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*	*33%*
Selling/General/Admin. Expenses, Tota	2,196	1,973	1,854	2,290	2,529	2,745	2,971	3,183	3,490	3,698	3,918	4,106	4,303	4,594	4,782	4,943	5,111	5,249	5,393
% Rev		*14%*	*11%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*	*12%*
Unusual Expense (Income)	2	2	2	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2
Total Operating Expense	**2198**	**1975**	**1855**	**2292**	**2531**	**2748**	**2973**	**3185**	**3492**	**3700**	**3920**	**4108**	**4306**	**4596**	**4784**	**4945**	**5113**	**5251**	**5395**
EBITDA	899	1,806	2,644	2,855	3,273	3,810	4,276	4,746	5,375	5,886	6,431	6,942	7,273	7,760	8,078	8,350	8,632	8,865	9,107
% growth	*-321%*	*-125%*	*501%*	*7%*	*36%*	*41%*	*25%*	*21%*	*22%*	*17%*	*16%*	*14%*	*8%*	*7%*	*4%*	*3%*	*3%*	*3%*	*3%*
Depreciation and Ammortization	171	170	137	111	94	199	196	192	185	179	166	151	156	161	169	175	179	184	187
Depreciation	*118*	*119*	*88*	*64*	*49*	*155*	*153*	*149*	*141*	*135*	*122*	*107*	*113*	*118*	*126*	*131*	*135*	*140*	*144*
Ammortization	*53*	*51*	*49*	*47*	*45*	*44*	*44*	*44*	*44*	*44*	*44*	*44*	*44*	*44*	*44*	*44*	*44*	*44*	*44*
Ammortization R&D	-829	-1,068	-1,330	-1,580	-1,844	-2,036	-2,180	-2,291	-2,395	-2,480	-2,550	-2,601	-2,635	-2,680	-2,742	-2,817	-2,914	-3,030	-2,395
EBIT	**-101**	**569**	**1,178**	**1,163**	**1,335**	**1,575**	**1,900**	**2,262**	**2,795**	**3,228**	**3,715**	**4,190**	**4,482**	**4,918**	**5,167**	**5,359**	**5,540**	**5,652**	**6,525**
% growth	*-128%*	*-661%*	*107%*	*-1%*	*15%*	*18%*	*21%*	*19%*	*24%*	*15%*	*15%*	*13%*	*7%*	*10%*	*5%*	*4%*	*3%*	*2%*	*15%*

Table 3: Forecast Number of MAU per Region and % Premium per region.

Number of MAU per region	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E	2039E	2040E
Europe	165.40	179.07	192.08	204.12	214.86	224.03	231.35	236.59	241.95	247.43	253.04	258.77	264.63	270.63	276.76	283.03	289.44	296.00
% growth	10%	8%	7%	6%	5%	4%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
North America	115.23	124.15	132.52	140.12	146.77	152.26	156.43	159.15	160.33	161.52	162.72	163.92	165.14	166.36	167.59	168.83	170.08	171.34
% growth	10%	8%	7%	6%	5%	4%	3%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Latin American	125.94	144.77	166.11	187.29	207.41	225.55	240.76	252.19	259.12	266.23	273.54	281.05	288.77	296.70	304.84	313.21	321.81	330.65
% growth	20%	15%	15%	13%	11%	9%	7%	5%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
Rest of the World	168.00	193.20	218.32	242.33	264.14	282.63	299.59	317.56	336.62	356.81	378.22	400.92	424.97	450.47	477.50	506.15	536.52	568.71
% growth	20%	15%	13%	11%	9%	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
	574.57	641.18	709.03	773.86	833.18	884.47	928.13	965.49	998.01	1031.99	1067.52	1104.66	1143.51	1184.15	1226.69	1271.22	1317.86	1366.70
% Premium MAU region	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E	2036E	2037E	2038E	2039E	2040E
Europe	39.0%	38.0%	38.0%	37.0%	37.0%	36.0%	36.0%	35.0%	35.0%	34.0%	34.0%	33.0%	32.0%	31.0%	30.0%	29.0%	28.0%	27.0%
% growth	0%	-3%	0%	-3%	0%	-3%	0%	-3%	0%	-3%	0%	-3%	-3%	-3%	-3%	-3%	-3%	-4%
North America	28.0%	28.0%	27.0%	27.0%	27.0%	27.0%	26.0%	25.0%	25.0%	24.0%	24.0%	23.0%	22.0%	21.0%	20.0%	19.0%	18.0%	17.0%
% growth	0%	0%	-4%	0%	0%	0%	-4%	-4%	0%	-4%	0%	-4%	-4%	-5%	-5%	-5%	-5%	-6%
Latin American	21.0%	21.0%	21.0%	22.0%	22.0%	22.0%	23.0%	24.0%	25.0%	25.0%	25.0%	26.0%	27.0%	28.0%	29.0%	30.0%	31.0%	32.0%
% growth	0%	0%	0%	5%	0%	0%	5%	4%	4%	0%	0%	4%	4%	4%	4%	3%	3%	3%
Rest of the World	12.0%	13.0%	14.0%	14.0%	14.0%	15.0%	15.0%	16.0%	15.0%	17.0%	17.0%	18.0%	19.0%	20.0%	21.0%	22.0%	23.0%	24.0%
% growth	0%	8%	8%	0%	0%	7%	0%	7%	-6%	13%	0%	6%	6%	5%	5%	5%	5%	4%

Table 4: Damodaran Interest Coverage Ratio conversion to Ratings and Spread table for Large Cap Companies (>$5bn)

Table 8.6: Interest Coverage Ratios and Ratings: High Market Cap Firms

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%

Table 5: Weighted Average Equity Risk Premium Spotify, Data from Damodaran Equity Risk Premium July 2023

Equity Risk Premium- Damodaran July 2023	
North America	**5.00%**
Weight	*24%*
Italy	8%
France	6%
Germany	5%
Netherlands	5%
Uk	6%
Spain	7%
Sweden	5%
Poland	6%
Europe	**6.09%**
Weight	*34%*
Mexico	8%
Brazil	10%
Peru	7%
Uruguay	8%
Paraguay	9%
South America	**8.33%**
Weight	*22%*
China	6%
India	8%
Nigeria	16%
Indonesia	8%
Egypt	15%
Japan	6%
Korea	6%
South Africa	9%
Row	**9.29%**
Weight	*20%*
Equity Risk Premium July 23	**6.96%**

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