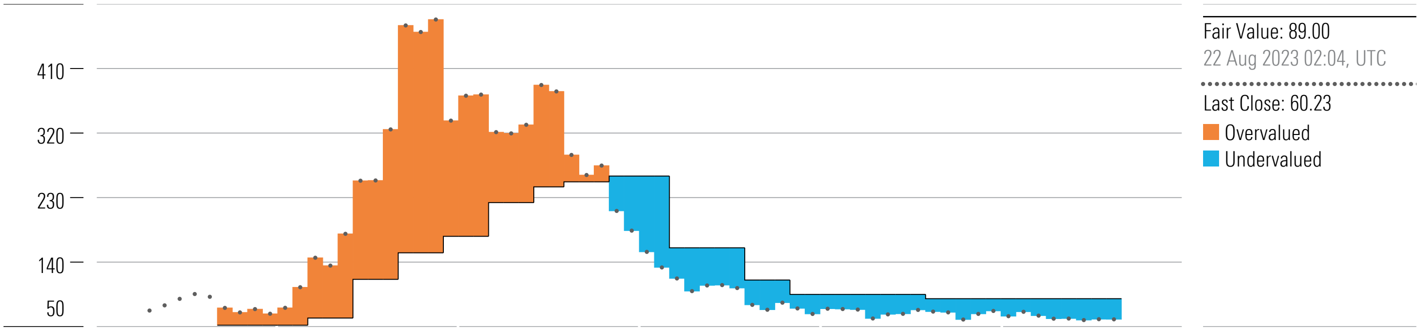
Morningstar Equity Analyst Report | Report as of 22 Aug 2024 22:34, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS

Zoom Video Communications Inc ZM ★★★★ 22 Aug 2024 21:45, UTC

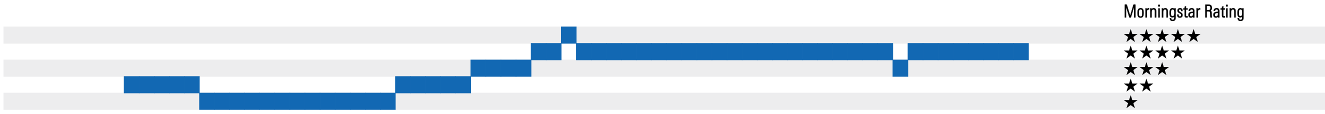
Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
60.23 USD 21 Aug 2024	89.00 USD 22 Aug 2023 02:04, UTC	0.76	21.04 USD Bil 22 Aug 2024	Narrow	Mid Blend	High	Standard	7 Aug 2024 05:00, UTC

Price vs. Fair Value



	2019	2020	2021	2022	2023	YTD	
	1.31	1.92	0.71	0.71	0.81	0.76	Price/Fair Value
	—	395.77	-45.48	-63.17	6.16	-16.24	Total Return %

Morningstar Rating



Total Return % as of 21 Aug 2024. Last Close as of 21 Aug 2024. Fair Value as of 22 Aug 2023 02:04, UTC.

Contents

Analyst Note (22 Aug 2024)
Business Description
Business Strategy & Outlook (27 Feb 2024)
Bulls Say / Bears Say (22 Aug 2024)
Economic Moat (27 Feb 2024)
Fair Value and Profit Drivers (27 Feb 2024)
Risk and Uncertainty (27 Feb 2024)
Capital Allocation (27 Feb 2024)
Analyst Notes Archive
Financials
ESG Risk
Appendix
Research Methodology for Valuing Companies

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

Zoom Earnings: Enterprise Strength Building

Analyst Note Dan Romanoff, CPA, Senior Equity Analyst, 22 Aug 2024

We are maintaining our fair value estimate of $89 per share for narrow-moat Zoom after the company reported good fiscal second-quarter results that were above our expectations on both the top and bottom lines. At the same time, full-year guidance was raised but by more than upside in the quarter. Based on guidance, we made only modest changes to our model and continue to view the stock as undervalued. Stabilization trends continue, consistent with the last several quarters, with enterprise growth and margins being the most obvious areas of strength. We are aligned with management's belief that revenues will accelerate in the third quarter. Lastly, Zoom announced that Kelly Steckelberg, CFO, will leave after the firm's third-quarter results to pursue a startup opportunity.

We see good momentum in contact center and enterprise as a sign of accelerating revenues beginning in the third quarter and lasting at least through the end of fiscal 2026. Total revenue grew 2.1% year over year in the quarter to $1.163 billion, compared with the high end of guidance of $1.150 billion, and against a 30-basis-point headwind from currency. Enterprise remains a clear bright spot, with 3.5% growth and 7% growth in paid customers generating more than $100,000 in trailing 12-month revenue, which we see as a positive sign for longer-term revenue expansion. Online average monthly churn ticked down to a best-ever 2.9%, from 3.2% a year ago, based on stricter payment terms. Management believes a level of 3% is healthy, but we think there is room for modest continued improvement over time.

Zoom's profitability remains impressive, but we are cautious about margin expansion potential in the

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Sector	Industry
Technology	Software - Application

Business Description

Zoom Video Communications provides a communications platform that connects people through video, voice, chat, and content sharing. The company's cloud-native platform enables face-to-face video and connects users across various devices and locations in a single meeting. Zoom, which was founded in 2011 and is headquartered in San Jose, California, serves companies of all sizes from all industries around the world.

longer term given the absolute and high level the company has already achieved, along with AI development costs and the associated cost to serve. In the second quarter, the non-GAAP operating margin was 39.2%, compared with 40.5% a year ago.

Business Strategy & Outlook Dan Romanoff, CPA, Senior Equity Analyst, 27 Feb 2024

Zoom Video Communications' mission is "to make video communications frictionless," which it accomplishes with a unified, video-first communications platform that incorporates video, voice, chat, and content sharing. More recently, Zoom introduced a phone system and a contact center solution. The company offers a differentiated peer-to-peer technology, complete with proprietary routing technology. Zoom is a recognized market leader in meeting software and is disrupting and expanding the $100 billion market for collaboration software with its ease of use and superior user experience. We think the pandemic lockdowns demonstrated the strength of the solutions, which combined with an expanding portfolio help establish a narrow moat.

Zoom relies mainly on a low-touch e-commerce model that lends itself to viral adoption, but it has also established a direct salesforce to gather and serve larger, more strategic customers. The firm was in the right place at the right time during the covid-19 lockdowns and saw its user base explode. Outside of a broader portfolio, we see Zoom executing well so early in its lifecycle in a classic land-and-expand strategy. We like this approach because it offers the best of both worlds and should allow for penetration into the large enterprise accounts that drive revenue, as well as the ability to generate above-average margins. This is an opportunity for the company, which has also done an excellent job of balancing growth and margins. Growth has slowed after covid-19, even as margins have surged, so we think Zoom is well positioned to use cash flow generation to fund innovation and growth.

With the 2019 introduction of Zoom Phone, Zoom contact center, Zoom Apps, and OnZoom, the portfolio is expanding meaningfully. The company's focus is squarely on adding as many users as possible. This starts with generating buzz and familiarity with free users while the direct salesforce sells to enterprise accounts. Last, customer count, deal size, and forward-looking metrics related to demand continue to expand.

Bulls Say Dan Romanoff, CPA, Senior Equity Analyst, 22 Aug 2024

- Zoom's user base and revenue surged during the pandemic; we expect most of these users to remain customers and drive continued growth in the coming years.
- Zoom offers a disruptive technology that is designed from the ground up as a video-first collaboration platform. Customer satisfaction is well above that for video conferencing peers.
- Zoom's low-touch, low-friction model helps drive strong margins. The company is already profitable on a GAAP basis, which is well ahead of other high-growth software peers.

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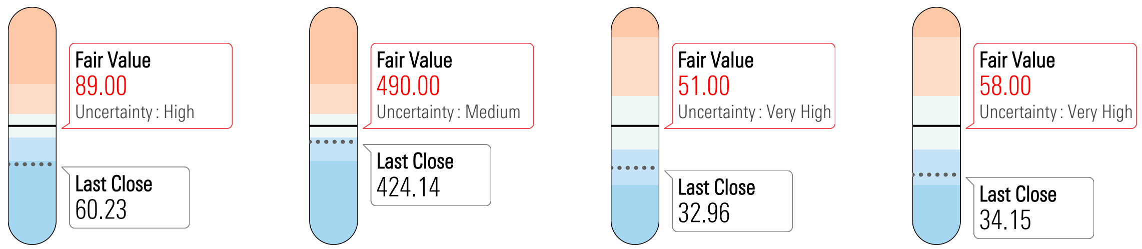
Competitors

	Zoom Video Communications Inc ZM	Microsoft Corp MSFT	RingCentral Inc Class A RNG	Five9 Inc FIVN



	Zoom Video Communications Inc ZM	Microsoft Corp MSFT	RingCentral Inc Class A RNG	Five9 Inc FIVN
Economic Moat	Narrow	Wide	None	None
Currency	USD	USD	USD	USD
Fair Value	89.00 22 Aug 2023 02:04, UTC	490.00 31 Jul 2024 06:07, UTC	51.00 16 Feb 2023 16:54, UTC	58.00 9 Aug 2024 16:43, UTC
1-Star Price	120.15	661.50	89.25	101.50
5-Star Price	62.30	343.00	25.50	29.00
Assessment	Undervalued 22 Aug 2024	Undervalued 22 Aug 2024	Undervalued 22 Aug 2024	Undervalued 22 Aug 2024
Morningstar Rating	★★★★22 Aug 2024 21:45, UTC	★★★★22 Aug 2024 21:29, UTC	★★★★22 Aug 2024 21:46, UTC	★★★★22 Aug 2024 21:44, UTC
Analyst	Dan Romanoff, Senior Equity Analyst	Dan Romanoff, Senior Equity Analyst	Dan Romanoff, Senior Equity Analyst	Emma Williams, Equity Analyst
Capital Allocation	Standard	Exemplary	Poor	Standard
Price/Fair Value	0.76	0.85	0.64	0.57
Price/Sales	4.11	12.92	1.34	2.58
Price/Book	2.19	11.74	—	4.85
Price/Earning	23.52	35.94	—	—
Dividend Yield	0.00%	0.71%	0.00%	0.00%
Market Cap	21.05 Bil	3,090.51 Bil	3.01 Bil	2.48 Bil
52-Week Range	55.06—75.91	309.45—468.35	25.08—38.35	28.75—92.40
Investment Style	Mid Blend	Large Growth	Small Blend	Small Growth

Bears Say Dan Romanoff, CPA, Senior Equity Analyst, 22 Aug 2024

- The biggest risk facing Zoom is executing across so many different aspects of growth simultaneously. For example, Zoom Phone is a more complex sale, and the company is moving from smaller to larger customers.
- Cisco and Microsoft are prominent in the video conferencing market and can bundle a broad array of solutions in response to a competitive threat from Zoom.
- Growth was pulled forward during covid-19 and remains depressed. It is not clear that revenue can accelerate meaningfully from current levels on a more durable trajectory.

Economic Moat Dan Romanoff, CPA, Senior Equity Analyst, 27 Feb 2024

We assign a narrow moat rating to Zoom based primarily on switching costs with an emerging moat source arising from network effects. The covid-19 pandemic accelerated Zoom's growth and provided a massive influx of new users, propelling an already-strong return on invested capital even higher in fiscal 2021 and most likely going forward. We think that many of these new customers, in particular enterprise customers, are sticky and will remain with Zoom for years. The company's impressive record of 12-month net dollar expansion rates of 130% or better in each quarter since July 2018 points to exceptionally sticky customer relationships, even if initial adoption is free and viral. Given the company's rapid scaling, expanding product portfolio, and move to establish itself as a communication platform rather than an application company, we think Zoom's competitive position will support excess returns on capital over the next decade.

Zoom provides a collaboration platform that was designed initially as a video conferencing solution. Zoom Meetings is the core platform, which has grown over the last several years. Initially, Zoom focused on individual and group video conferencing, screen sharing, audio conferencing, searchable and archived transcripts, chat, and file sharing. Now, it has expanded its portfolio to include Zoom Phone, video webinars, events, hardware-as-a-service partners, and a variety of other products. Importantly, in its quest to become a communications platform company, Zoom has introduced the Zoom Apps marketplace and enhanced its development platform with application programming interfaces and an enhanced software development kit.

In our view, switching costs in software are driven by several factors, the most obvious of which is the time and expense of implementing a new software package for the customer while maintaining the existing platform. There are indirect costs along those same lines, mainly lost productivity as customers move up a learning curve on the new system and the distraction of users involved in the function where the change is occurring. Lastly, and perhaps most importantly, there is the operational risk, including loss of data during the changeover, project execution, and potential operational disruption. The more critical the function and the more touch points across an organization a software vendor has, the higher the switching costs will be.

Through this lens, Zoom often sees little difficulty or incremental expense in initial pilot programs or even in some major rollouts involving thousands of users. Indeed, this is a feature of Zoom's business model. Zoom employs a hybrid go-to-market strategy, with self-service through its website and a direct salesforce. Potential customers can visit the company's website, download the software, and be up and running within minutes (in a simple case), reinforcing the “frictionless” message the company espouses. Zoom relies on viral adoption from here, with an internal champion pushing team members to use Zoom. The platform then spreads to new teams and ultimately to new use cases. During the pandemic, users from the biggest enterprises in the world to single-person businesses turned to Zoom to help them conduct something akin to business as usual.

On the surface, this easy and frictionless rollout seems counterintuitive to high customer switching costs. Since simplicity is a core pillar of Zoom's philosophy, initially we saw little specialized training or

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lost productivity as a result of switching video conference calling software platforms. In the simplest of cases, easy to deploy means easy to switch as well, but we see this mainly in small and medium-size businesses, so some small use cases amounted to nothing more than trials, both before and during the pandemic. Competing platforms like Microsoft Teams are also frictionless and therefore represent competitive threats to Zoom. Further, an organization can easily deploy multiple communication solutions while users can pick up a headset and work with multiple services. In fact, nearly every organization of commercial size that uses Zoom also uses Microsoft Office, which includes Teams. Slack, is another collaboration platform that completes head-to-head with Teams, and Slack management has repeatedly hammered this point home: While virtually all of its customers already used the Office suite, Slack was still used, likely due to more features, better connectivity, and a much more robust set of prebuilt integrations for other applications. We think that while not exactly the same, Zoom's situation is similar to that of Slack, and customers continue to adopt the solutions despite having Teams already present in their organizations.

While employee preference and inertia can drive switching costs, we do not see a steep learning curve for users among the baseline products in video conferencing on any of these platforms. Despite our views that Zoom is an easy-to-use, reliable, and robust solution, the ease with which users can try the product make it theoretically susceptible to competition, especially when it comes from large firms such as Microsoft, Cisco, and Google. Then again, easy trial usage is a feature to create a new customer pipeline rather than a bug that results in a competitive threat.

Looking at the competitive landscape, we believe that enterprise software companies compete on features and functionality rather than price. Pricing among Microsoft, Cisco, Zoom, Slack, and others is generally similar, with tiered versions from free to $20 per user per month (list price). The exact features included in each tier vary and make precise comparisons challenging, but they are generally consistent with one another. At the large-scale end, competition includes mainly Microsoft (Teams) and Cisco (Webex), while in the midmarket and SMB area, we see LogMeIn (GoToMeeting), BlueJeans, Google (Workspace), Slack, and a variety of bundled and point solutions from the likes of RingCentral and Five9. Ultimately, we do not believe that enterprises will adopt an inferior solution just to save a few dollars per employee per month. We think simplicity and a better user experience are allowing Zoom to take customers from legacy providers, and ultimately Microsoft and Zoom are best positioned over the next several years. We also think stepped-up investments by Cisco will help stem recent market share erosion from Webex's substantial installed base.

Despite a variety of competitors, including products from a handful of tech giants, the collaboration software market is growing rapidly and we envision Zoom capturing its fair share of new customer wins and seat expansion in the decade ahead, all of which should lead to excess returns on capital. We believe that the various remote work and workflow solutions ultimately result in a market opportunity in

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excess of $100 billion annually. In its S-1 filing, the company sized the unified communications and collaboration market at $34 billion in 2019, but Zoom now sees it expanding to $91 billion in 2025, based on data from a variety of sources including Gartner and IDC. We're pleased to see other estimates increasing to meet our own, but our larger point is that the market for Zoom's solutions is enormous and growing rapidly. Thanks to the pandemic, modern converged cloud-based solutions that solve a variety of communications needs will capture the most market share, in our view. Zoom's products would need to devolve from leading solutions into clearly inferior ones in the decade ahead for the company to surrender its share of growth and profits awaiting in this massive market opportunity.

Moreover, we do not see a scenario where an organization uses Teams for a year, then freely switches to Webex, then switches again to Zoom based on discounted pricing or some other random factor. We believe that collaboration software, including Zoom's solutions, becomes stickier in an organization once the paid version is implemented, as Zoom has more touch points and becomes more ingrained in the organization's workflows. At some point during the process, we see smaller organizations typically converting from the free version to a paid version, depending on the features they need. Larger, enterprise customers are unlikely to begin as free users but might trial the software on a specific group and therefore keep the cost nominal. Regardless of product pricing, rolling out a platform across an entire organization takes time and effort, so organizations are unlikely to switch away from an implemented solution in order to indiscriminately try other software. If other solutions were being considered, they would likely be used on a trial basis within a small group as well. However, Zoom's massive enterprise growth has not come from a wave of these small trials, but rather, more involved enterprisewide rollouts.

According to management, 55% of customers started with the free offering, which is not the same as a conversion rate but certainly reinforces the power of viral marketing. Zoom is not the first company to use a free version to quickly and cheaply gather users in a high-level funnel. Within Morningstar's technology coverage, we count HubSpot (narrow moat), Atlassian (narrow moat), VMware (narrow moat), Okta (narrow moat), IBM (narrow moat), and Oracle (narrow moat) as offering completely free versions for some their solutions. Additionally, we see at least a dozen other software companies covered by Morningstar that have either a wide or narrow moat that also offer free trial periods for their software. For larger and strategic accounts, Zoom employs a direct salesforce to generate leads and a customer success team to service clients. We think these teams help establish and maintain customer relationships and therefore boost switching costs as well.

When we launched coverage in 2019, our initial no-moat rating stemmed from two concerns: easy rollouts (users are easy come, easy go) and a relatively highly competitive threat. Since that time, the world and video collaboration tools have witnessed profound changes. We believe these concerns were more relevant when video conference calling was a niche luxury technology, but such tools quickly became a necessity. Even as employees return to offices, the model going forward is clearly going to be a hybrid of remote and in-person work, where these tools will remain essential. In 2020 with the covid-19 pandemic, we saw the obvious and mandated rise of remote and hybrid working arrangements. This shift required not just the business need for robust collaboration tools, but greater integration of such tools into business workflows. In turn, switching to a different set of collaboration tools today would be more disruptive than it was just a couple of years ago.

Over the past two years, we believe that initial installations at many enterprise customers are complete, but those customers are likely thinking more strategically and are more tightly integrating Zoom more formally into their workflow in order to maximize the value provided by the solution. Back-end integration means the solution is tied into other applications and core systems at the code level, which makes a software solution hard to change, even if there are potentially better solutions available. For example, a company might use both Salesforce and Zoom, and there is a high likelihood that directly in the Salesforce app, there is a button to initiate a Zoom meeting. Similarly, if an enterprise uses Adobe's Digital Experience and Digital Marketing clouds, an obvious case would be to have Zoom Video Conferencing or Zoom Phone embedded into the workflow management portion on the creative side so the creative team could quickly meet, complete with whiteboard functionality to brainstorm, and then have the ability to bring members on the campaign management side into the meeting in order to have a real-time analysis of the efficacy of the last marketing campaign the company just ran--all without leaving the Adobe dashboard. Again, Zoom might be easy for employees to use by picking up a headset, but the back-end integration is harder to implement, so organizations are less likely to switch without a pressing need.

After the pandemic, the portfolio continues to grow and the installed base is now a multiple of what it was just two years ago. More solutions employed by a customer make switching more difficult. In the last two years, Zoom introduced a variety of key new products and significantly enhanced existing solutions. For example, it launched hardware as a service whereby the company has partnered with various hardware suppliers to provide approved and often unique hardware appliances to meeting rooms to smoothly offer Zoom solutions. Further, while the acquisition of Five9 was terminated, we see the early 2022 launch of Zoom Video Engagement Center as filling an obvious hole in the portfolio for a contact center solution, and we expect strong cross-selling traction not unlike Zoom Phone enjoys.

We see the time, expense, and complexity increasing as large customers also elect Zoom Phone and any number of the other solutions in the growing portfolio. Zoom Phone in particular has gone from test cases two years ago to more than 2 million seats by April 2021, meaning that customers are adopting more solutions from Zoom's portfolio and therefore tightening their bond with the company. By comparison, it took narrow-moat RingCentral 20 years to capture 3.5 million seats as of June 2021, so the adoption of Zoom Phone within the enterprise has been rapid and impressive, in our view. Training and employee learning curves are not the main source of switching costs for Zoom, in our view, but increasing complexity likely leads to higher training needs as well.

Lastly, the pandemic has proved that flexibility is imperative and the remote work capabilities that Zoom provides are absolutely essential. As video conferencing has gone from nice to have to necessity in a hybrid environment as workers return to their offices, we see higher switching costs. We stress this point, as companies are clearly opting for hybrid work environments to have a permanent presence in their organizations going forward.

The data shows Zoom continues to enjoy viral adoption once it has an initial use case, with trailing 12-month net dollar expansion rates of 130% or better in each quarter since July 2018, which is a very strong absolute level and a remarkable run over three years--one which we think we continue over the next several years. We also see larger deals growing well in excess of the corporate average. We believe this data suggests that when companies deploy Zoom, they overwhelmingly pay for it and push it out to additional departments and use cases, which we view as supportive of our high customer switching costs argument.

Zoom's momentum has continued even as the lockdowns have eased and employees have begun returning to the office. Revenue growth remained strong in calendar 2021 even against the very challenging comps in calendar 2020 as revenue spiked due to the start of the pandemic-related lockdowns. This top-line performance has clearly been besting Zoom's main competitors. Non-GAAP operating margins more than doubled in just one year compared with prepandemic levels. These unparalleled financial results have pushed ROICs to more than double from already excellent levels. We expect growth to moderate and ROICs to recede to prepandemic levels but remain strong over the longer term. The financial model has clearly changed as a result of Zoom scaling in one year rather than 10 years.

Regarding the network effect, we see several factors combining to create an emerging one. The most obvious indicator of the network effect in our opinion is the viral adoption model Zoom has employed, whereby a paying customer can have a video conference call with a nonpaying customer on any device. Given the ease of use and high quality of the basic solutions, users quickly get a simple trial and often move into a paid version, where they in turn host calls for other nonpaying users. This flywheel effect continually draws in new users. Zoom has launched an updated software development kit to make it easier for software developers to work with its solutions. The company has also created a marketplace where developers can distribute their own Zoom-related solutions; there are in excess of 50 products available already. Lastly, Zoom launched a $100 million venture fund to invest in companies that develop technologies involved in the ecosystem. We see these factors as creating a network effect that we envision expanding over time.

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We see the pandemic as permanently changing the need for video calling and other solutions that enable remote work. We think the massive jump in the installed base is a game changer for Zoom, and the expanding portfolio represents cross-selling opportunities that deepen ties and increase complexity. The data supports this view, and we therefore see Zoom as generating strong financial results and high and durable ROICs over the next decade.

Fair Value and Profit Drivers Dan Romanoff, CPA, Senior Equity Analyst, 27 Feb 2024

Our fair value estimate for Zoom is $89 per share, which implies a fiscal 2025 enterprise value/sales multiple of 5 times, adjusted price/earnings multiple of 18 times, and a 5% free cash flow yield.

We believe investors are most concerned with how growth normalized in a post-lockdown world. We see continued depressed revenue growth in fiscal 2025, followed by modest acceleration as post-covid-19 normalization continues and new (or newer) solutions, such as Zoom Contact Center and Zoom Phone penetration increase. We model a five-year compound annual growth rate of 4% through fiscal 2029. We think revenue will shift more toward existing customers over time, and solutions beyond Zoom Meetings (Phone, contact center, Rooms, and Connector, among others) will increase within the mix. We model non-GAAP operating margin contracting modestly over the next five years from 39% in fiscal 2024. Management's long-term guidance calls for margins of 28% to 32%.

We believe Zoom Phone and Zoom Contact Center will contribute significantly to revenue growth over the next decade. We see this substantial market as being able to support multiple winners, but given the covid-19 revenue surge, we are skeptical of a return to double-digit growth any time soon.

Risk and Uncertainty Dan Romanoff, CPA, Senior Equity Analyst, 27 Feb 2024

We assign Zoom a Medium Morningstar Uncertainty Rating. The stock experienced a roller coaster ride up during the covid-19 lockdowns and then down as the world returned to the office.

Zoom offers a freemium model and caters to companies of all sizes, which means revenue is concentrated among the largest customers, although there are no customers that account for 10% (or more) of revenue. On the flip side, smaller customers typically have higher churn, which is likely exacerbated in Zoom's case as the solution enjoyed mass adoption for consumers and small businesses during the covid lockdowns. We think churn and retention levels have normalized post-covid.

Zoom was actually profitable on a GAAP basis in fiscal 2019, and unlike many young software companies, we expect profitability to continue with strong margins over the next five years.

Zoom faces strong competition from a variety of technology providers, notably Microsoft, Cisco, Google, and LogMeIn, along with a wide variety of smaller niche solutions. Larger companies, such as Microsoft and Cisco, can bundle a number of solutions together with video conferencing. Further, most of these

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competitors also offer a free version of their products. Lastly, as the company expands Zoom Phone and Zoom Contact Center, we expect increased competition from legacy and modern cloud-based private phone providers, such as Avaya, RingCentral, Nice, Five9, and 8x8.

Capital Allocation Dan Romanoff, CPA, Senior Equity Analyst, 27 Feb 2024

We assign Zoom a Standard Morningstar Capital Allocation Rating. This rating reflects our assessments of a sound balance sheet, fair investments, and appropriate shareholder distributions. We think investments back into the business are most likely to be the key driver of total shareholder returns and are therefore appropriately prioritized over other capital returns such as dividends and buybacks. While Zoom has not historically paid a dividend, it began repurchasing shares in fiscal 2024 and announced it intends to continue that practice in fiscal 2025. With growth remaining depressed and margins high, we expect share buybacks to continue in the near term.

Zoom's capital deployment strategy centers around re-investing in the business and making generally small tuck-in acquisitions. Management has been building out the platform to include more solutions beyond video meetings, such as Zoom Phone, Zoom contact center, OnZoom, and Zapps, or Zoom apps. Given a limited acquisition history and generally low R&D (as a percentage of revenue), we wonder if Zoom is investing aggressively enough. Zoom does not pay a dividend, nor do we expect it to over the next several years.

Analyst Notes Archive

Zoom Earnings: Strong Period With Contact Center Experiencing Good Momentum Dan Romanoff, CPA, Senior Equity Analyst, 21 May 2024

We are maintaining our fair value estimate of $89 per share for narrow-moat Zoom after the company reported good fiscal first-quarter results above our expectations on both the top and bottom lines. At the same time, full-year guidance was raised but by less than upside in the quarter. We made only modest changes to our model based on guidance, and we continue to view the stock as undervalued. Results show a continuation of trends from the last several quarters, with enterprise growth and margins the most obvious areas of strength. Management still believes the second quarter will be the trough for revenue growth and expects to see modest top-line acceleration in the year's second half. Finally, the company repurchased 2.4 million shares for an aggregate price of $150 million.

We see accelerating revenue and momentum in contact center as a harbinger of better times later in the year, consistent with management's commentary. Total revenue accelerated modestly to 3.2% growth year over year in the quarter to $1.141 billion, compared with guidance of $1.125 billion. Demand looks solid across geographies. Enterprise growth continues to outpace overall growth and accelerated to 5.4% year over year, which we see as a positive sign for longer-term revenue expansion. Customers with more than $100,000 in trailing annual revenue grew 8% year over year against a difficult 23% growth comparison a year ago. Online average monthly churn ticked up to 3.2%, from 3.1% a year ago, based on stricter payment terms. Management noted that excluding changes to terms, churn was unchanged sequentially. We think churn can slowly improve over time.

Zoom's profitability remains impressive, but we do not think margins have much room to expand from current levels, especially given artificial intelligence development costs. In the first quarter, non-GAAP operating margin was 40.0%, compared with 38.2% a year ago, with improvements driven by headcount reductions and price increases last year.

Zoom Earnings: Company Sees the Quarter as a Growth Trough With 2025 Outlook Largely in Line

Dan Romanoff, CPA, Senior Equity Analyst, 27 Feb 2024

Narrow-moat Zoom reported good fourth-quarter fiscal 2024 results that were above our expectations on the top- and bottom line, while the fiscal 2025 outlook was largely in line with what we anticipated. We see results as a continuation of trends from last quarter, with enterprise growth outperforming the corporate average, but still decelerating. Importantly, management believes the second quarter will be the trough for revenue growth and expects to see modest top-line acceleration in the second half of the year. Zoom also highlighted strength in its fledgling contact center business, which is positive, as it carries an attractive price point to help drive revenue growth. Last, the board authorized a new $1.5 billion share repurchase. Given in-line guidance, we see little reason to make material changes to our model. Thus, we are maintaining our fair value estimate of $89 per share and see the stock as undervalued.

Enterprise growth continues to outpace overall growth and was up 5% year over year, which bodes well for longer-term revenue expansion. Total revenue grew 3% year over year as reported to $1.146 billion, compared with the top end of guidance of $1.130 billion. Customers with more than $100,000 in trailing annual revenue grew 10% year over year against a difficult 27% growth comparison a year ago. Online average monthly churn ticked down to 3.0%, from 3.4% a year ago, representing another best. We think churn can continue to inch lower over time. The international segment showed signs of stabilization, especially in Europe, which we think is due in part to new regional leadership.

Zoom's profitability remains impressive, but we think margins do not have much room to expand from current levels, especially given artificial intelligence development costs. In the fourth quarter, the non-GAAP operating margin was 38.7%, compared with 36.2% a year ago. Headcount reductions from earlier this year and improving costs buttressed profitability.

Zoom Earnings: Stabilization Continues with Positive Indicators, but Fiscal 2025 Guidance Is Lurking

Dan Romanoff, CPA, Senior Equity Analyst, 21 Nov 2023

Narrow-moat Zoom reported a good fiscal third quarter, beating our expectations on both the top and

Morningstar Equity Analyst Report | Report as of 22 Aug 2024 22:34, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS Page 12 of 25

Zoom Video Communications Inc ZM ★★★★ 22 Aug 2024 21:45, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
60.23 USD 21 Aug 2024	89.00 USD 22 Aug 2023 02:04, UTC	0.76	21.04 USD Bil 22 Aug 2024	Narrow	Mid Blend	High	Standard	7 Aug 2024 05:00, UTC

bottom lines, while the fourth-quarter outlook was in line with what we anticipated. Key developments this quarter include the continued decline in online average monthly churn to 3.0%, which is a new low and clearly demonstrates the pandemic effects are a thing of the past; a slowdown in in enterprise customer additions, which we think is consistent with continued macroeconomic uncertainty; and approximately 7 million phone seats and 700 contact center customers, both of which are in line with our analysis. Given in-line guidance, we see little reason to make material changes to our model, especially ahead of fiscal 2025 guidance, which we expect management to provide on the fourth-quarter earnings call. Thus, we are maintaining our fair value estimate of $89 per share, and see shares as undervalued.

Enterprise growth continues to outpace overall growth, rising 8% year over year, boding well for longer-term revenue expansion. Revenue grew 3.2% year over year as reported, or 3.5% in constant currency, to $1.137 billion, versus the top end of guidance of $1.120 billion. Customers with more than $100,000 in trailing annual revenue grew 14% year over year against a difficult 31% growth comparison in 2022. Online average monthly churn ticked down to 3.0%, from 3.1% a year ago, which is a new low. Zoom believes there is room for this metric to continue to trend favorably, which we view as a positive development. International continues to struggle, but we see signs of encouragement from new regional leadership.

Zoom’s profitability remains impressive, but we think margins do not have much room to expand from current levels, especially given artificial intelligence development costs. In the third quarter, non-GAAP operating margin was 39.3%, compared with 34.6% a year ago. Headcount reductions from earlier this year and improving cost to serve buttressed profitability.

Zoom Earnings: Phone and Contact Center Still Hold Key to Growth Dan Romanoff, CPA, Senior Equity Analyst, 22 Aug 2023

Narrow-moat Zoom reported strong fiscal second-quarter results that were meaningfully ahead of our expectations on both the top and bottom lines, while the full-year outlook was raised approximately in line with upside in the quarter. We see two important new and positive disclosures in that Zoom phone reached roughly $500 million on an annualized run rate basis and Zoom contact center surpassed 500 customers in just six quarters. Enterprise remains solid but continues to decelerate, while significant improvements in the online business seem to have plateaued even as management sees no change in the overall demand environment. We modestly lowered our estimates for revenue growth over the next several years based on continued deceleration in enterprise and a pause in online improvements. As a result, we are lowering our fair value estimate to $89 per share, from $95 previously. However, we still see shares as undervalued.

Revenue grew 3.6% year over year as reported, or 4.5% in constant currency, to $1.139 billion, compared with the top end of guidance of $1.115 billion. Enterprise growth continues to outpace overall growth and was up 10% year over year. The online business has shown signs of improvement, with online average monthly churn ticking down to 3.2%, from 3.6% a year ago and is basically at historical levels. That said, management indicated some moderation around this business. Europe and Japan remain sluggish but both seem to be bottoming, as both regions grew sequentially for the first time in more than a year. Customers with more than $100,000 in trailing annual revenue grew 18% year over year against a challenging 37% growth comparison last year.

Zoom's profitability remains impressive, but we think margins do not have much room to expand from current levels. In the second quarter, non-GAAP operating margin was 40.5%, compared with 35.8% a year ago, and the midpoint of guidance at 36.6%. Headcount reductions last quarter contributed to margin strength.

Zoom Earnings: Zoom Phone Hits 10% of Revenue and Online Business Begins to Recover Dan Romanoff, CPA, Senior Equity Analyst, 23 May 2023

Narrow-moat Zoom reported strong fiscal first-quarter results ahead of our expectations on both the top and bottom lines, featuring revenue above the top end of guidance and non-GAAP profitability well ahead of the company's outlook. Enterprise was solid but continues to decelerate, while the online business showed signs of life a couple quarters earlier than expected. Currency headwinds have eased even if the demand environment remains cautious based on uncertain macro conditions. Importantly, management disclosed that Zoom Phone revenue surpassed 10% of total, pointing to continued traction. Zoom lifted its outlook for the year, but mostly because of this first-quarter upside, so we are therefore holding our fair value estimate steady at $95 per share. Shares are undervalued, but we continue to prefer other wide-moat names across software.

Revenue grew 3% year over year as reported, or 5% in constant currency, to $1.105 billion, compared with the top end of guidance of $1.085 billion. Consistent with the last several quarters, enterprise revenue was a highlight, up 13% year over year, while online business has begun to show signs of improvement. Online average monthly churn improved to 3.1%, compared with 3.6% a year ago, while price increases further helped stabilize the business. Europe and Japan remain sluggish. Customers with more than $100,000 in trailing annual revenue grew 23% year over year against a challenging 46% growth comparison last year.

Zoom's profitability remains impressive, but we think margins are at a short-term peak and do not have much room to expand from current levels. In the first quarter, non-GAAP operating margin was 38.2%, compared with 37.2% a year ago, and the midpoint of guidance at 34.8%. Management undertook a variety of cost saving, productivity, and efficiency measures that began in the fourth quarter and culminated with a substantial reduction in force of 15%, or 1,300 employees overall.

Morningstar Equity Analyst Report | Report as of 22 Aug 2024 22:34, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS Page 14 of 25

Zoom Video Communications Inc ZM ★★★★ 22 Aug 2024 21:45, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
60.23 USD 21 Aug 2024	89.00 USD 22 Aug 2023 02:04, UTC	0.76	21.04 USD Bil 22 Aug 2024	Narrow	Mid Blend	High	Standard	7 Aug 2024 05:00, UTC

Good Quarter for Zoom, Including Phone; Profitability Booms in Guidance; FVE Stable at $95 Dan Romanoff, CPA, Senior Equity Analyst, 28 Feb 2023

Narrow-moat Zoom reported upside to the top and bottom lines for its fiscal fourth quarter, featuring revenue above the top end of guidance and non-GAAP profitability well ahead of the company's outlook. Enterprise strength continues to be overshadowed by online weakness, which we expect to normalize in the second half of the year. Currency headwinds continue to ease, while the demand environment remains cautious, with elongated sales cycles. New products are gaining traction, but remain relatively small as a percentage of revenue. The outlook for the year was mixed relative to our expectations, with revenue coming in below and non-GAAP operating income coming in better. These impacts generally offset each other and keep our fair value steady at $95 per share. We continue to prefer our wide-moat names during the prolonged software selloff.

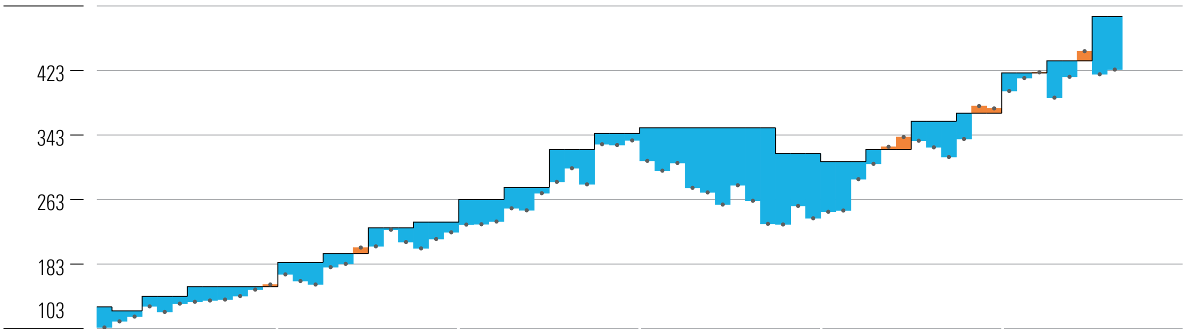
Revenue grew 4% year over year as reported, or 6% in constant currency, to $1.118 billion, compared with FactSet consensus of $1.100 billion. Consistent with the last several quarters, enterprise revenue was strong, up 18% year over year, while online business continues to struggle, and Europe was soft, with the region declining 9% compared with the same period last year. Customers with more than $100,000 in trailing annual revenue grew 27% year over year against a challenging 66% growth comparison last year. Zoom Phone, Zoom Rooms, Zoom One, and contact center continue to see good traction. Contact center notably won a 2,000 seat deal and was up more than 100% year over year, while the company exited the quarter with more than 5.5 million Zoom Phone seats. Online average monthly churn improved to 3.4%, compared with 3.8% a year ago. We continue to believe Zoom One and new or newer solutions like phone and the contact center will be instrumental in revenue acceleration next year.

Morningstar Equity Analyst Report | Report as of 22 Aug 2024 22:34, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS

Zoom Video Communications Inc ZM ★★★★ 22 Aug 2024 21:45, UTC

Competitors Price vs. Fair Value

Microsoft Corp MSFT



Fair Value: 490.00
31 Jul 2024 06:07, UTC

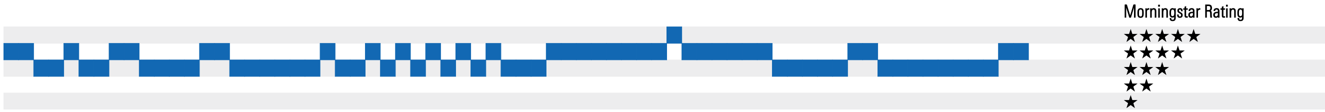
Last Close: 424.14

Overvalued

Undervalued

	2019	2020	2021	2022	2023	YTD
Price/Fair Value	1.02	0.95	0.97	0.75	1.02	0.85
Total Return %	57.12	42.37	52.24	-27.94	57.96	13.39

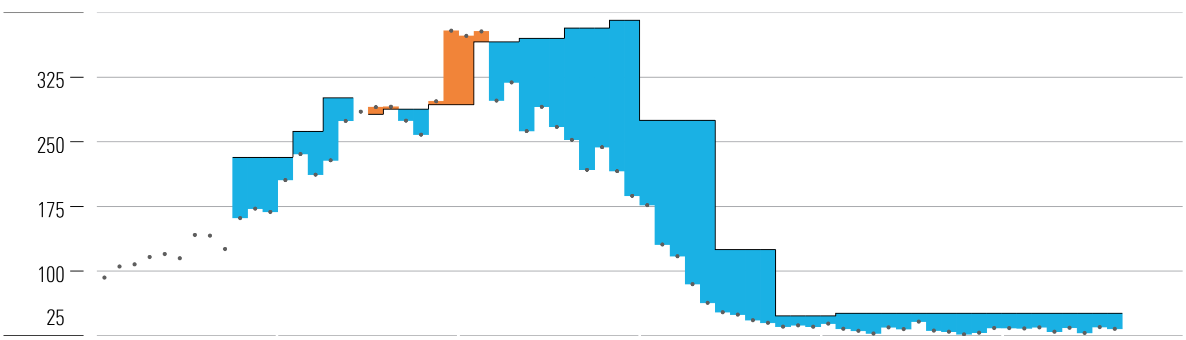
Morningstar Rating



★★★★★
★★★★
★★★
★★
★

Total Return % as of 21 Aug 2024. Last Close as of 21 Aug 2024. Fair Value as of 31 Jul 2024 06:07, UTC.

RingCentral Inc Class A RNG



Fair Value: 51.00
16 Feb 2023 16:54, UTC

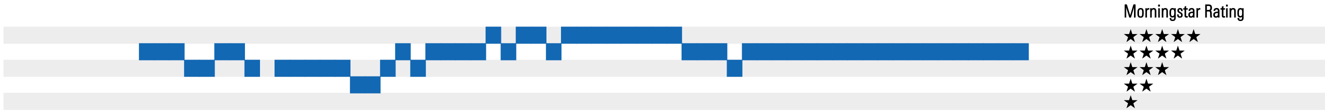
Last Close: 32.96

Overvalued

Undervalued

	2019	2020	2021	2022	2023	YTD
Price/Fair Value	0.73	1.29	0.48	0.74	0.67	0.64
Total Return %	104.60	124.68	-50.56	-81.10	-4.10	-2.92

Morningstar Rating



★★★★★
★★★★
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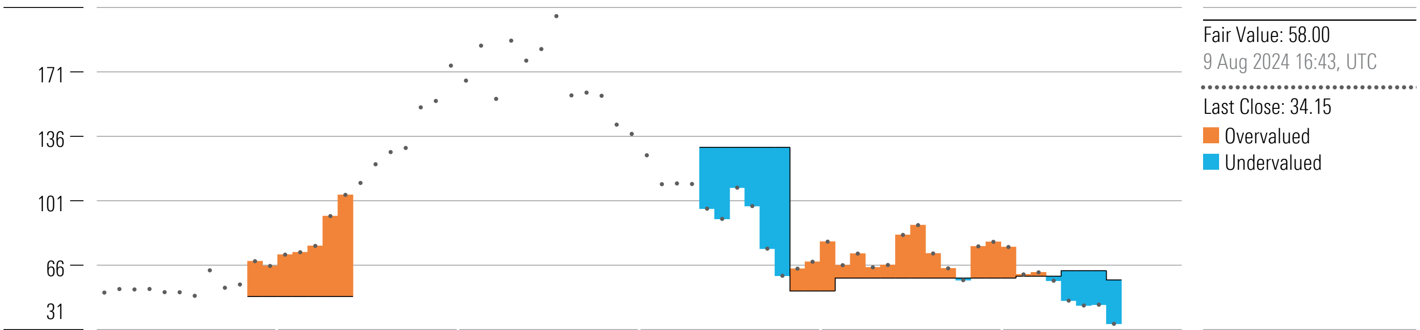
Total Return % as of 21 Aug 2024. Last Close as of 21 Aug 2024. Fair Value as of 16 Feb 2023 16:54, UTC.

Morningstar Equity Analyst Report | Report as of 22 Aug 2024 22:34, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS

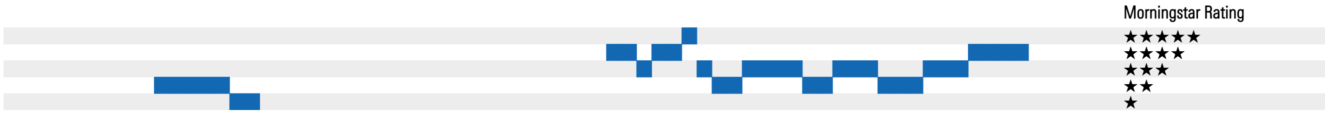
Zoom Video Communications Inc ZM ★★★★ 22 Aug 2024 21:45, UTC

Competitors Price vs. Fair Value

Five9 Inc FIVN



	2019	2020	2021	2022	2023	YTD
Price/Fair Value	1.34	2.20	—	1.31	1.33	0.57
Total Return %	50.00	165.93	-21.26	-50.58	15.96	-56.60



Total Return % as of 21 Aug 2024. Last Close as of 21 Aug 2024. Fair Value as of 9 Aug 2024 16:43, UTC.

Zoom Video Communications Inc ZM ★★★★ 22 Aug 2024 21:45, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
60.23 USD 21 Aug 2024	89.00 USD 22 Aug 2023 02:04, UTC	0.76	21.04 USD Bil 22 Aug 2024	Narrow	Mid Blend	High	Standard	7 Aug 2024 05:00, UTC

Morningstar Historical Summary

Financials as of 30 Apr 2024

Fiscal Year, ends 31 Jan	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
Revenue (USD K)	—	—	—	60,817	151,478	330,517	622,658	2,651,368	4,099,864	4,392,960	1,141,234	4,563,094
Revenue Growth %	—	—	—	—	149	118	88.4	325	54.6	7.1	3.2	3.1
EBITDA (USD K)	—	—	—	1,219	-2,047	13,175	29,145	688,705	1,111,779	327,750	229,689	825,601
EBITDA Margin %	—	—	—	2.0	-1.4	4.0	4.7	26.0	27.1	7.5	20.1	18.1
Operating Income (USD K)	—	—	—	0	-4,833	6,167	12,696	659,848	1,063,591	245,429	203,022	718,559
Operating Margin %	—	—	—	0.0	-3.2	1.9	2.0	24.9	25.9	5.6	17.8	15.8
Net Income (USD K)	—	—	—	-14	-3,822	7,584	25,305	672,316	1,375,639	103,711	216,308	838,326
Net Margin %	—	—	—	0.0	-5.4	0.0	3.5	25.3	33.5	2.4	19.0	18.4
Diluted Shares Outstanding (K)	—	—	—	268,805	268,805	257,925	254,298	298,128	305,827	304,231	315,361	311,331
Diluted Earnings Per Share (USD)	—	—	—	0.00	-0.03	0.00	0.09	2.25	4.50	0.34	0.69	2.71
Dividends Per Share (USD)	—	—	—	—	—	—	—	—	—	—	—	—

Valuation as of 31 Jul 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Sales	—	—	—	—	—	34.8	51.0	14.3	4.8	4.9	4.0	4.1
Price/Earnings	—	—	—	—	—	1,250.0	232.6	49.0	29.6	94.3	21.8	22.3
Price/Cash Flow	—	—	—	—	—	142.9	90.1	31.2	16.1	15.1	10.4	10.6
Dividend Yield %	—	—	—	—	—	—	—	—	—	—	—	—
Price/Book	—	—	—	—	—	24.3	64.5	10.7	3.4	3.0	2.2	2.3
EV/EBITDA	0.0	0.0	0.0	0.0	0.0	1.4	3.2	0.1	0.0	0.0	0.0	0.0

Operating Performance / Profitability as of 30 Apr 2024

Fiscal Year, ends 31 Jan	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
ROA %	—	—	—	—	-3.8	0.0	2.7	20.4	21.4	1.3	2.1	8.9
ROE %	—	—	—	—	—	—	5.3	28.6	28.5	1.7	2.7	11.3
ROIC %	—	—	—	—	—	—	4.7	27.6	27.9	1.7	2.6	11.2
Asset Turnover	—	—	—	—	0.7	1.2	0.8	0.8	0.6	0.6	0.1	0.5

Financial Leverage

Fiscal Year, ends 31 Jan	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Debt/Capital %	—	—	—	—	—	—	7.2	2.3	1.5	1.2	0.5	—
Equity/Assets %	—	—	—	—	—	—	64.7	72.9	76.5	76.4	80.6	—
Total Debt/EBITDA	—	—	—	—	—	—	2.5	0.2	0.1	0.3	0.3	—
EBITDA/Interest Expense	Infinite	Infinite	Infinite	—	—	—	—	—	—	—	—	—

Morningstar Analyst Historical/Forecast Summary as of 21 Aug 2024

Financials

Fiscal Year, ends 31 Jan 2024	2023	2024	Estimates 2025	2026	2027
Revenue (USD Mil)	4,393	4,527	4,646	4,797	4,951
Revenue Growth %	7.1	3.1	2.6	3.3	3.2
EBITDA (USD Mil)	328	630	912	986	1,035
EBITDA Margin %	7.5	13.9	19.6	20.5	20.9
Operating Income (USD Mil)	245	525	807	883	936
Operating Margin %	5.6	11.6	17.4	18.4	18.9
Net Income (USD Mil)	1,329	1,607	1,797	1,597	1,571
Net Margin %	30.3	35.5	38.7	33.3	31.7
Diluted Shares Outstanding (Mil)	304	309	314	314	314
Diluted Earnings Per Share(USD)	4.37	5.21	5.72	5.09	5.00
Dividends Per Share(USD)	0.00	0.00	0.00	0.00	0.00

Forward Valuation

	2023	2024	Estimates 2025	2026	2027
Price/Sales	5.0	4.4	4.5	4.4	4.3
Price/Earnings	17.2	12.4	11.9	13.4	13.6
Price/Cash Flow	—	—	—	—	—
Dividend Yield %	—	—	—	—	—
Price/Book	3.7	2.5	2.4	2.2	2.1
EV/EBITDA	51.8	21.4	14.9	13.8	13.1

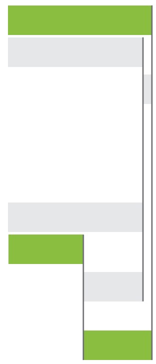
Morningstar Equity Analyst Report | Report as of 22 Aug 2024 22:34, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS Page 18 of 25

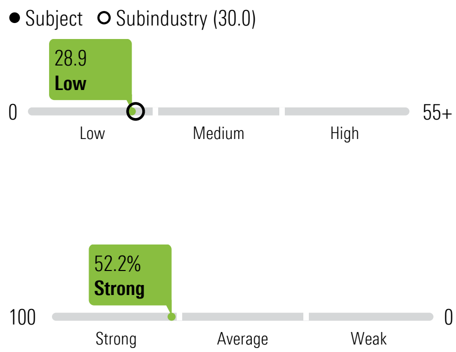
Zoom Video Communications Inc ZM ★★★★ 22 Aug 2024 21:45, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
60.23 USD 21 Aug 2024	89.00 USD 22 Aug 2023 02:04, UTC	0.76	21.04 USD Bil 22 Aug 2024	Narrow	Mid Blend	High	Standard	7 Aug 2024 05:00, UTC

ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	28.9
– Manageable Risk	27.1
Unmanageable Risk[2]	**1.8**
Management	
Manageable Risk	27.1
– Managed Risk[3]	14.1
Management Gap[4]	**13.0**
Overall Unmanaged Risk	**14.8**





- 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 52.2% 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 Aug 07, 2024. Highest Controversy Level is as of Aug 08, 2024. Sustainalytics Subindustry: Enterprise and Infrastructure Software. 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 07 Aug 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	
Zoom Video Communications Inc	28.9 | Low	0 – 55+	52.2 | Strong	100 – 0	14.8 | Low	0 – 40+
Microsoft Corp	33.8 | Low	0 – 55+	62.4 | Strong	100 – 0	14.2 | Low	0 – 40+
RingCentral Inc	37.2 | Medium	0 – 55+	46.9 | Average	100 – 0	21.0 | Medium	0 – 40+
Five9 Inc	39.6 | Medium	0 – 55+	33.1 | Average	100 – 0	27.4 | Medium	0 – 40+
HubSpot Inc	31.4 | Low	0 – 55+	57.5 | Strong	100 – 0	14.6 | Low	0 – 40+

Morningstar Equity Analyst Report | Report as of 22 Aug 2024 22:34, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NASDAQ - ALL MARKETS

Appendix
Historical Morningstar Rating

Zoom Video Communications Inc ZM 22 Aug 2024 21:45, 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 —

Microsoft Corp MSFT 22 Aug 2024 21:29, UTC

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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.

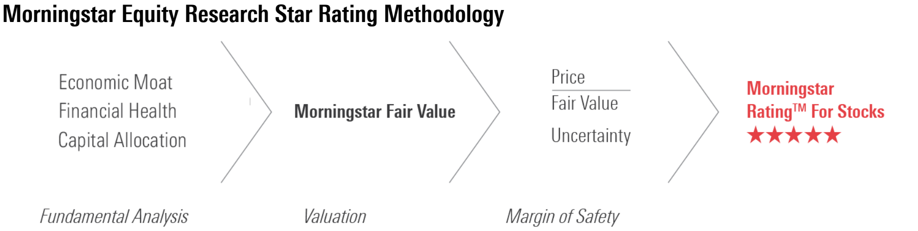
Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return 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.

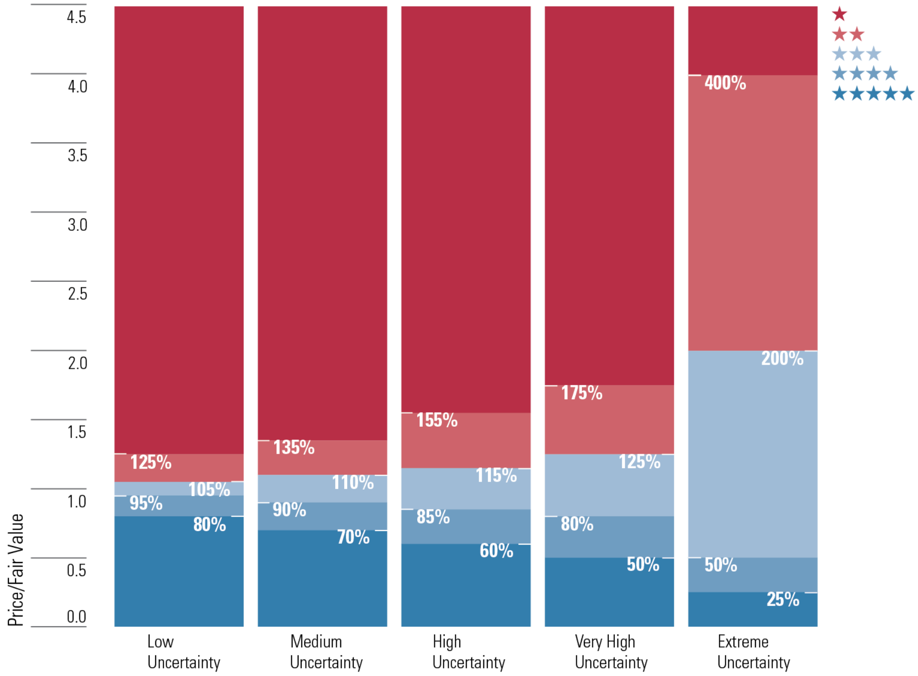
4. Market Price

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/

Ratings should not be used as the sole basis in evaluating a company or security. Ratings involve unknown risks and uncertainties which may cause our expectations not to occur or to differ significantly from what was expected and should not be considered an offer or solicitation to buy or sell a security.

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