


Dell Technologies Inc Ordinary Shares - Class C

DELL★★★★

18 Dec 2025 22:30, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
127.89 USD 17 Dec 2025	150.00 USD 26 Nov 2025 05:20, UTC	0.85	81.47 USD Bil 18 Dec 2025	None	Large Value	High	Exemplary	 3 Dec 2025 06:00, UTC

Sector	Industry
 Technology	Computer Hardware

Business Description

Dell Technologies is a broad information technology vendor, primarily supplying hardware to enterprises. It focuses on premium and commercial personal computers, as well as enterprise on-premises data center hardware. It holds top-three market shares in its core markets of personal computers, peripheral displays, mainstream servers, and external storage. Dell has a robust ecosystem of component and assembly partners, and also relies heavily on channel partners to fulfill its sales.

estimate.

► We are increasingly confident in the health of AI-related demand, and management commentary suggested that this demand is broadening, with orders less concentrated among a few large clients, and growth in sovereign and enterprise demand, as well as tier 2 CSPs.

Long view: We forecast an EPS CAGR of 16%, in line with the long-term guide of 15%-plus, and believe Dell will grow into its historical 11 times forward P/E multiple by the end of fiscal 2027. We don't give full credit on long-term growth (6% CAGR vs. the guide of 7%-9%), meaning there could be further upside.

Business Strategy & Outlook Eric Compton, CFA, Director, 29 Aug 2025

Dell is a tech titan with a substantial share in personal computers, servers, and storage arrays. The PC market is relatively consolidated, with the top players controlling the majority of the market. Servers and storage are less consolidated, but Dell is a leading player in both segments. Just under half of Dell's revenue comes from its PC business, and just over half comes from the servers and storage segment. Dell primarily sells to enterprises.

The IT hardware and PC markets can fluctuate in response to overall refresh cycles and IT spending, as equipment ages, technology advances, and economic conditions change. The covid-19-driven work-from-home trend led to an unusual boost in demand for PCs, which has now receded. Dell functions as an original equipment manufacturer, which means it sells finished products that are often manufactured and assembled by original device manufacturers. Dell provides its specifications to the ODMs, the ODMs handle much of the manufacturing, and the final product is sold under the Dell brand by Dell. Dell does a good job of coordinating a complex supply chain, providing the necessary services, support, and product specs for enterprises, and providing a brand and salesforce that can readily place IT hardware into the hands of enterprises.

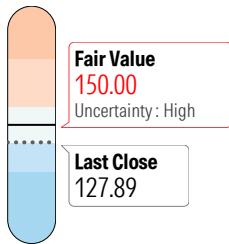
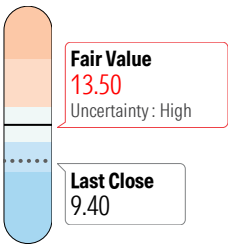
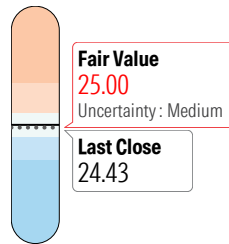
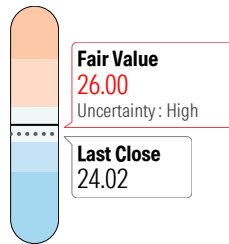
We view these markets as mature, relatively commodified industries, which leads to slower long-term growth and tighter margins. AI servers are an exception, with much faster growth. Fundamentally, much of the manufacturing is outsourced, and products among competitors are similar enough that it is hard to generate pricing power. Dell's strategy for addressing these limitations is to operate as efficiently as possible, particularly by effectively managing its working capital base.

Artificial intelligence-optimized servers are the latest emerging growth driver for OEMs like Dell. While this will promote revenue growth for now, we do not anticipate a fundamentally different margin or return profile compared with general-purpose servers. Dell generates solid free cash flows exceeding 100% of earnings and returns most of this to shareholders, which is an appropriate capital allocation policy.

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Competitors

	Dell Technologies Inc - Class C DELL	Lenovo Group Ltd 00992	HP Inc HPQ	Hewlett Packard Enterprise Co HPE
	 <p>Fair Value 150.00 Uncertainty: High</p> <p>Last Close 127.89</p>	 <p>Fair Value 13.50 Uncertainty: High</p> <p>Last Close 9.40</p>	 <p>Fair Value 25.00 Uncertainty: Medium</p> <p>Last Close 24.43</p>	 <p>Fair Value 26.00 Uncertainty: High</p> <p>Last Close 24.02</p>
Economic Moat	None	None	None	None
Currency	USD	HKD	USD	USD
Fair Value	150.00 26 Nov 2025 05:20, UTC	13.50 15 Aug 2025 03:31, UTC	25.00 26 Nov 2025 19:22, UTC	26.00 4 Sep 2025 17:34, UTC
1-Star Price	232.50	20.93	33.75	40.30
5-Star Price	90.00	8.10	17.50	15.60
Assessment	Undervalued 18 Dec 2025	Undervalued 18 Dec 2025	Fairly Valued 18 Dec 2025	Fairly Valued 18 Dec 2025
Morningstar Rating	★★★★★ 18 Dec 2025 22:30, UTC	★★★★★ 18 Dec 2025 17:25, UTC	★★★★★ 18 Dec 2025 22:36, UTC	★★★★★ 18 Dec 2025 22:53, UTC
Analyst	Eric Compton, Director	Jing Jie Yu, Equity Analyst	Eric Compton, Director	Eric Compton, Director
Capital Allocation	Exemplary	Standard	Standard	Standard
Price/Fair Value	0.85	0.70	0.94	0.92
Price/Sales	0.85	0.24	0.42	0.93
Price/Book	—	2.23	—	1.28
Price/Earning	14.00	10.18	8.02	12.38
Dividend Yield	1.58%	4.07%	4.78%	2.16%
Market Cap	81.47 Bil	116.60 Bil	21.53 Bil	31.56 Bil
52-Week Range	66.25—168.08	6.57—13.60	21.21—35.28	11.97—26.44
Investment Style	Large Value	Large Value	Mid Value	Mid Value

Bulls Say Eric Compton, CFA, Director, 26 Nov 2025

- ▶ The AI server growth wave is just getting started, and Dell will be a key beneficiary as enterprise sales eventually take off, driving material revenue growth.
- ▶ In addition to server sales, AI servers will generate a long tail of higher-margin service revenue, along with other upgrade revenue streams (networking, storage, and memory).
- ▶ There will be a cyclical increase in PC growth in calendar years 2025 and 2026 as AI PCs come to relevance and Windows 10 support expires.

Bears Say Eric Compton, CFA, Director, 26 Nov 2025

- ▶ The AI server market's current growth may not be maintainable, and most of this growth will be concentrated with the hyperscalers. OEMs like Dell will only see low margins in this business.
- ▶ The general-purpose server and storage markets are seeing stagnant growth as enterprises shift more

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workloads to the public cloud. This limits the structural growth opportunities for OEMs, such as Dell.

- The PC market is also challenged from a structural growth perspective, making it difficult to identify future growth catalysts if AI doesn't pan out well.

Economic Moat Eric Compton, CFA, Director, 8 Oct 2025


We assign Dell Technologies a Morningstar Economic Moat Rating of none. While Dell's returns on invested capital are unexpectedly good for a competitive industry selling commoditized products, coming in at roughly 23% when including goodwill by the end of our forecast period, we lack the necessary confidence that these returns will persist over the next decade. Dell's largest business lies in the server and storage industries, where companies primarily compete on price for essentially undifferentiated products. However, within storage, specifically, margins can be somewhat better. Dell's other primary business is selling PCs, primarily to enterprises, where again the products are largely undifferentiated and pricing is a primary point of competition. Despite the growth boon from AI-optimized servers, we're skeptical that these will be moatworthy, as margins are currently worse on AI-optimized servers than on general-purpose servers.

Dell's PC business is housed within its client solutions group segment. Dell is one of the three largest personal computer sellers in the world, along with HP and Lenovo, which combined control roughly 60% of the market. Despite some players being larger than others, PCs remain a commodified business. The primary differentiators between PCs are factors such as the amount of memory or the speed of the processor, and all these components are modular and produced by third parties. Dell and its competitors are known as OEMs, which are more like PC sellers rather than PC makers, as third parties, such as Wistron or Pegatron, manufacture most PCs. Dell will send product specifications to these third parties, which are primarily based in Taiwan with factories in China and other parts of the world. These third parties will manufacture the PCs according to these specifications. These companies are known as original device manufacturers. Dell and its competitors obtain their computers from these companies, and then handle the distribution and selling. Due to this dynamic, with all major PC companies using the same suppliers, there is little differentiation among PCs made by Dell and its top two competitors, Lenovo and HP.

We think understanding the supply chain is the key to understanding Dell's PC operations. The company is primarily involved in the distribution business, selling PCs via its brand around the world. Dell helps coordinate a global supply chain and sells relevant PC products across the globe into appropriate end markets via its global brand and distribution know-how. There is value in this service. Because Dell is primarily a distributor of PCs, it can operate a very capital-light business. Dell has mastered having a working capital base that is as efficient as possible. We calculate roughly negative 40-50 days of working capital, on average, meaning Dell carries low inventory and gets paid first before it then pays its own vendors later. In fact, working capital is so efficient, we calculate it reduces the

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company's invested capital base by roughly 40%, excluding goodwill. This largely explains why the company is able to earn decent returns on invested capital. It has an extremely efficient invested capital base, which helps offset being in a low-margin PC business, with operating margins of between 5% and 7%.




Because of these dynamics, we believe Dell actually presents a more nuanced moat situation for its PC business than many investors would initially recognize. From a moat perspective, having such an efficient working capital base is a positive sign and generally shows Dell has at least some bargaining power within the supply chain when it comes to payment terms. The actual manufacturers of PCs typically have operating margins of 1%-3%, ROICs of less than 10%, and positive net working capital. These metrics are all worse than Dell's and show that Dell wields some power in the supply chain and can extract value. We believe Dell's brand and distribution expertise are valuable assets as well. Corporations, the primary purchasers of PCs, which account for more than 80% of Dell's PC sales, are more likely to buy from established brands with the scale and reliability to meet their more complex needs. It is also not easy coordinating a global supply chain. Dell's position as one of the largest sellers of PCs means it has established relationships with key members of the supply chain. This means Dell, along with the handful of large established PC sellers, will have a spot in line when it comes to ordering components for their PCs (processors, memory, and so on). This gives some power to Dell in the PC industry that would be hard to replicate for a new, smaller company.

Despite these nuanced advantages, we have a hard time gaining the confidence to assign a narrow moat to a low-margin business, primarily on the basis of an extremely efficient invested capital base. We think the no-moat rating better represents the margin profile, difficulty of differentiating on the product side, and Dell being primarily a price taker.

Dell's other primary business is its infrastructure solutions group segment, which is split between selling servers and storage arrays. Dell is also an OEM in these markets, and many of the same concepts that applied to being an OEM in the PC business also apply to being an OEM in the server and storage business.

Within servers, Dell once again functions as an OEM, selling primarily to enterprise clients. Dell, Lenovo, and SMCI are notable OEM competitors here, and all tend to offer similar products. Notable ODMs include Inventec, Wistron, Foxconn, and more. We think it is hard to be differentiated as an OEM, as the hardware is all fairly similar between them. This is because all OEMs tend to have access to the same supply chain, and the value derived from any differentiated parts of the hardware, such as the processing chip, tends to go to the manufacturer of that piece of hardware, such as Nvidia and its GPUs in AI-optimized servers. Because it is difficult to differentiate on the hardware, we again do not see intangible assets being present, and we find that firms primarily compete on price and service over time, with no one brand being at an obvious advantage to us.

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While it is difficult to be differentiated on hardware, similar to PCs, the reason OEMs like Dell exist is because they add value to the industry by coordinating a complex supply chain, providing the necessary services and support for enterprises, and providing a brand and salesforce that can readily place servers into the hands of enterprises. Enterprise is a fragmented group, with many different businesses spread out across the world. Selling into this market requires a trusted brand and a large enough services and salesforce group to be successful. This is why we see OEMs primarily selling to enterprises.

The other primary buyer of servers are the hyperscalers, such as Alphabet, Microsoft, Amazon, and Meta. Because this end market is much more concentrated than the enterprise market, and because Tier 1 cloud service providers have the expertise to know exactly what they want, they are able to purchase directly from the ODMs, bypassing the OEMs. This is another key source of competition for OEMs, as the market increasingly moves toward consumption of public cloud capacity by enterprises via the hyperscalers; therefore, the market that the ODMs directly sell to has grown while the enterprise server market has generally stagnated. As such, we see structural forces putting pressure on the OEMs, while OEMs will still have to compete on price and service, making the space difficult for establishing a moat.

AI-optimized servers are injecting a new source of growth into the server market. Much of this growth goes to the ODMs, as hyperscalers are a primary buyer of AI-optimized servers, although the OEMs are seeing an influx of orders, as well. We view these developments as a driver of improved revenue growth, not a driver of improved returns on capital. If anything, AI-optimized servers have been lower margin than general-purpose servers, and we find it difficult to discern how OEMs will accrue any more value from these servers compared with GP servers, as the competitive forces seem to be the same. As such, we do not view this industry development as a source of improving returns or moatworthiness for Dell.

The storage market that Dell competes in primarily consists of OEMs selling storage arrays, essentially blocks of storage capacity, often in rack form, that are integrated in an overall IT stack that consists of servers, storage, and networking. In the storage space, the market structure and dynamics are fairly similar to the server market. Dell remains a key competitor and has the top share in the market, while other vendors such as NetApp, IBM, HPE, and Pure Storage also compete. Much of the dollars within the value chain once again flow to the manufacturers of the key components, such as NAND (Samsung, SK Hynix, Micron, WDC, and Kioxia), DRAM (Samsung, SK Hynix, and Micron), and Hard Disk Drives (Seagate, Western Digital). OEMs are once again primarily limited to serving the enterprise market, as ODMs serve the hyperscaler market more efficiently and at lower cost.

Within storage, we again see OEMs as primarily selling undifferentiated hardware to enterprises while competing on price. The storage market does allow for some additional differentiation on the software

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side, as companies attempt to create more compelling software management of their storage arrays and integration within storage and with other parts of their IT stack. This can lead to slightly higher margins in the space compared with servers; however, they still find it challenging to truly differentiate themselves, as storage refresh cycles are typically every three to five years, and vendors must compete on price each time an enterprise client is looking to purchase new capacity. End clients also typically want interoperable components within their IT stack, making the creation of a singular, closed system of servers, storage, and networking under one unified software umbrella essentially impossible. Dell, a longtime dominant force in the industry, has gradually lost market share over the past decade, while newer players such as Pure Storage have gained, a testament to the fact that execution over time plays a key role in this competitive industry. As such, we find it hard to assign a moat to Dell in this space.

Fair Value and Profit Drivers Eric Compton, CFA, Director, 26 Nov 2025

Our fair value for Dell is \$150 per share. Our valuation implies a fiscal 2027 adjusted price/earnings multiple of 12.5 times. We forecast a fiscal 2026 free cash flow yield of 6% and dividend yield of 1.4%.

Our overall thesis on Dell includes consistent sales growth within the AI-optimized server market, a return to better growth with the storage market, and product cycle-driven growth in PCs in fiscal 2026 and 2027 (essentially calendar years 2025 and 2026).

Within the AI-optimized server market, we forecast Dell achieving consistent business of \$30 billion or more by fiscal 2027 (up from \$10 billion in 2025), and solid low-double-digit percentage growth thereafter. This will help Dell's server business grow at a CAGR of 18% over the next five years, and this is the primary growth driver we see for Dell. For context, we forecast roughly \$46 billion in revenue growth from fiscal 2025 through 2030, and within that, we forecast roughly \$36 billion in revenue growth coming from the server segment (with \$31 billion from AI servers and \$5 billion from non-AI, CPU-based servers).

While the growth drivers are well understood, the margin profile of this revenue growth is a key debate. We assume the ISG segment (where servers are projected to make up close to 75% of revenue by 2030) can maintain a roughly 12%-13% operating margin over time (within a guidance range of 11%-14%), despite the increasing share of AI server sales for the segment.

We also forecast a return to high-single-digit to double-digit percentage growth in the storage business (from low-single-digit growth currently). Finally, we forecast a pick-up in growth within the CSG segment (PCs) in fiscal 2026 and 2027, driven by a refresh cycle within PCs (expiration of support for Windows 11 and AI PCs), with growth falling off thereafter.

Overall, this leads to a five-year revenue CAGR of 8% for Dell, with gross margins gradually working their way back to 22%. In comparison, operating margins are expected to improve from 6.5% currently

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to 8.9% by the end of our forecast period. We expect some pressure on margins in the short term, given the weaker margin profile of AI-optimized servers, offset by cost-cutting, improved storage sales, and eventually a mix shift toward enterprise server sales. We believe that the greatest uncertainty resides within the future of the AI server market. Dell's future growth and margin profile in this business are hard to predict, and if we were ever to enter a new "AI winter," it could mean materially lower growth for Dell.

Risk and Uncertainty Eric Compton, CFA, Director, 29 Aug 2025

We give Dell a High Morningstar Uncertainty Rating, primarily driven by higher uncertainty around future growth and margins in the nascent AI-optimized server market.

Dell operates in competitive markets that often have lower margins, as price competition is intense. Furthermore, growth prospects can be limited as PCs are a mature industry, and on-premises/hybrid IT environments are facing structural headwinds due to an increasing number of companies migrating their IT workloads to the cloud. Additionally, public cloud providers have begun to offer dedicated private cloud solutions, including those that are "air gapped" (not connected to the internet), to meet the demand that would have historically been addressed through on-premises IT deployments. This only increases the competitive pressures, as it provides another potential path by which enterprises can bypass Dell's offerings. Finally, there can also be cyclicalities in enterprise purchasing demand across these different markets.

A key source of uncertainty for Dell is the future of the AI server industry. For AI-optimized servers, the market is still relatively new and growing rapidly, making it difficult to predict its future size and the maintainability of current growth. Predicting the future margin profile of this growing business is also tricky, as margins are currently low even as management expects a longer tail of services and enterprise sales to improve margins. The potential for higher margins in what we view as a competitive space is a key debate.

Regarding environmental, social, and governance, we do not foresee any material ESG issues. However, notable potential risks include attracting and retaining talent, which could demand high remuneration. Also, Dell's products facilitate the transfer of data, which may attract cybercriminals, and its solutions are tasked with protecting customers from cyberattacks, making data privacy and security a key concern.

Capital Allocation Eric Compton, CFA, Director, 29 Aug 2025

We assign Dell an Exemplary Capital Allocation Rating, based on a sound balance sheet, exemplary investment efficacy, and appropriate shareholder returns.

Dell's capital allocation priorities include investing in its product portfolio (both organic and opportunistic inorganic), increasing its mix toward higher-margin business areas (ISG, Commercial

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PCs), and returning cash to shareholders. Dell maintains a dividend and aims to increase it each year while also systematically repurchasing shares. Dell targets returning 80% of free cash flow to shareholders, which we think is appropriate as it gives some flexibility for growth investments while acknowledging that many of the businesses they are in are more mature and should be more cash flow and shareholder return focused.

With regards to investment efficacy, Dell has generally been good, and if anything it has historically been excellent. Looking at the past, Dell's acquisition of EMC and subsequent deleveraging, repositioning of the company, the value realization from the VMware stake, and eventual re-IPO and the resulting shareholder returns have been exceptional. Dell's execution on AI server sales has also been excellent, as it has been able to bring the product to market and reposition sales teams to take a leading share among OEMs in this space. Looking forward, our sense is that Dell has repositioned in a way that few others have been able to accomplish and has taken share within the AI server market. We think this excellent execution in a newly developing market is representative of the exemplary investment efficacy the company is engaging in.




Among other positives, Dell tends to run one of the most efficient operations in the industry, which is no surprise given it was the original innovator of the modern "negative working capital" approach. Dell has been a leader within storage, particularly after the acquisition of EMC, which it successfully deleveraged from over the years. Overall, we view Dell as one of the better operators in the space.

Analyst Notes Archive

Dell: AI Server Sales Optimism at Analyst Event Drives Our Fair Value Estimate Increase to \$149 Eric Compton, CFA, Director, 8 Oct 2025

At its securities analyst event, Dell Technologies raised its long-term targets, increasing compounded annual revenue growth expectations from 3%-4% to 7%-9%, and non-GAAP EPS growth from 8% to 15%. Why it matters: With expectations for PC sales not changing much, higher growth is set to be driven by stronger-than-expected artificial intelligence demand. The raised long-term targets match other trends we've seen, such as recent AI deals, all pointing to continued AI-driven growth in the quarters ahead. A key part of the Dell thesis is the gradual mix shift toward enterprise AI sales, which should boost profitability as these tend to be higher-margin deals. Management referenced over 3,000 enterprise customers, suggesting growing momentum in enterprise AI server sales. While AI servers remain the primary growth driver, we remain positive on non-AI servers too. With nearly 70% of the installed base yet to upgrade to next-generation models, we see more growth ahead. For storage, the growing adoption of end-to-end solutions like the Data AI Platform should drive growth. The bottom line: We raise our fair value estimate for no-moat Dell Technologies to \$149 from \$135, driven by an increase in our server and storage sales projections. Shares were up 3% after the investor event, and are fairly valued compared with our updated valuation. Our current profitability estimates reflect some margin

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expansion, driven by cost discipline, enterprise customer momentum, and higher-margin storage sales growth. We project operating margins will grow from 6.5% to 8.5%, which aligns with the 15% non-GAAP EPS growth guidance. Our revised valuation reflects a forward P/E multiple for earnings over the next 12 months of roughly 13.3, broadly in line with our previous estimates, with the increase in our fair value estimate driven by our increased EPS estimates. To the extent AI demand is higher and/or more persistent, we could see more upside.

Dell Earnings: AI Server Sales Outperform Again, but Margin Dilution Worse Than Expected Eric Compton, CFA, Director, 29 Aug 2025

Dell reported solid fiscal second-quarter results on the top line, largely driven by AI server sales, which exceeded \$8 billion in the quarter; however, gross margins declined from 21.1% to 18.3%. Why it matters: While Dell is generating solid sales momentum within AI servers, the dip in margins calls into question exactly how much will fall to the bottom line. If we only examine the change in the outlook for revenue and operating income, it implies low single-digit incremental margins. We gather this math is a bit harsh, as there was an unspecified amount of one-time charges related to expediting server shipments, and some negative mix shifts related to declining storage sales. Storage revenue tends to be higher margin, so this undoubtedly had an impact. While we cannot exactly triangulate AI server margins, the implied gross margin uplift, based on the updated guidance for the second half of the year, is substantial, which helps assuage some of our own fears about the incremental margins of this business. The bottom line: As we factor in higher AI server sales and a bounce back in gross margins in the second half of the year, we are increasing our fair value estimate to \$135 from \$125. This is driven by higher growth estimates, along with slightly better margin estimates in the latter years of our forecast. While our margin estimates are slightly worse for fiscal 2026 and 2027, we raised our operating margin estimates for 2028 through 2030, given the implied margins for the second half of fiscal 2026, an expected mix shift towards more enterprise AI server deals, and increased storage mix. We were encouraged by the AI server momentum, spurred by Blackwell-based server shipments, and we believe Dell will likely exceed even its updated \$20 billion server estimate (up from \$15 billion) for fiscal 2026. After the earnings reaction selloff, we view shares as mildly undervalued.


Dell Earnings: \$12.1 Billion Surge in AI Server Orders; Raising Fair Value to \$125 From \$121 Eric Compton, CFA, Director, 30 May 2025

No-moat Dell Technologies released first-quarter 2026 earnings that lightly beat our top-line and bottom-line estimates. However, the real story was Dell's surging artificial intelligence server orderbook, with the backlog soaring from \$4.1 billion last quarter to \$14.4 billion in the current quarter. This development supports Dell's overall AI revenue goals for the year and supports our overall thesis on the company. While the AI server orderbook was exceptional, management maintained its 8% revenue growth outlook. We would not be surprised if they eventually raise this outlook in the coming quarters.

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Management did raise their non-GAAP earnings per share guidance to \$9.40 (up from \$9.30). We have made some slight adjustments to our forecasts, primarily lowering our short-term expense outlook, and we are raising our fair value estimate to \$125 from \$121 previously. Shares were up 2% after hours and continue to be slightly undervalued. AI servers continue to dominate Dell's long-term growth story. Despite ongoing macroeconomic turbulence, Dell shipped \$1.8 billion in AI server orders in the quarter, implying a modest growth of 6% year over year. However, the firm's demand metrics remain strong, as the firm booked an impressive \$12.1 billion in orders during the quarter, surpassing full-year fiscal 2025 shipments, and bringing the backlog to a robust \$14.4 billion. Management highlighted that AI demand improved sequentially across all customer types, including tier 2 cloud service providers and enterprises. While the backlog is already exceptional, Dell maintained its \$15 billion outlook for AI server revenue for the year, with \$7 billion expected to come next quarter, implying a significant slowdown in the second half of the year. We would not be surprised if Dell eventually raises its outlook. Even so, the growing backlog should cushion top-line risks from tightening IT budgets due to tariff pressures, particularly in traditional servers and storage businesses.

Dell Earnings: \$9 Billion AI Server Backlog Signals Sustained AI Momentum; Maintain Valuation

Eric Compton, CFA, Director, 28 Feb 2025

No-moat Dell Technologies reported fiscal 2025 fourth-quarter earnings that missed our top-line estimate but surpassed our bottom-line forecast. The top-line miss was almost entirely driven by lumpiness in artificial intelligence server deliveries resulting in AI server sales of \$2.1 billion versus the \$2.8 billion projected. However, margins were better than we expected, and we would not read into quarterly deliveries too much. Rather, the more important indicators, backlog and pipeline, remained as strong as ever. This gives us the confidence to maintain our overall AI growth outlook for Dell, and we are maintaining our fair value estimate of \$121. With shares selling off recently, they are starting to look marginally undervalued. For fiscal 2026, management expects 8% revenue growth year on year and non-GAAP EPS of \$9.30 at the midpoint, which were both roughly in line with FactSet consensus estimates and our own projections. AI servers were once again a key focus, and we think the story remains largely positive. While AI server revenue of \$2.1 billion was disappointing on the surface, the backlog had jumped to an impressive \$9 billion by the time Dell reported earnings, likely driven by a large order from Elon Musk's xAI that was rumored to be \$5 billion. Dell also continued to describe the pipeline as growing sequentially, and this growth was broad based across multiple client types, including enterprises. Management's guidance of \$15 billion in AI shipments in fiscal 2026 exceeded our estimates, slightly, as we were looking for closer to \$14 billion. We expect the ongoing Blackwell ramp and improved pipeline conversion to drive high-teens growth in the ISG segment in fiscal 2026. AI servers are not the only source of growth for Dell, as we also expect general purpose servers could grow nearly double digits in fiscal 2026. We also like the story beginning to develop within the storage segment, where growth is finally starting to show up once again.

Dell Technologies Inc Ordinary Shares - Class C **DELL** ★★★★★ 18 Dec 2025 22:30, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
127.89 USD 17 Dec 2025	150.00 USD 26 Nov 2025 05:20, UTC	0.85	81.47 USD Bil 18 Dec 2025	None	Large Value	High	Exemplary	 3 Dec 2025 06:00, UTC

Dell Earnings: Look Past Muted Quarterly AI Server Revenue; Longer-Term Demand Trends All Healthy Eric Compton, CFA, Director, 27 Nov 2024

No-moat Dell Technologies reported fiscal 2025 third-quarter earnings that mildly beat our EPS estimates. However, the big story was all the moving parts within artificial intelligence revenue. We think weakness in AI-server revenue caused Dell shares to drop by 11% after hours, to \$126 per share. We would look past these near-term speed bumps, as other long-term demand metrics remain healthy. We raise our fair value estimate to \$121 per share from \$114, and we now view shares as fairly valued following the after-hours drop. We think the long-term story remains bright for Dell, but the market had gotten ahead of itself in anticipation of results. Despite surging AI demand and a sizable boost in backlog, Dell's AI server revenue declined sequentially, and more importantly, the company guided for another sequential decline next quarter. This was weaker than anticipated and implies that Dell is struggling to ship units and convert its pipeline. We view this as a short-term issue, with management largely blaming it on the slow rollout of Nvidia's Blackwell chips, which is out of Dell's control. We believe that as Blackwell chips become more widely available, Dell's AI revenue will naturally increase, as this appears to be the primary bottleneck. Other indicators of long-term demand, including the pipeline and the backlog, were increasing to new highs during the quarter, which should eventually translate to higher sales. Overall, we have trimmed our near-term estimates to reflect the updated guidance, but expect a recovery in pipeline conversion rates in 2026. We anticipate that SMCI's regulatory issues will undermine vendor confidence and redirect new AI-server orders toward competitors like Dell. We have raised our long-term estimates to reflect these share gains. We have also slightly increased our margin estimates, reflecting renewed confidence in the firm's ability to drive cost efficiencies, particularly in its server and storage businesses.




Dell Earnings: Sky-High AI Sales Drive Revenue Beat; Raising Our Fair Value Estimate Eric Compton, CFA, Director, 30 Aug 2024

No-moat Dell Technologies reported robust fiscal second-quarter earnings, with AI-server sales dramatically exceeding our expectations, \$3.1 billion versus \$2.4 billion expected. The firm continues to ride the AI wave and exceeded our revenue expectations by 5%, driven by AI server sales. We were also impressed with the firm's improving margin profile, as Dell seems to be winning business while also maintaining better margins than peers. We have lifted our revenue and profitability estimates to reflect our more optimistic outlook given current results. As a result, we are raising our fair value estimate to \$112 from \$92. Shares rose 4% during after-hours trading (likely driven by the AI server-driven top-line guidance beat) and screen as fairly valued compared with our raised valuation. Revenue rose 9% year over year driven by strength in the firm's server and storage business, offset by weaker-than-anticipated PC sales. The star of the show was the infrastructure solutions group, which consists of the firm's servers, networking, and storage businesses, that reported a robust 40% growth year over year.

Dell Technologies Inc Ordinary Shares - Class C

DELL★★★★★

18 Dec 2025 22:30, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
127.89 USD 17 Dec 2025	150.00 USD 26 Nov 2025 05:20, UTC	0.85	81.47 USD Bil 18 Dec 2025	 None	 Large Value	High	Exemplary	 3 Dec 2025 06:00, UTC

This growth was due to strength in AI server demand and a return in storage sales. Dell continues to ride the AI wave, with AI server sales up 100% sequentially. The AI server backlog was flat, but we remain optimistic about revenue growth driven by its healthy pipelines that expanded in the quarter. We were encouraged to see 6% sequential growth in storage sales, signaling its recovery, and continue to expect this business to also contribute to top-line growth. Unlike competitors like HPQ and Lenovo that saw growth, the firm reported a 4% year-on-year decline in PC revenue. While this was a weaker short-term result, we maintain our overall thesis that artificial intelligence PCs and the end-of-life for Windows 10 will drive a PC refresh cycle over the next several years. ■■

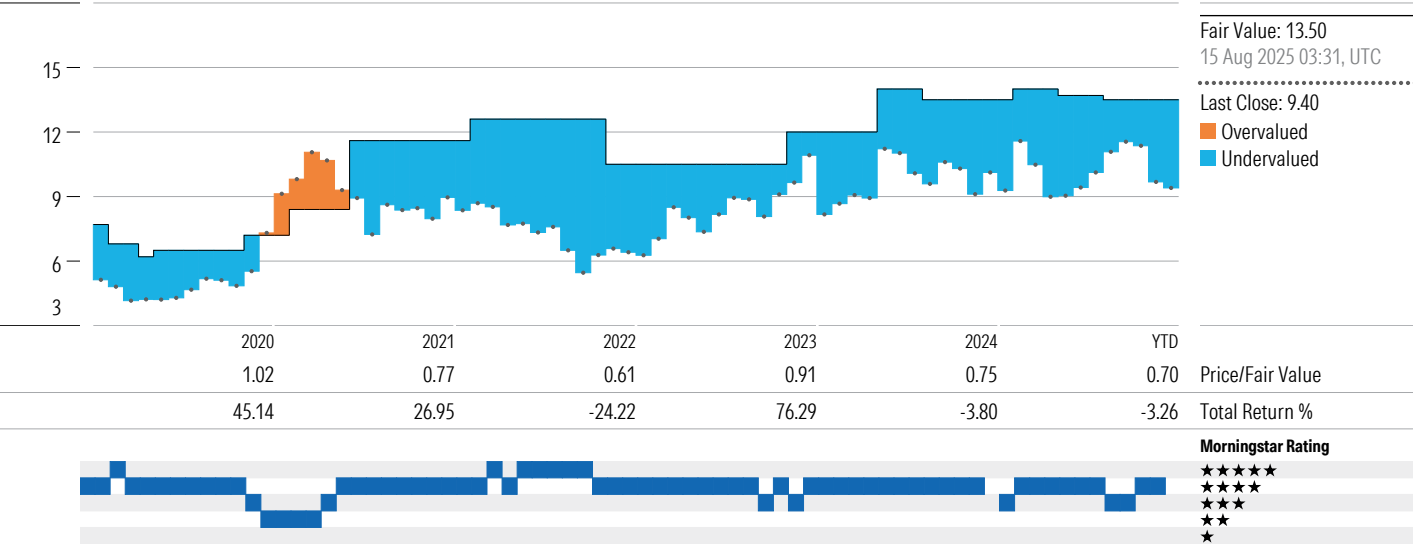
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Dell Technologies Inc Ordinary Shares - Class C DELL ★★★★★ 18 Dec 2025 22:30, UTC

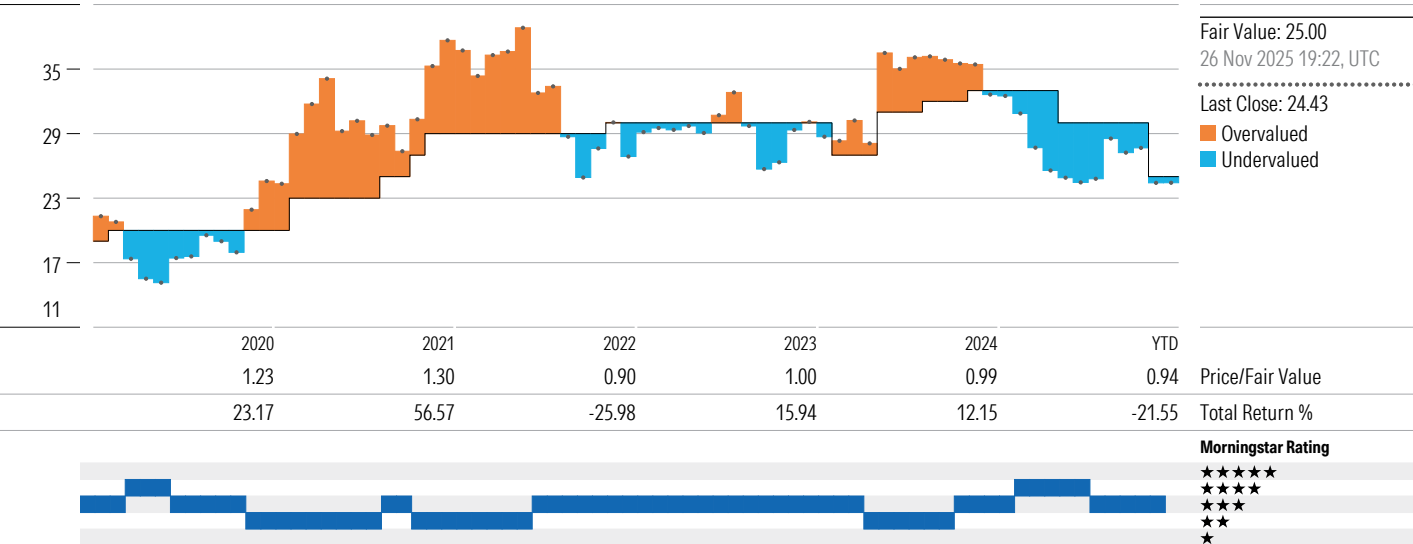
Competitors Price vs. Fair Value

Lenovo Group Ltd 00992



Total Return % as of 18 Dec 2025. Last Close as of 18 Dec 2025. Fair Value as of 15 Aug 2025 03:31, UTC.

HP Inc HPQ



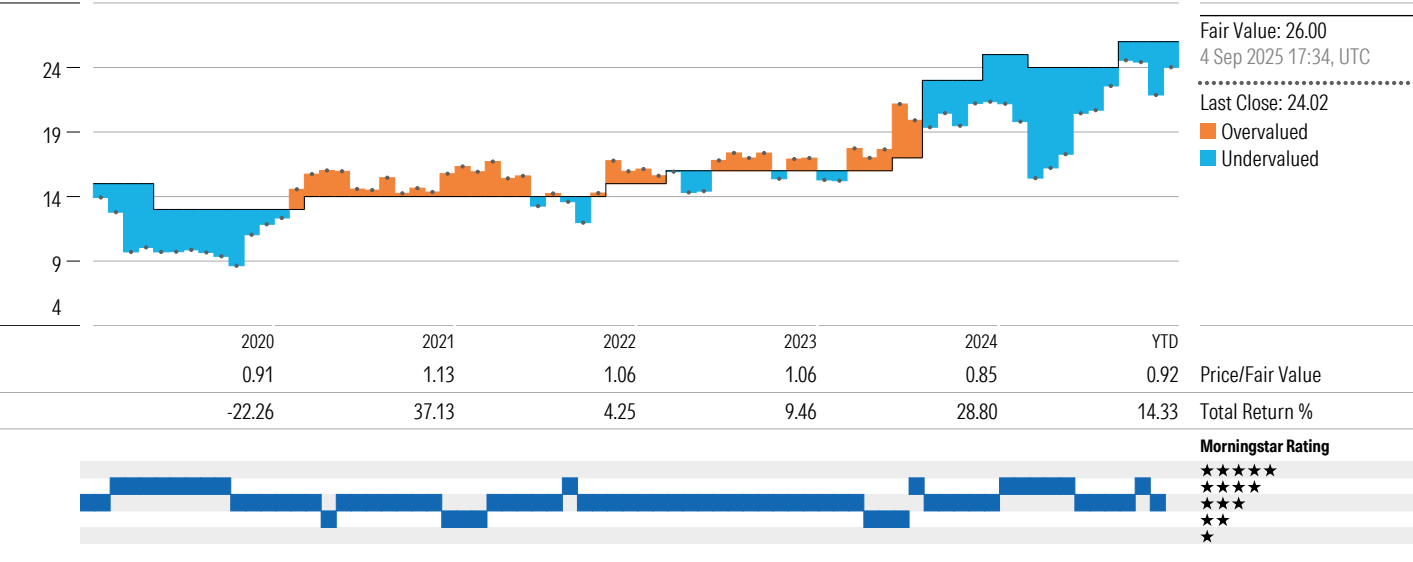
Total Return % as of 17 Dec 2025. Last Close as of 17 Dec 2025. Fair Value as of 26 Nov 2025 19:22, UTC.

Dell Technologies Inc Ordinary Shares - Class CDELL★★★★★

18 Dec 2025 22:30, UTC

Competitors Price vs. Fair Value

Hewlett Packard Enterprise CoHPE



Total Return % as of 17 Dec 2025. Last Close as of 17 Dec 2025. Fair Value as of 4 Sep 2025 17:34, UTC.

Dell Technologies Inc Ordinary Shares - Class C **DELL** ★★★★★ 18 Dec 2025 22:30, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
127.89 USD 17 Dec 2025	150.00 USD 26 Nov 2025 05:20, UTC	0.85	81.47 USD Bil 18 Dec 2025	None	Large Value	High	Exemplary	3 Dec 2025 06:00, UTC

Morningstar Valuation Model Summary

Financials as of 25 Nov 2025

Fiscal Year, ends 31 Jan	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
Revenue (USD Mil)	102,301	88,425	95,567	111,675	120,414	128,027	135,115	141,655
Operating Income (USD Mil)	5,771	5,411	6,237	8,319	9,904	10,946	11,890	12,607
EBITDA (USD Mil)	8,927	8,714	9,360	11,310	13,453	14,512	15,561	16,441
Adjusted EBITDA (USD Mil)	10,779	10,348	10,985	12,265	14,229	15,341	16,439	17,362
Net Income (USD Mil)	2,442	3,388	4,592	5,748	6,711	7,635	8,460	9,035
Adjusted Net Income (USD Mil)	5,747	5,438	5,881	6,777	7,872	8,758	9,541	10,069
Free Cash Flow To The Firm (USD Mil)	1,164	7,168	2,473	6,064	7,511	9,003	9,645	10,214
Weighted Average Diluted Shares Outstanding (Mil)	753	736	720	685	657	625	590	555
Earnings Per Share (Diluted) (USD)	3.24	4.60	6.38	8.39	10.22	12.22	14.33	16.27
Adjusted Earnings Per Share (Diluted) (USD)	7.63	7.39	8.17	9.89	11.99	14.02	16.16	18.13
Dividends Per Share (USD)	1.32	1.48	1.79	2.12	2.33	2.56	2.82	3.10

Margins & Returns as of 25 Nov 2025

	3 Year Avg	Actual			Forecast					5 Year Avg
		2023	2024	2025	2026	2027	2028	2029	2030	
Operating Margin %	6.1	5.6	6.1	6.5	7.4	8.2	8.6	8.8	8.9	8.4
EBITDA Margin %	—	8.7	9.9	9.8	10.1	11.2	11.3	11.5	11.6	—
Adjusted EBITDA Margin %	—	10.5	11.7	11.5	11.0	11.8	12.0	12.2	12.3	11.8
Net Margin %	3.7	2.4	3.8	4.8	5.1	5.6	6.0	6.3	6.4	5.9
Adjusted Net Margin %	6.0	5.6	6.2	6.2	6.1	6.5	6.8	7.1	7.1	6.7
Free Cash Flow To The Firm Margin %	3.9	1.1	8.1	2.6	5.4	6.2	7.0	7.1	7.2	6.6

Growth & Ratios as of 25 Nov 2025

	3 Year CAGR	Actual			Forecast					5 Year CAGR
		2023	2024	2025	2026	2027	2028	2029	2030	
Revenue Growth %	-1.9	1.1	-13.6	8.1	16.9	7.8	6.3	5.5	4.8	8.2
Operating Income Growth %	10.2	23.9	-6.2	15.3	33.4	19.1	10.5	8.6	6.0	15.1
EBITDA Growth %	0.6	-3.1	-2.4	7.4	20.8	19.0	7.9	7.2	5.7	12.1
Adjusted EBITDA Growth %	1.0	1.1	-4.0	6.2	11.7	16.0	7.8	7.2	5.6	9.6
Earnings Per Share Growth %	-3.2	-53.8	41.9	38.6	31.6	21.8	19.7	17.2	13.5	20.6
Adjusted Earnings Per Share Growth %	-3.2	9.0	-3.2	10.5	21.1	21.1	17.0	15.3	12.2	20.6

Valuation as of 25 Nov 2025

	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
Price/Earning	5.3	11.2	12.7	12.4	10.3	8.8	7.6	6.8
Price/Sales	0.3	0.7	0.8	0.7	0.7	0.6	0.6	0.6
Price/Book	-9.8	-27.4	-50.3	-44.7	1,756.3	49.0	21.8	13.0
Price/Cash Flow	—	—	—	—	—	—	—	—
EV/EBITDA	4.9	7.5	8.4	8.4	7.2	6.7	6.3	5.9
EV/EBIT	9.1	14.4	14.7	12.4	10.4	9.4	8.7	8.2
Dividend Yield %	3.3	1.8	1.7	1.7	1.9	2.1	2.3	2.5
Dividend Payout %	17.3	20.0	21.9	21.4	19.4	18.3	17.4	17.1
Free Cash Flow Yield %	—	—	—	—	—	—	—	—

Operating Performance / Profitability as of 25 Nov 2025

Fiscal Year, ends 31 Jan	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
ROA %	2.7	4.1	5.8	5.9	7.2	7.9	8.4	8.4
ROE %	-80.7	-158.9	-331.1	-321.2	4677.8	458.7	247.4	169.5
ROIC %	13.2	11.5	13.2	16.4	19.2	21.1	22.7	23.6

Dell Technologies Inc Ordinary Shares - Class C **DELL** ★★★★★ 18 Dec 2025 22:30, UTC

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Financial Leverage (Reporting Currency)

Fiscal Year, ends 31 Jan	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
Debt/Capital %	50.4	30.8	25.4	24.6	22.0	20.9	20.1	20.8
Assets/Equity	-29.6	-38.5	-57.5	-54.3	645.0	58.0	29.4	20.1
Net Debt/EBITDA	2.4	2.1	2.2	1.8	1.4	1.2	1.0	0.8
Total Debt/EBITDA	2.7	2.5	2.2	2.8	2.1	1.9	1.7	1.7
EBITDA/ Net Interest Expense	4.2	7.8	9.2	9.5	8.3	9.4	10.5	11.0

Forecast Revisions as of 25 Nov 2025

Prior data as of 8 Oct 2025	2026		2027		2028	
	Current	Prior	Current	Prior	Current	Prior
Fair Value Estimate Change (Trading Currency)	150.00	148.98	—	—	—	—
Revenue (USD Mil)	111,675	109,175	120,414	116,837	128,027	124,053
Operating Income (USD Mil)	8,319	7,902	9,904	9,710	10,946	10,607
EBITDA (USD Mil)	12,265	11,710	14,229	14,021	15,341	14,963
Net Income (USD Mil)	6,777	6,608	7,872	7,751	8,758	8,511
Earnings Per Share (Diluted) (USD)	8.39	8.08	10.22	10.02	12.22	11.80
Adjusted Earnings Per Share (Diluted) (USD)	9.89	9.65	11.99	11.80	14.02	13.60
Dividends Per Share (USD)	2.12	2.11	2.33	2.31	2.56	2.54

Key Valuation Drivers as of 25 Nov 2025

Cost of Equity %	9.0
Pre-Tax Cost of Debt %	5.5
Weighted Average Cost of Capital %	7.8
Long-Run Tax Rate %	21.0
Stage II EBI Growth Rate %	0.9
Stage II Investment Rate %	28.0
Perpetuity Year	10

Additional estimates and scenarios available for download at <https://pitchbook.com/>.

Discounted Cash Flow Valuation as of 25 Nov 2025

	USD Mil
Present Value Stage I	28,696
Present Value Stage II	21,158
Present Value Stage III	65,962
Total Firm Value	115,816
Cash and Equivalents	3,633
Debt	24,567
Other Adjustments	0
Equity Value	94,882
Projected Diluted Shares	670
Fair Value per Share (USD)	150.00

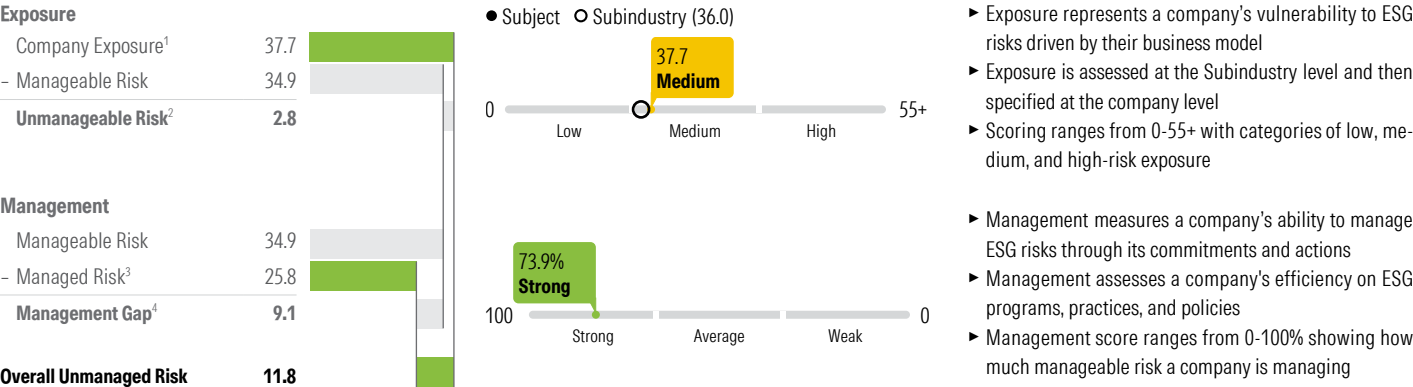
Dell Technologies Inc Ordinary Shares - Class C

DELL★★★★

18 Dec 2025 22:30, UTC

Last Price 127.89 USD 17 Dec 2025	Fair Value Estimate 150.00 USD 26 Nov 2025 05:20, UTC	Price/FVE 0.85	Market Cap 81.47 USD Bil 18 Dec 2025	Economic Moat™ None	Equity Style Box Large Value	Uncertainty High	Capital Allocation Exemplary	ESG Risk Rating Assessment¹ 3 Dec 2025 06:00, UTC
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ESG Risk Rating Breakdown



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 73.9% 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 Assessment⁵



Peer Analysis 03 Dec 2025	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	
Dell Technologies Inc	37.7 Medium	0	55+	73.9 Strong	100	0	11.8 Low	40+
Lenovo Group Ltd	38.3 Medium	0	55+	69.7 Strong	100	0	13.5 Low	40+
HP Inc	34.3 Low	0	55+	80.7 Strong	100	0	8.6 Negligible	40+
Hewlett Packard Enterprise Co	35.4 Medium	0	55+	74.5 Strong	100	0	10.9 Low	40+
Rigetti Computing Inc	49.9 Medium	0	55+	30.1 Average	100	0	36.2 High	40+

Appendix

Historical Morningstar Rating

Dell Technologies Inc Ordinary Shares - Class C DELL 18 Dec 2025 22:59, UTC

Dec 2025 ★★★★	Nov 2025 ★★★★	Oct 2025 ★★★★	Sep 2025 ★★★★	Aug 2025 ★★★★	Jul 2025 ★★★★	Jun 2025 ★★★★	May 2025 ★★★★	Apr 2025 ★★★★	Mar 2025 ★★★★	Feb 2025 ★★★★	Jan 2025 ★★★★
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 ★★★★

Lenovo Group Ltd 00992 18 Dec 2025 17:25, UTC

Dec 2025 ★★★★	Nov 2025 ★★★★	Oct 2025 ★★★★	Sep 2025 ★★★★	Aug 2025 ★★★★	Jul 2025 ★★★★	Jun 2025 ★★★★	May 2025 ★★★★	Apr 2025 ★★★★	Mar 2025 ★★★★	Feb 2025 ★★★★	Jan 2025 —
Dec 2024 ★★★★	Nov 2024 ★★★★	Oct 2024 ★★★★	Sep 2024 ★★★★	Aug 2024 ★★★★	Jul 2024 ★★★★	Jun 2024 ★★★★	May 2024 ★★★★	Apr 2024 ★★★★	Mar 2024 ★★★★	Feb 2024 ★★★★	Jan 2024 ★★★★
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HP Inc HPQ 18 Dec 2025 22:36, UTC

Dec 2025 ★★★	Nov 2025 ★★★★	Oct 2025 ★★★★	Sep 2025 ★★★★	Aug 2025 ★★★★	Jul 2025 ★★★★	Jun 2025 ★★★★	May 2025 ★★★★	Apr 2025 ★★★★	Mar 2025 ★★★★	Feb 2025 ★★★★	Jan 2025 ★★★★
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 ★★★★

Hewlett Packard Enterprise Co HPE 18 Dec 2025 22:53, UTC

Dec 2025 ★★★★	Nov 2025 ★★★★★	Oct 2025 ★★★★	Sep 2025 ★★★★	Aug 2025 ★★★★	Jul 2025 ★★★★	Jun 2025 ★★★★★	May 2025 ★★★★★	Apr 2025 ★★★★★	Mar 2025 ★★★★★	Feb 2025 ★★★★★	Jan 2025 ★★★★
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 ★★★★

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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, in-depth 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 short-term market-price movements), but we believe these negatives are mitigated by deep analysis and our long-term 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 single-point 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 working capital 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

Morningstar Equity Research Star Rating Methodology



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outcomes for the intrinsic value of a company, and anything 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	★★★★★ Rating	★ Rating
Uncertainty Ratings		
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

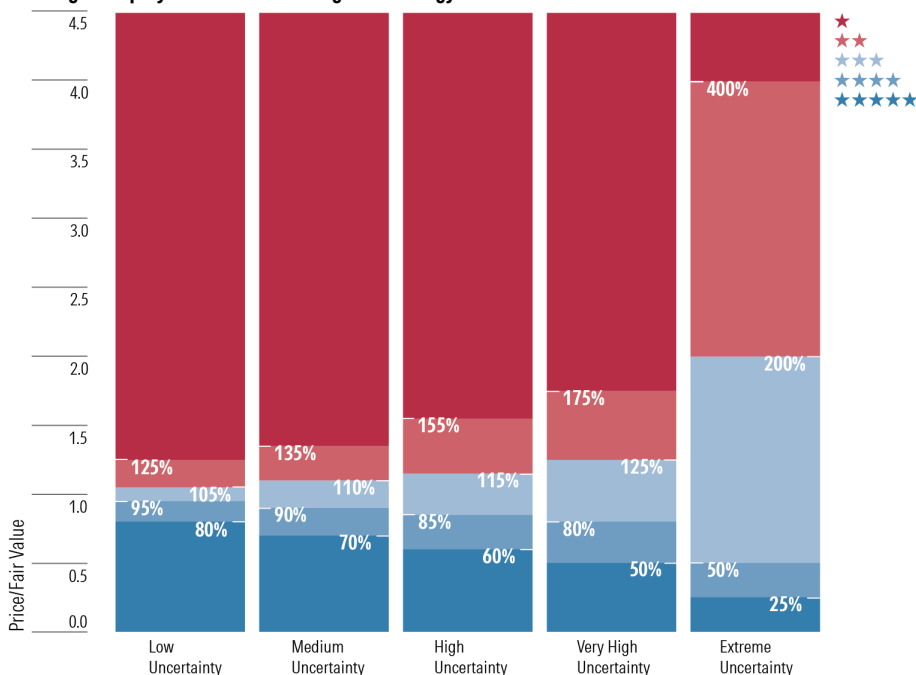
Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly,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



Morningstar Star Rating for Stocks

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 multi-year 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,

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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.

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.

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.

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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