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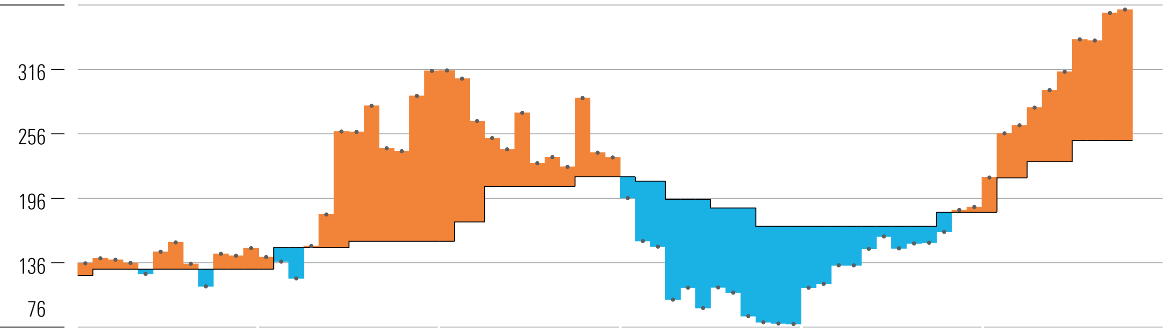
Spotify Technology SA SPOT ★★★ 17 Oct 2024 14:41, UTC

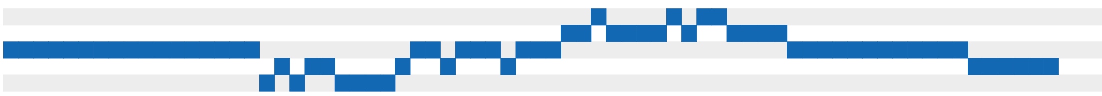
Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
371.69 USD 16 Oct 2024	350.00 USD 17 Oct 2024 14:38, UTC	1.06	74.16 USD Bil 17 Oct 2024	Narrow	Large Growth	Very High	Exemplary	2 Oct 2024 05:00, UTC

Price vs. Fair Value



	2019	2020	2021	2022	2023	YTD	
	1.15	2.02	1.08	0.46	1.03	1.06	Price/Fair Value
	31.76	110.40	-25.62	-66.27	138.01	97.80	Total Return %

Morningstar Rating



Total Return % as of 16 Oct 2024. Last Close as of 16 Oct 2024. Fair Value as of 17 Oct 2024 14:38, UTC.

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The primary analyst covering this company does not own its stock.

[1]The ESG Risk Rating Assessment is a representation of Sustainalytics' ESG Risk Rating.

Spotify and Sirius XM: Adjusting Our Moat Ratings to Reflect the Changed Competitive Environment

Analyst Note Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024

We are updating our moat ratings for Spotify and Sirius XM, with Spotify going to a narrow moat from none previously and Sirius XM going to no-moat from narrow.

For Spotify, the change reflects the stature it has attained in the streaming music industry and the cost advantage global leadership has conferred. Along with modest switching costs and network effects, we think this will make it difficult for competitors to eat into its leading market share in an industry that we think is poised to continue growing rapidly. Along with our change in moat rating, we are raising our fair value estimate for Spotify to $350 from $250 and placing an Exemplary Capital Allocation Rating on the firm.

For Sirius XM, the change in moat rating reflects the higher level of competition we think the firm faces from music streaming providers like Spotify. Sirius XM's in-vehicle experience can be mimicked by streaming providers that do not need the satellite technology or customized radios. A shrinking subscriber base and the different business model of the music streaming providers have negated the cost advantage that we once assigned to Sirius XM. Along with our change in moat rating, we are reducing our fair value estimate for Sirius XM to $30 from $50 and placing a Standard Capital Allocation Rating on the firm.

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Sector	Industry
Communication Services	Internet Content & Information

Business Description

Spotify, headquartered in Stockholm, Sweden, is one of the world's largest music streaming service providers, with 602 million monthly active users at the end of 2023. The firm monetizes its users through a paid subscription model, referred to as its premium service, and an ad-based model, referred to as its ad-supported service. Revenue from premium and ad-supported services represented 86% and 14% of Spotify's 2023 total revenue, respectively.

Business Strategy & Outlook Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024

Our outlook for Spotify is bright, due mainly to the opportunity we see for the global music streaming market to expand and the moat we think the firm has to keep its edge over competitors. Spotify operates in more than 180 countries and has more than 600 million monthly active users and nearly 250 million paying subscribers, more than double any competitor.

Spotify's management has kept its customer offerings relatively simple. For the most part, Spotify simply offers unlimited listening to an extraordinarily wide catalog of music that we don't think any competitor can eclipse. Customers can either access the service for free by accepting breaks for advertisements, or they can pay a monthly subscription fee for uninterrupted listening and broader customization. Subscription plans mostly differ only in the number of people included on the plan. Spotify also now sells separate subscriptions for unlimited audiobook listening.

We don't expect major changes to Spotify's product or menu of offerings, but we believe that many countries provide a significant runway for further subscriber additions due to relatively low current penetration levels, and we think Spotify should have the ability to raise prices at a regular cadence. Relative to the value customers receive—unlimited listening to almost any song ever recorded—we think streaming music prices remain low, and in many markets, including the US, Spotify didn't raise subscription prices from 2011-23. Even with recent price increases, US plans only cost around 20% more than 13 years ago.

Spotify is reliant on major record labels for its music inventory, and we believe the labels have negotiating leverage over the music streaming platforms. However, the music streaming platforms—and Spotify especially—have been saviors for record labels, in our view, in the aftermath of music piracy and the music industry's trend away from physical album sales. We see a mutually beneficial relationship between the labels and their biggest customer. We believe record labels prefer to continue working with music streaming platforms, and we don't anticipate Spotify will face business disruption related to record label negotiations.

Bulls Say Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024

- Spotify has significant room to continue raising prices after historically not doing so. The value is higher, and the price is lower for a Spotify subscription than nearly all video streaming services.
- Music streaming penetration in many countries is quite low, both in absolute terms and relative to uptake for video streaming services. This provides a long runway for further subscriber growth.
- Advertising revenue growth should pick up as Spotify's podcasts are now being offered on other platforms, and targeting for ad-supported music customers is improving.

Bears Say Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024

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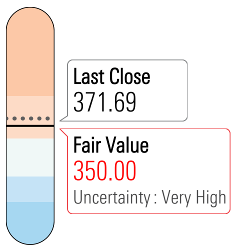
Competitors

Spotify Technology SA SPOT



Economic Moat	Narrow
Currency	USD
Fair Value	350.00 17 Oct 2024 14:38, UTC
1-Star Price	542.50
5-Star Price	210.00
Assessment	Overvalued 16 Oct 2024
Morningstar Rating	★★★17 Oct 2024 14:41, UTC
Analyst	Matthew Dolgin, Senior Equity Analyst
Capital Allocation	Exemplary
Price/Fair Value	1.06
Price/Sales	4.76
Price/Book	16.35
Price/Earning	118.17
Dividend Yield	0.00%
Market Cap	74.64 Bil
52-Week Range	145.76—389.23
Investment Style	Large Growth

- Spotify is dependent on record labels, and there's nothing proprietary about Spotify's service. Over the long term, record labels could find a way to take a greater share of the industry's profits.
- With record labels' power and fixed percentages of revenue going toward music rights, Spotify has little opportunity to expand margins.
- Spotify's biggest competitors are major technology companies that don't need to rely on music to be profitable. Integration in their ecosystems and bundles with other services could make their music streaming services more attractive than Spotify.

Economic Moat Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024

We assign a narrow moat rating to Spotify. In our view, the characteristics that make it so difficult for a streaming music platform to gain a competitive advantage support why Spotify, the clear current leader in the music streaming industry, has a moat and is unlikely to face a serious threat from competitors over the next several years. For Spotify, we see modest cost advantages, switching costs, and network effects. While we doubt any of these moat sources in isolation is a sufficient barrier to competitive pressure, collectively they make it unlikely that a competitor can eat into the leading global market share Spotify has attained.

The business of operating a streaming music platform is a tough one, in our view, and one that generally doesn't lend itself to strong competitive advantages. Most critically, we believe the major record labels, which control most of the product on streaming music platforms, hold by far the most power in the music industry. In our view, the major labels are the only ones who could bestow an ironclad moat or stymie a potential competitor based on how freely they license their music rights.

The lack of negotiating leverage that results from the power disparity with record labels leaves music streaming platforms, also known as digital service providers, or DSPs, with limited flexibility in their cost structures and in how they price their offerings. Consequently, we don't think any of the major competitors can offer much differentiation in music catalog, user experience, or price, leaving consumers with a similar value proposition from multiple providers. While we don't believe there are any switching costs or network effects that are severe enough to prevent any customer switching from one provider to another, there are some. A competing platform needs to provide some impetus to choose it over the market leader. In other words, although switching costs might not be overly burdensome, the benefit of switching is nil in many cases.

Spotify has only recently turned the corner to profitability after a long history of losses, and Spotify had the advantage of offering record labels something that no one else did when it launched—the ability to offer music fans sanctioned access to an entire catalog of songs over the internet. Assuming a new competitor could secure the same music rights that Spotify and other major DSPs hold, it would face a long uphill battle to attract customers and reach adequate scale to generate profits.

Almost 90% of Spotify's revenue and essentially all its gross profit stem from interactive music streaming subscription plans, meaning the subscription offering that allows users the ability to choose the exact song they want to listen to, make their own playlists, and rewind and skip songs as much as they please. For interactive music streaming, music platforms like Spotify pay a precise percentage of total subscription revenue to the record labels and artists. Currently, that figure includes about 50%-55% that goes to major record labels for the recordings plus a roughly 15% statutory rate to music publishers for song composition rights. These percentages are standard for all DSPs. As a result, no platform can gain operating leverage on its music costs under the current model. Whether a platform generates $1 million in revenue or $1 billion in revenue, it should pay the same 65% or more for the music rights.

This is where Spotify's cost advantage begins to show. With no ability to drive down music costs, and minimal opportunity to realize lower costs for the technological and infrastructure capabilities needed to operate a top-quality global platform, a music platform needs to spread its fixed costs over the biggest

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possible user base to have a cost advantage. With more than 600 million global users, including about 250 million premium subscription customers, Spotify is the global leader. While most other major competitors do not disclose subscribers, we estimate that Tencent Music, which operates exclusively in China, is the only other firm with at least 100 million subscribers.

We also think a music streamer of Spotify's scale and maturity has lower need for marketing costs than less-established competitors. Spotify has already reached a critical mass of subscribers and is the clear leader in its industry, meaning that for the most part, it no longer has to bring awareness to its service or creatively lure customers.

We don't think it's possible to offer a materially different music experience than what Spotify does, leaving competitors the task of pulling away subscribers without having a superior offering. However, competitors can't reasonably compete on price or promotions, because record labels have a direct monetary interest in what DSPs charge. Even if a label entertained a shift from the current structure that included a minimum fixed payment, the label has interest in not devaluing its product, and it can withhold rights.

With a similar service for a similar price, we anticipate that even modest switching costs and network effects make it difficult to pull subscribers away from Spotify. With the inconvenience in transferring playlists or learning new platforms (switching costs), and with the ability to share playlists and track friends' music habits (network effect), we don't foresee other DSPs pulling significant business away from Spotify.

These industry barriers protect Spotify against the biggest current competitors as well as prospective competitors. Outside of China, where Tencent Music is the industry leader, Spotify's biggest competitors are Apple Music, YouTube Music, and Amazon Music. Each of these streaming services is part of a gigantic technology conglomerate, and in some cases these firms may be less concerned with making music profitable than driving users into their ecosystems. Yet even these companies have not been able to dent Spotify's subscriber growth, and they all still have much smaller subscriber bases despite launching in the mid-2010s. From a usage perspective, their offerings cannot provide any compelling feature that Spotify cannot, and from a financial perspective, they too are limited in their ability to offer users better prices or value than they do now. Spotify has thrived within this competitive environment, and we don't think these competitors can do much to change the current market share. We expect record labels would resist efforts among the large tech firms to provide more “extras” in bundled plans without a corresponding increase in price.

We see the same outcome with smaller competitors. Pandora, which is part of Sirius XM, offers essentially the same service as Spotify. However, Sirius XM does not seem to aggressively push its Pandora business, instead focusing on the SiriusXM offering. We perceive that Pandora accepts that it

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would be fighting a losing, value-destructive battle to aggressively go after Spotify customers.

The same competitive dynamics hold for the smaller portion of Spotify's business, which includes its ad-supported offering. A competing ad-supported service that is not interactive would have a different business model but no better path to profits. For noninteractive, all platforms pay a non-negotiable, statutory rate per song. Like with interactive, since there is no ability to gain operating leverage on the cost of music itself, streaming platforms with the most scale gain a cost advantage from being able to spread the rest of their costs among a larger revenue base. With this offering being free for consumers, we again don't see a way for competition to offer a greater attraction than Spotify.

Fair Value and Profit Drivers Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024

Our fair value estimate for Spotify is $350 per share, implying an EV/EBITDA ratio of 30 based on our 2025 forecast. Our fair value estimate assumes a $1.09/EUR exchange rate to reconcile Spotify's reporting currency to trading currency. We project Spotify to maintain double-digit top-line growth throughout our five-year forecast while growing profits and free cash flow at an even higher clip now that the firm has matured beyond its initial phase of growth.

We project premium revenue growth (from subscriptions) to slow from the 20% level that we expect in 2024 to a midteens rate throughout the rest of our forecast. Similar to what has occurred in 2024, we expect subscriber additions to remain high and for the firm to regularly increase prices. However, we expect a greater proportion of subscriber additions to come from lower-priced markets over time, resulting in lower growth in average revenue per subscriber than has occurred in 2024. While we believe there are further penetration gains to make in the US and some other European countries that carry relatively higher prices, we think the opportunity pales compared with what's achievable in more developing markets. While we expect Spotify to maintain its leading market share, we don't expect it to take further share from its major competitors, which primarily constitute major technology companies like Apple, Amazon, and Alphabet. As long as those companies remain in the music business, we think their subscribers will be sticky due to ecosystem preferences. In all, we project Spotify to add an average of almost 30 million global subscribers annually through 2028, but we project average revenue per subscriber to grow only 4%-5% despite continuing price increases that have resulted in 7% ARPU growth on average since the fourth quarter of 2023, when the 2023 price increases took full effect.

We expect premium revenue to continue making up nearly 90% of total revenue, as we believe subscription plans will continue to be the most appealing to consumers. However, we believe ad-supported revenue can also grow double digits throughout our forecast, with higher advertising rates through better targeting and monetization of Spotify podcasts on other platforms contributing to the growth.

We don't expect the firm's gross margin to expand substantially because we don't believe there's much room for improvement on the roughly 65% of music revenue that Spotify pays to record labels and artists. However, we believe the firm can continue realizing leverage on its research and development and sales and marketing expenses. In total, we project the firm's gross margin to expand from about 29% in 2024 to 31% in 2028, while we project the operating margin to turn positive for the first time in 2024 and then expand from about 6% in 2024 to 12% in 2028. We project more than 20% EBIT growth each year throughout our forecast, and we expect free cash flow growth to nearly mirror profit growth.

Risk and Uncertainty Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024
Our Morningstar Uncertainty Rating for Spotify is High.

The biggest and most likely risks to Spotify, in our view, are that its dominance wanes or the broader audio streaming market slows. The firm's high valuation depends on a long runway of rapid subscriber growth and price increases, in our view. We expect the firm to achieve this growth, but a greater push by the big technology companies that constitute Spotify's biggest competitors or pushback from consumers on price increases would take air out of the Spotify story.

Risks that we view as unlikely but catastrophic if they were to occur include conflicts with record labels that cause the loss of music rights or a new mode of music consumption that overtakes the ubiquity of music streaming subscriptions. Given Spotify's size, we think it is unequivocally in the labels' best interests to maintain their mutually beneficial relationship with Spotify, but ultimately, the labels control the product that Spotify offers. Similarly, we don't see any superior music technology on the horizon that would detract from Spotify, but music consumption has a history of evolving—from different types of physical products to pirated downloads to sanctioned downloads to unlimited music streaming. We think it would be naïve to think a disruptive means of consumption cannot develop.

The most likely environmental, social, and governance risk, in our view, is the potential for a data breach. With over 600 million active users globally, Spotify maintains a lot of sensitive data that could cast a negative light or legal liability if hacked. From a governance standpoint, the firm is controlled by its two co-founders through the use of beneficial certificates that carry voting rights but no economic rights. They have more than 70% of the votes while maintaining less than 30% ownership of the company, leaving the majority of shareholders subject to the co-founders' preferences.

Capital Allocation Matthew Dolgin, CFA, Senior Equity Analyst, 17 Oct 2024
We assign Spotify an Exemplary Morningstar Capital Allocation Rating. The firm's nearly flawless investment in its business to reach its current stature and its extremely strong balance sheet weigh most prominently in our rating. They overshadow the deficiencies we see in the firm's capital returns to shareholders, which we think are far too low.

We think management's vision, tactics, and execution in developing an entirely new business for the music industry have been exemplary. It hit all the right notes in bringing record labels in as partners while deftly balancing aggressive investment in its business and

navigating new markets and features with measured launches in new countries, so as to not get ahead of itself. Capital invested in marketing and research and development was perfect to build the world's leading streaming music platform and attracting the largest global subscriber base. It has also worked with record labels to get reasonable terms for music rights while also making itself a critical partner to record labels that the labels would now be loath to do without.

We think the company's policy on capital return to shareholders is lacking, but we see this as secondary to the importance of the investment and management that led Spotify to the position it is in today. Spotify does not pay a dividend, while we think it should pay a consistent dividend. Management has not indicated a dividend is on the horizon, despite our belief the firm is well positioned to implement one. The business has minimal capital investment needs, a large net cash position on its balance sheet, continuously growing free cash flow, and a strong recurring revenue base. We see little need for the cash pile, as acquisitions have also not been a prominent part of the firm's strategy, and we don't see major acquisition pieces that would make sense. Spotify has authorized a share repurchase program, and with the stock reaching all-time highs since implementation, repurchases would have been accretive to shareholders. However, the firm has only repurchased about $100 million in shares since it implemented its most recent repurchase program in 2021, and it has repurchased only about $650 million in its corporate history. At the end of June 2024, the firm had EUR 3 billion in net cash and EUR 1.5 billion in short-term investments on its balance sheet. We understand the mindset to be conservative with cash while in extreme growth mode, but in time, we would hope to see the firm return more cash to shareholders as we evaluate our capital allocation rating.

Analyst Notes Archive

Spotify Earnings: Significantly Improving Profitability Drives Our Fair Value Estimate to $250

Matthew Dolgin, CFA, Senior Equity Analyst, 23 Jul 2024

Record operating income and an outlook foreshadowing another huge jump in profit underpinned a 10% rise in Spotify's stock following its second-quarter earnings release. The firm has now posted operating profit in three of the last four quarters after historically generating losses, giving us more confidence that the business has matured and can achieve consistent profitability. A rise in our margin assumptions leads us to increase our fair value estimate to $250 from $230.

Total operating income was EUR 266 million during the second quarter, representing a swing of more than EUR 500 million from the loss a year ago. Operating income grew sequentially by 58%, and management's forecast of EUR 405 million in the third quarter implies another quarter of greater than 50% growth sequentially. Gross margin expansion stemming from recent price increases and more favorable music content costs flowed through to operating profit, and all operating expenses have come down significantly as a percentage of revenue. Free cash flow was EUR 490 million, a record quarterly amount and representing the third straight quarter of positive free cash flow after years of consistent cash burn.

Total revenue grew 20% year over year for the second straight quarter. The firm continues to add paying subscribers, who make up the bulk of Spotify's revenue, and the subscription price increase that Spotify implemented in July 2023 continued to help expand average revenue per subscriber. Spotify added 7 million net paying subscribers in the quarter and saw average revenue per subscriber jump 8% year over year to EUR 4.61. Management said that it has seen fewer subscribers leave after recent price increases than it expected. The most recent price increase that went into effect in June 2024 should support further sales growth and margin expansion over the next year.

Spotify Earnings: Stellar Profits While Revenue Growth Accelerates Matthew Dolgin, CFA, Senior Equity Analyst, 23 Apr 2024

Significant margin improvement was the most encouraging component of no-moat Spotify's excellent first-quarter results. Revenue growth accelerated and was in line with management's guidance, which is encouraging, considering the cost-cutting program put in place in 2023 and monthly active users coming in slightly below management's target. We're raising our fair value estimate to $230 from $215, but it's difficult for us to rationalize the stock's valuation.

Total revenue grew 20% year over year after growing in the low to mid-teens during each quarter of 2023. A higher number of monthly active users compared with last year's first quarter accounted for all of the sales growth, as average revenue per user was roughly flat, with lower advertising per user offsetting higher premium prices. One of the few hiccups we saw in the quarter was a deceleration in MAU growth, as the 2% sequential growth was the lowest rate in nearly two years. However, we also see this as one of the opportunities that can support sales growth if the firm can reverse this downward trend. Management acknowledged that its reduction in sales and market expenses (down 7% year over year to the lowest level in two years) was too severe and said it will adjust the overcorrection.

Even with marketing costs picking up from here, management expects further margin expansion, building on a record first quarter. Gross margin was 27.6% for the quarter, up nearly 250 basis points year over year. Operating margin was 5%—only the second quarter of operating profit since 2019—and nearly achieved management's forecast despite EUR 76 million in unanticipated social accrual charges, which are tied to the firm's rising stock price. Favorability in variable content costs was the major component of gross margin expansion, but all other operating expenses were also down substantially as a percentage of revenue following the cost-cutting of 2023, and this lower level should prove durable.

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Spotify Earnings: Network Effect Becoming Clearer as Consistent Profitability Is in Sight Ali Mogharabi, Senior Equity Analyst, 6 Feb 2024

We are increasing our Spotify fair value estimate to $215 from $183. The firm reported impressive fourth-quarter 2023 results with double-digit top-line growth in the premium and ad-supported segments driven by higher prices, more listeners and engagement, and margin expansion. With further development and strengthening of a network effect in the subscriber and ad-supported segments, Spotify has turned the corner and likely will be profitable in 2024 and beyond, as we have been expecting. We believe the progression of the network effect, which will further lower listener and advertiser acquisition costs, plus the additional operating leverage generated by Spotify's revenue growth will drive margins higher through the next five years more than we had previously assumed.

Monthly active users came in at 602 million during the quarter, up 23% year over year and 5% sequentially. Total revenue increased to EUR 3.7 billion (up 18% from last year) due to further strength in premium (up 17%) and advertising (up 12%) revenue. Operating loss improved to EUR 75 million from the prior year's loss of EUR 231 million. The gross margin improved by 140 basis points due to the increasing revenue contribution from the higher-margin marketplace and gross margin improvement in the ad-supported segment. Spotify is no longer focusing mainly on the higher-cost exclusive podcast content in that segment, although it continues to renew agreements with valuable content providers like Joe Rogan. Plus, as podcast continues to grow, its marginal cost on the cloud side is improving. Lower listener acquisition costs and G&A expenses also contributed to the improvement in operating losses during the quarter.

Spotify Earnings: Listener Growth, Higher Prices, and Efficiency Paving Profitability Path Ali Mogharabi, Senior Equity Analyst, 24 Oct 2023

Spotify reported another solid quarter, demonstrating its progress toward strengthening its platform's network effect. Spotify's listener churn rate did not increase upon the implementation of higher prices in many markets. At the same time, its number of subscribers and overall listeners increased substantially, which also accelerated year-over-year advertising revenue growth from the previous quarter. On the bottom line, we are pleased with profitability in the quarter, which the firm believes will continue going forward, in line with our initial assumption. We think increasing demand of the higher-margin audiobooks over time likely will further expand the premium segment's gross margin.

We adjusted our projections higher as we now anticipate a higher user count and wider margins given the strengthening of Spotify's flywheel, resulting in a $183 fair value estimate, up from $170, a level at which the stock is trading currently after nearly a 10% jump in reaction to the firm's quarterly results.

Total revenue came in at EUR 3.4 billion, up 11% year over year, or 17% excluding currency headwinds. The premium segment revenue increased 10%, driven by a 16% increase in subscribers, to 226 million, and higher prices, partially offset by a currency headwind, which led to reported revenue per subscriber declining 6%. The ad-supported segment grew 16% (24% excluding currency headwinds), mainly due to the 32% increase in listeners that more than offset a 12% decline in listener monetization stemming from the supply of ads outpacing demand from advertisers. However, we continue to expect user growth to improve ad demand and user monetization over time.

Spotify Earnings: Impressive Listener Growth Indicates Network Effect, but Monetization Lags Ali Mogharabi, Senior Equity Analyst, 25 Jul 2023

We are maintaining our $170 fair value estimate, no-moat rating, and Very High Morningstar Uncertainty Rating for Spotify. The stock is down 14% in intraday trading in reaction to second-quarter results and trading more than 15% below our fair value estimate. Nevertheless, we recommend new investors wait for a slightly wider margin of safety.

In our view, Spotify’s second-quarter subscriber and overall user growth, plus improvements in listener acquisition costs, displays the formation of a network effect. However, the monetization piece is lagging, as demonstrated by the year-over-year decline in revenue generated per listener during the quarter. We expect monetization to improve in the second half of this year and through 2024 due to the firm’s price increases and less hesitancy by advertisers. On the bottom line, excluding costs related to attempts to operate more efficiently, operating losses improved, which likely will continue through the rest of the year. We still project full-year profitability in 2024.

Total revenue of EUR 3.18 billion was up 11% (14% excluding currency headwinds), driven by 11% growth in the premium segment and 12% growth in the ad-supported segment. Spotify impressively increased its subscriber count for premium (up 17% to 220 million) and ad-supported (up 34% to 343 million) listeners from last year, which more than offset the monetization declines of 6% for premium and what we estimate was 16% for ad-supported. Lower subscriber monetization was mainly due to product mix, while the decline in revenue generated per ad-supported listener was because of uncertainty by advertisers; we still expect this will improve in the second half, especially given Spotify’s impressive listener growth.

Spotify Earnings: Listeners Keep Flocking to Spotify, Which May Spark Monetization Improvement Ali Mogharabi, Senior Equity Analyst, 25 Apr 2023

While Spotify's user monetization was affected mainly by macro headwinds to ad revenue, we were impressed with solid growth in both subscriber and ad-supported user counts. The improvement was especially remarkable since the firm began focusing on operating leaner, which included lower marketing spending. This could make user growth an early indicator of a network effect, but we await more consistency on that front before considering it as an economic moat source.

With a reduction in headcount and more centralization from a product development standpoint, which was announced in January, we expect the firm to further progress toward generating a full-year operating profit, likely next year. However, we think that with Spotify's recent investment in artificial intelligence, margins will expand a bit slower than we initially assumed due to technology investments and costs associated with content copyright lawsuits and compliance which the labels may force Spotify to bear. Our adjustments did not affect our $170 fair value estimate. While the stock price has nearly doubled since its 52-week lows in November 2022, we think further upside remains as Spotify shares are trading at 0.8 times our fair value estimate.

Monthly active users in the first quarter expanded to 515 million, up 22% from last year and 5% from the prior quarter. Double-digit year-over-year revenue growth in both premium (up 14%) and ad-supported (17%) drove Spotify's 14% total revenue improvement to EUR 3.04 billion. Revenue generated per subscriber declined 1% from last year as more of the new subscribers chose the multi-listener plans such as duo and premium family. Excluding the favorable impact of foreign exchange, the average revenue generated per subscriber was 2% lower than last year.

Spotify Technology SA SPOT ★★★ 17 Oct 2024 14:41, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
371.69 USD 16 Oct 2024	350.00 USD 17 Oct 2024 14:38, UTC	1.06	74.16 USD Bil 17 Oct 2024	Narrow	Large Growth	Very High	Exemplary	2 Oct 2024 05:00, UTC

Morningstar Historical Summary

Financials as of 30 Jun 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
Revenue (EUR K)	—	1,940,000	2,952,000	4,090,000	5,259,000	6,764,000	7,880,000	9,668,000	11,727,000	13,247,000	7,443,000	14,471,000
Revenue Growth %	—	—	52.2	38.6	28.6	28.6	16.5	22.7	21.3	13.0	19.7	16.5
EBITDA (EUR K)	—	-194,000	-492,000	-1,175,000	-135,000	-1,000	-544,000	427,000	-141,000	-298,000	523,000	564,000
EBITDA Margin %	—	-10.0	-16.7	-28.7	-2.6	0.0	-6.9	4.4	-1.2	-2.3	7.0	3.9
Operating Income (EUR K)	—	-235,000	-349,000	-378,000	-43,000	-73,000	-293,000	94,000	-659,000	-446,000	434,000	391,000
Operating Margin %	—	-12.1	-11.8	-9.2	-0.8	-1.1	-3.7	1.0	-5.6	-3.4	5.8	2.7
Net Income (EUR K)	—	-230,000	-539,000	-1,235,000	-78,000	-186,000	-581,000	-34,000	-430,000	-532,000	471,000	466,000
Net Margin %	—	-11.9	-18.3	-30.2	-1.5	-2.8	-7.4	-0.4	-3.7	-4.0	6.3	3.2
Diluted Shares Outstanding (K)	—	167,779	167,779	178,113	181,210	180,961	187,583	193,943	195,846	194,732	205,124	200,297
Diluted Earnings Per Share (EUR)	—	-1.37	-3.21	-6.93	-0.51	-1.03	-3.10	-1.03	-2.93	-2.73	2.30	2.28
Dividends Per Share (EUR)	—	—	—	—	—	—	—	—	—	—	—	—

Valuation as of 30 Sep 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Sales	—	—	—	—	3.7	3.9	6.3	4.4	1.3	2.6	4.6	4.6
Price/Earnings	—	—	—	—	-30.4	52.6	-70.9	-137.0	-41.0	-44.8	144.9	144.9
Price/Cash Flow	—	—	—	—	62.1	48.5	133.3	113.6	61.7	156.3	50.5	50.5
Dividend Yield %	—	—	—	—	—	—	—	—	—	—	—	—
Price/Book	—	—	—	—	11.3	12.7	19.7	18.8	6.4	15.6	15.6	15.6
EV/EBITDA	0.0	0.0	0.0	0.0	-0.1	-26.6	-0.1	0.1	-0.1	-0.1	0.0	0.0

Operating Performance / Profitability as of 30 Jun 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
ROA %	—	-21.9	-34.2	-47.4	-2.1	-3.9	-10.2	-0.5	-5.8	-6.7	5.1	5.3
ROE %	—	-100	—	—	-6.7	-9.0	-24.0	-1.4	-19.0	-21.6	13.9	14.8
ROIC %	—	-100	—	—	-5.6	-7.5	-18.2	-0.1	-10.5	-14.4	7.9	7.5
Asset Turnover	—	1.8	1.9	1.6	1.4	1.4	1.4	1.4	1.6	1.7	0.8	1.7

Financial Leverage

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Debt/Capital %	—	—	—	79.9	—	23.4	17.1	45.7	41.2	40.2	29.7	—
Equity/Assets %	—	21.8	—	7.7	48.3	39.8	44.3	29.6	31.4	30.2	42.0	—
Total Debt/EBITDA	—	—	—	-0.8	0.0	-622.1	-1.1	4.2	-11.9	-5.7	3.4	—
EBITDA/Interest Expense	Infinite	-193.9	-98.4	-293.8	-22.5	0.0	-10.1	8.4	-2.4	-6.1	29.1	12.0

Morningstar Analyst Historical/Forecast Summary as of 16 Oct 2024

Financials

Fiscal Year, ends 31 Dec 2023	2022	2023	2024 (Estimates)	2025 (Estimates)	2026 (Estimates)
Revenue (EUR Mil)	11,727	13,247	15,995	18,587	21,423
Revenue Growth %	21.3	13.0	20.8	16.2	15.3
EBITDA (EUR Mil)	-488	-288	1,166	1,794	2,243
EBITDA Margin %	-4.2	-2.2	7.3	9.7	10.5
Operating Income (EUR Mil)	-659	-446	1,065	1,694	2,158
Operating Margin %	-5.6	-3.4	6.7	9.1	10.1
Net Income (EUR Mil)	-430	-532	1,084	1,609	1,950
Net Margin %	-3.7	-4.0	6.8	8.7	9.1
Diluted Shares Outstanding (Mil)	196	195	205	206	206
Diluted Earnings Per Share(EUR)	-2.93	-2.73	5.28	7.81	9.47
Dividends Per Share(EUR)	0.00	0.00	0.00	0.00	0.00

Forward Valuation

	2022	2023	2024 (Estimates)	2025 (Estimates)	2026 (Estimates)
Price/Sales	1.2	2.5	4.3	3.7	3.2
Price/Earnings	-25.2	-62.3	64.7	43.7	36.1
Price/Cash Flow	—	—	—	—	—
Dividend Yield %	—	—	—	—	—
Price/Book	6.0	13.1	17.7	11.8	8.5
EV/EBITDA	-25.5	-108.4	55.7	36.2	29.0

Morningstar Equity Analyst Report | Report as of 17 Oct 2024 14:52, UTC | Reporting Currency: EUR | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

Spotify Technology SA SPOT ★★★ 17 Oct 2024 14:41, UTC

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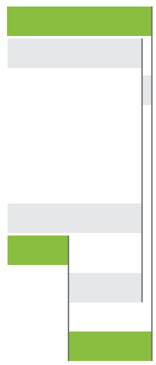
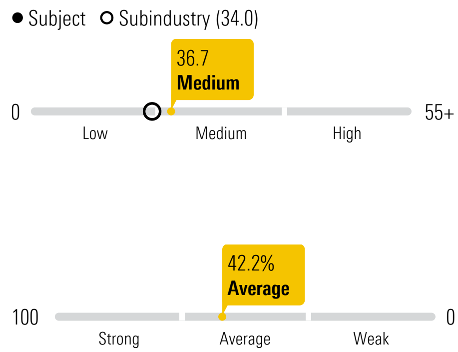
ESG Risk Rating Breakdown

Exposure		
Company Exposure[1]	36.7	
– Manageable Risk	34.2	
Unmanageable Risk[2]	**2.5**	
Management		
Manageable Risk	34.2	
– Managed Risk[3]	14.4	
Management Gap[4]	**19.8**	
Overall Unmanaged Risk	**22.3**	

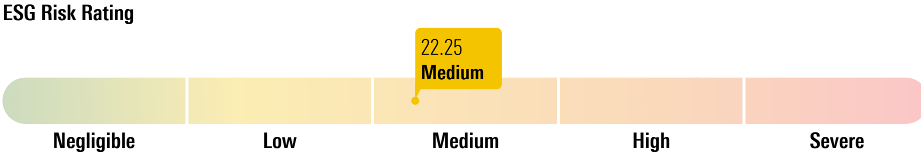




- Exposure represents a company's vulnerability to ESG risks driven by their business model
- Exposure is assessed at the Subindustry level and then specified at the company level
- Scoring ranges from 0-55+ with categories of low, medium, and high-risk exposure

- Management measures a company's ability to manage ESG risks through its commitments and actions
- Management assesses a company's efficiency on ESG programs, practices, and policies
- Management score ranges from 0-100% showing how much manageable risk a company is managing

ESG Risk Rating



ESG Risk Ratings measure the degree to which a company's value is impacted by environmental, social, and governance risks, by evaluating the company's ability to manage the ESG risks it faces.

1. A company's Exposure to material ESG issues 2. Unmanageable Risk refers to risks that are inherent to a particular business model that cannot be managed by programs or initiatives 3. Managed Risk = Manageable Risk multiplied by a Management score of 42.2% 4. Management Gap assesses risks that are not managed, but are considered manageable 5. ESG Risk Rating Assessment = Overall Unmanaged Risk = Management Gap plus Unmanageable Risk

ESG Risk Rating Assessment[5]

ESG Risk Rating is of Oct 02, 2024. Highest Controversy Level is as of Oct 08, 2024. Sustainalytics Subindustry: Internet Software and Services. Sustainalytics provides Morningstar with company ESG ratings and metrics on a monthly basis and as such, the ratings in Morningstar may not necessarily reflect current Sustainalytics' scores for the company. For the most up to date rating and more information, please visit: sustainalytics.com/esg-ratings/.

Peer Analysis 02 Oct 2024

Peers are selected from the company's Sustainalytics-defined Subindustry and are displayed based on the closest market cap values

Company Name	Exposure			Management			ESG Risk Rating		
Spotify Technology SA	36.7 | Medium	0	55+	42.2 | Average	100	0	22.3 | Medium	0	40+
Match Group Inc	32.0 | Low	0	55+	51.1 | Strong	100	0	16.7 | Low	0	40+
Magnite Inc	37.1 | Medium	0	55+	35.7 | Average	100	0	24.9 | Medium	0	40+
IAC Inc	38.8 | Medium	0	55+	36.6 | Average	100	0	25.6 | Medium	0	40+
—	— | —	0	55+	— | —	100	0	— | —	0	40+

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Appendix

Historical Morningstar Rating

Spotify Technology SA SPOT 16 Oct 2024 21:55, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
—	—	★★	★★	★★	★★	★★	★★	★★★	★★★	★★★	★★★

Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★

Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★★	★★★★★	★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★	★★★★	★★★

Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★	★★★	★★	★★★	★★★	★★★	★★	★★★	★★★	★★	★	★

Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★	★	★★	★★	★	★★	★	★★★	★★★	★★★	★★★	★★★

Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★

Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, indepth competitive advantage analysis, and a variety of other analytical tools to augment this process. Moreover, we think analyzing valuation through discounted cash flows presents a better lens for viewing cyclical companies, high-growth firms, businesses with finite lives (e.g., mines), or companies expected to generate negative earnings over the next few years. That said, we don't dismiss multiples altogether but rather use them as supporting cross-checks for our DCF-based fair value estimates. We also acknowledge that DCF models offer their own challenges (including a potential proliferation of estimated inputs and the possibility that the method may miss shortterm market-price movements), but we believe these negatives are mitigated by deep analysis and our longterm approach.

Morningstar's equity research group ("we," "our") believes that a company's intrinsic worth results from the future cash flows it can generate. The Morningstar Rating for stocks identifies stocks trading at a discount or premium to their intrinsic worth—or fair value estimate, in Morningstar terminology. Five-star stocks sell for the biggest risk adjusted discount to their fair values, whereas 1-star stocks trade at premiums to their intrinsic worth.

Four key components drive the Morningstar rating: (1) our assessment of the firm's economic moat, (2) our estimate of the stock's fair value, (3) our uncertainty around that fair value estimate and (4) the current market price. This process ultimately culminates in our singlepoint star rating.

1. Economic Moat

The concept of an economic moat plays a vital role not only in our qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of our fair value estimates. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, no-moat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

When considering a company's moat, we also assess whether there is a substantial threat of value destruction, stemming from risks related to ESG, industry disruption, financial health, or other idiosyncratic issues. In this context, a risk is considered potentially value destructive if its occurrence would eliminate a firm's economic profit on a cumulative or midcycle basis. If we deem the probability of occurrence sufficiently high, we would not characterize the company as possessing an economic moat.

2. Estimated Fair Value

Combining our analysts' financial forecasts with the firm's economic moat helps us assess how long returns on invested capital are likely to exceed the firm's cost of capital. Returns of firms with a wide economic moat rating are assumed to fade to the perpetuity period over a longer period of time than the returns of narrow-moat firms, and both will fade slower than no-moat firms, increasing our estimate of their intrinsic value.

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

In this stage, which can last five to 10 years, analysts make full financial statement forecasts, including items such as revenue, profit margins, tax rates, changes in workingcapital accounts, and capital spending. Based on these projections, we calculate earnings before interest, after taxes (EBI) and the net new investment (NNI) to derive our annual free cash flow forecast.

Stage II: Fade

The second stage of our model is the period it will take the company's return on new invested capital—the return on capital of the next dollar invested ("RONIC")—to decline (or rise) to its cost of capital. During the Stage II period, we use a formula to approximate cash flows in lieu of explicitly modeling the income statement, balance sheet, and cash flow statement as we do in Stage I. The length of the second stage depends on the strength of the company's economic moat. We forecast this period to last anywhere from one year (for companies with no economic moat) to 10–15 years or more (for wide-moat companies). During this period, cash flows are forecast using four assumptions: an average growth rate for EBI over the period, a normalized investment rate, average return on new invested capital (RONIC), and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until a perpetuity value is calculated. In the case of firms that do not earn their cost of capital, we assume marginal ROICs rise to the firm's cost of capital (usually attributable to less reinvestment), and we may truncate the second stage.

Stage III: Perpetuity

Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with estimated WACC.

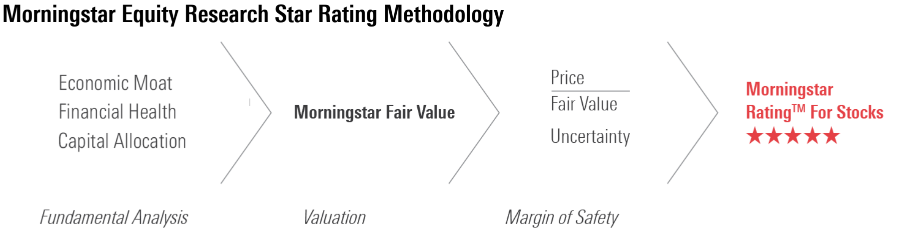
Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return to all capital providers—we discount future cash flows using the WACC, which is a weighted average of the costs of equity, debt, and preferred stock (and any other funding sources), using expected future proportionate long-term, market-value weights.

3. Uncertainty Around That Fair Value Estimate

Morningstar's Uncertainty Rating is designed to capture the range of potential outcomes for a company's intrinsic value. This rating is used to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating is aimed at identifying the confidence we should have in assigning a fair value estimate for a given stock.

Our Uncertainty Rating is meant to take into account anything that can increase the potential dispersion of future outcomes for the intrinsic value of a company, and any-

Morningstar Equity Research Star Rating Methodology



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Research Methodology for Valuing Companies

thing that can affect our ability to accurately predict these outcomes. The rating begins with a suggested rating produced by a quantitative process based on the trailing 12-month standard deviation of daily stock returns. An analyst overlay is then applied, with analysts using the suggested rating, historical rating data, and their own knowledge of the company to inform them as they make the final Uncertainty Rating decision. Ultimately, the rating decision rests with the analyst. Analysts take into account many characteristics when making their final decision, including cyclical factors, operational and financial factors such as leverage, company-specific events, ESG risks, and anything else that might increase the potential dispersion of future outcomes and our ability to estimate those outcomes.

Our recommended margin of safety—the discount to fair value demanded before we'd recommend buying or selling the stock—widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the potential dispersion of outcomes, the greater the discount we require relative to our estimate of the value of the firm before we would recommend the purchase of the shares. In addition, the Uncertainty Rating provides guidance in portfolio construction based on risk tolerance.

Our Uncertainty Ratings are: Low, Medium, High, Very High, and Extreme.

	Margin of Safety	
Qualitative Analysis Uncertainty Ratings	★★★★★Rating	★Rating
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly, when a stock hits 1 star, we expect there is a 75% chance that the intrinsic value of that stock lies below the current market price.

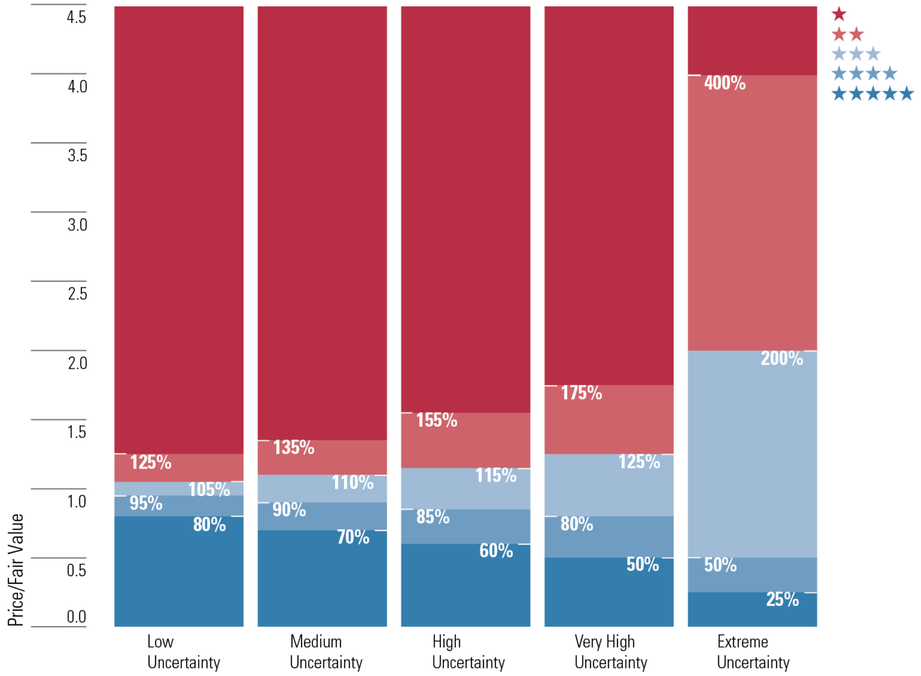
4. Market Price

The market prices used in this analysis and noted in the report come from exchange on which the stock is listed which we believe is a reliable source.

For more details about our methodology, please go to https://shareholders.morningstar.com

Morningstar Star Rating for Stocks

Morningstar Equity Research Star Rating Methodology



Once we determine the fair value estimate of a stock, we compare it with the stock's current market price on a daily basis, and the star rating is automatically re-calculated at the market close on every day the market on which the stock is listed is open. Our analysts keep close tabs on the companies they follow, and, based on thorough and ongoing analysis, raise or lower their fair value estimates as warranted.

Please note, there is no predefined distribution of stars. That is, the percentage of stocks that earn 5 stars can fluctuate daily, so the star ratings, in the aggregate, can serve as a gauge of the broader market's valuation. When there are many 5-star stocks, the stock market as a whole is more undervalued, in our opinion, than when very few companies garner our highest rating.

We expect that if our base-case assumptions are true the market price will converge on our fair value estimate over time generally within three years (although it is impossible to predict the exact time frame in which market prices may adjust).

Our star ratings are guideposts to a broad audience and individuals must consider their own specific investment goals, risk tolerance, tax situation, time horizon, income needs, and complete investment portfolio, among other factors.

The Morningstar Star Ratings for stocks are defined below:

★★★★★ We believe appreciation beyond a fair risk adjusted return is highly likely over a multiyear time frame. Scenario analysis developed by our analysts indicates that the current market price represents an excessively pessimistic outlook, limiting downside risk and maximizing upside potential.

★★★★ We believe appreciation beyond a fair risk-adjusted return is likely.

★★★ Indicates our belief that investors are likely to receive a fair risk-adjusted return (approximately cost of equity).

★★ We believe investors are likely to receive a less than fair risk-adjusted return.

★ Indicates a high probability of undesirable risk-adjusted returns from the current market price over a multiyear time frame, based on our analysis. Scenario analysis by our analysts indicates that the market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

Other Definitions

Last Price: Price of the stock as of the close of the market of the last trading day before date of the report.

Capital Allocation Rating: Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management's capital allocation, with particular emphasis on the firm's balance sheet, investments, and shareholder distributions. Analysts consider compan-

Research Methodology for Valuing Companies

ies' investment strategy and valuation, balance sheet management, and dividend and share buyback policies. Corporate governance factors are only considered if they are likely to materially impact shareholder value, though either the balance sheet, investment, or shareholder distributions. Analysts assign one of three ratings: "Exemplary", "Standard", or "Poor". Analysts judge Capital Allocation from an equity holder's perspective. Ratings are determined on a forward looking and absolute basis. The Standard rating is most common as most managers will exhibit neither exceptionally strong nor poor capital allocation.

Capital Allocation (or Stewardship) analysis published prior to Dec. 9, 2020, was determined using a different process. Beyond investment strategy, financial leverage, and dividend and share buyback policies, analysts also considered execution, compensation, related party transactions, and accounting practices in the rating.

Capital Allocation Rating: Our Capital Allocation (or Stewardship) Rating represents our assessment of the quality of management's capital allocation, with particular emphasis on the firm's balance sheet, investments, and shareholder distributions. Analysts consider companies' investment strategy and valuation, balance sheet management, and dividend and share buyback policies. Corporate governance factors are only considered if they are likely to materially impact shareholder value, though either the balance sheet, investment, or shareholder distributions. Analysts assign one of three ratings: "Exemplary", "Standard", or "Poor". Analysts judge Capital Allocation from an equity holder's perspective. Ratings are determined on a forward looking and absolute basis. The Standard rating is most common as most managers will exhibit neither exceptionally strong nor poor capital allocation.

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Sustainalytics ESG Risk Rating Assessment: The ESG Risk Rating Assessment is provided by Sustainalytics; a Morningstar company.

Sustainalytics' ESG Risk Ratings measure the degree to which company's economic value at risk is driven by environment, social and governance (ESG) factors.

Sustainalytics analyzes over 1,300 data points to assess a company's exposure to and management of ESG risks. In other words, ESG Risk Ratings measures a company's unmanaged ESG Risks represented as a quantitative score. Unmanaged Risk is measured on an open-ended scale starting at zero (no risk) with lower scores representing less unmanaged risk and, for 95% of cases, the unmanaged ESG Risk score is below 50.

Based on their quantitative scores, companies are grouped into one of five Risk Categories (negligible, low, medium, high, severe). These risk categories are absolute, meaning that a 'high risk' assessment reflects a comparable degree of unmanaged ESG risk across all subindustries covered.

The ESG Risk Rating Assessment is a visual representation of Sustainalytics ESG Risk Categories on a 1 to 5 scale. Companies with Negligible Risk = 5 Globes, Low Risk = 4, Medium Risk = 3 Globes, High Risk = 2 Globes, Severe Risk = 1 Globe. For more information, please visit sustainalytics.com/esg-ratings/

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