

MORNINGSTAR

Oracle Corp ★★★ 17 Oct 2025 01:28, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
313.00 USD 16 Oct 2025	340.00 USD 17 Oct 2025 01:25, UTC	0.92	892.30 USD Bil 16 Oct 2025	 Wide	 Large Growth	High	Standard	 3 Sep 2025 05:00, UTC

Sector	Industry
 Technology	Software - Infrastructure

Business Description

Oracle provides enterprise applications and infrastructure offerings around the world through a variety of flexible IT deployment models, including on-premises, cloud-based, and hybrid. Founded in 1977, Oracle pioneered the first commercial SQL-based relational database management system, which is commonly used for running online transaction processing and data warehousing workloads. Besides database systems, Oracle also sells enterprise resource planning, or ERP, customer relationship management, or CRM, and human capital management, or HCM, applications. Today, Oracle has more than 159,000 full-time employees in over 170 countries.

potential lock-in effects. There is more work for Oracle to show how different pieces of its portfolio can drive larger business gains when used as a bundle.

Key stats: OCI's \$166 billion fiscal 2030 revenue goal means 75% annualized growth over the next five years. Besides the AI tailwind, synergy across Oracle's portfolio should also fuel high growth.

- Besides a long-term revenue outlook for OCI, management also provided a companywide fiscal 2030 revenue guidance of \$225 billion and a non-GAAP EPS guidance of \$21. Both of which were a tad higher than our updated forecasts.

Business Strategy & Outlook Luke Yang, CFA, Equity Analyst, 17 Oct 2025

The initial success of Oracle Cloud Infrastructure comes from its technological innovation that makes it a flexible and secure alternative to established hyperscalers like Amazon Web Services, Microsoft Azure, or Google Cloud Platform. More recently, OCI's strong client focus and ability to scale put it squarely at the center of the booming AI ecosystem, leading to skyrocketing bookings with key AI stakeholders such as OpenAI, Meta, and xAI. We believe OCI is on track to become a leading infrastructure provider for AI training and inference workloads; however, Oracle also faces significant challenges in securing the resources, most particularly GPU chips, necessary to deliver the capacity required by its AI customers.

Oracle has long been a major supplier of both relational database systems and enterprise software. The company's relational database boasts a premium market positioning that offers industry-leading security and stability at a higher price. Although Oracle Database still plays a dominant role in handling some of the world's most mission-critical data workflows, the company's dominance in the database industry is gradually fading due to emerging database products more tailored to enterprises' specialized data workflows. We think Oracle has made substantial progress in modernizing its database offering by bringing multicloud database to other hyperscalers. This is a win-win-win arrangement that benefits Oracle, other cloud providers, and customers simultaneously. As Oracle further expands its portfolio with AI Lakehouse and AI Data Platform, we expect the database to remain an important growth engine for the company.

Oracle is one of the only companies that offers an integrated AI portfolio across data, infrastructure, and software. We think Oracle's current product lineup is in the best shape it has been in, and the company has the capacity to both retain its traditional on-premises customers migrating to the cloud and acquire new customers. In our view, cloud transition will continue to serve as a tailwind to Oracle's revenue growth in the coming years.

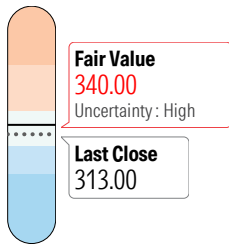
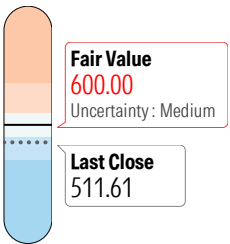
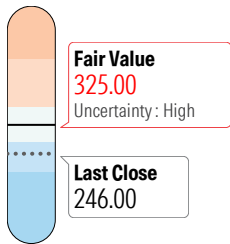
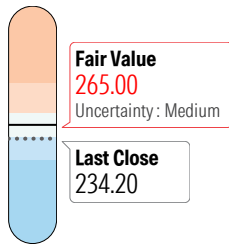
Bulls Say Luke Yang, CFA, Equity Analyst, 17 Oct 2025

- Scaling of Oracle Cloud Infrastructure has helped retain customers, port workloads to the cloud, and create new cloud service revenue, all of which should continue in the coming years.
- Oracle Database should be able to keep its market leadership as customers continue to depend on its

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Competitors

	Oracle Corp ORCL	Microsoft Corp MSFT	Salesforce Inc CRM	SAP SE SAP
	 Fair Value 340.00 Uncertainty: High Last Close 313.00	 Fair Value 600.00 Uncertainty: Medium Last Close 511.61	 Fair Value 325.00 Uncertainty: High Last Close 246.00	 Fair Value 265.00 Uncertainty: Medium Last Close 234.20
Economic Moat	Wide	Wide	Wide	Wide
Currency	USD	USD	USD	EUR
Fair Value	340.00 17 Oct 2025 01:25, UTC	600.00 31 Jul 2025 03:51, UTC	325.00 29 May 2025 01:49, UTC	265.00 18 Feb 2025 07:47, UTC
1-Star Price	527.00	810.00	503.75	357.75
5-Star Price	204.00	420.00	195.00	185.50
Assessment	Fairly Valued 16 Oct 2025	Undervalued 16 Oct 2025	Undervalued 16 Oct 2025	Undervalued 16 Oct 2025
Morningstar Rating	★★★ 17 Oct 2025 01:28, UTC	★★★★ 16 Oct 2025 21:24, UTC	★★★★ 16 Oct 2025 21:32, UTC	★★★★ 17 Oct 2025 00:29, UTC
Analyst	Luke Yang, Equity Analyst	Dan Romanoff, Senior Equity Analyst	Dan Romanoff, Senior Equity Analyst	Rob Hales, Senior Equity Analyst
Capital Allocation	Standard	Exemplary	Standard	Standard
Price/Fair Value	0.92	0.85	0.76	0.88
Price/Sales	14.82	13.60	5.79	7.69
Price/Book	35.71	11.11	3.68	6.65
Price/Earning	65.34	37.51	32.12	39.75
Dividend Yield	0.63%	0.65%	0.70%	1.00%
Market Cap	892.30 Bil	3,802.88 Bil	234.19 Bil	271.59 Bil
52-Week Range	118.86—345.72	344.79—555.45	226.48—369.00	209.70—283.50
Investment Style	Large Growth	Large Blend	Large Blend	Large Growth

industry-leading performances in terms of stability and security.

- Oracle Cloud Infrastructure was built with flexibility and ease-of-use in mind, which could bring a significant base of first-time Oracle users to the company, strengthening top-line results.

Bears Say Luke Yang, CFA, Equity Analyst, 17 Oct 2025

- Oracle could suffer below-average growth as customers are prompted to select specialized database software that runs their workloads more efficiently.
- The scale of Oracle Cloud is much smaller than the leading hyperscalers, putting them at a disadvantage cost-wise.
- Oracle's balance sheet is among the most leveraged within our software coverage, which could limit operational flexibility and future acquisition opportunities.

Economic Moat Luke Yang, CFA, Equity Analyst, 17 Oct 2025

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We think Oracle has a wide economic moat supported by high switching costs. Database systems and other enterprise software Oracle sells are critical to the day-to-day operation of modern enterprises. Companies tend to stay with the same vendor for years on the application side and even several decades for core systems to ensure optimal business continuity. In addition, cloud infrastructure revenue is also very sticky due to the high cost and risk of data ingress and egress. These features should keep Oracle's return on invested capital above its cost of capital over the next 20 years, as it is a key player in these areas.

After introducing "Generation 2 Cloud" in 2018, Oracle has seen an acceleration in the growth of its Cloud Infrastructure, or OCI, and Cloud Applications, or OCA, businesses. In our view, OCI will not catch up with Amazon Web Services, or AWS, Microsoft Azure, or Google Cloud Platform, or GCP, over the next five years on a pure market share basis, and we forecast a single-digit enterprise cloud market share for Oracle by 2027. OCI's rapid near-term growth should dramatically decrease its unit cost due to economies of scale, but we don't see cost advantage becoming a moat source for Oracle at the moment since the majority of OCI's workload should be the lower-margin Infrastructure-as-a-Service business. We believe OCI alone warrants a wide moat due to its strong switching costs. Once a customer gets on board, they tend to stay with the same cloud provider due to the complexity of data migration across different clouds. Also, a multicloud strategy, where companies use two or more public cloud providers, is becoming more common across enterprises. Given the limited number of cloud providers that are at scale, we have a hard time identifying a scenario that necessitates a complete retreat from OCI for enterprise customers that already signed up for it.

We see strong switching costs with Oracle Database, too. Typically, databases serve as the organization's central nervous system, facilitating the exchange of data across different enterprise software. If a company would like to change its database system provider, the process of "rewiring" how it stores and accesses data can involve significant monetary and time-related costs that often exceed its internal IT capabilities. Alibaba and Amazon provided us with some recent case studies in attempting to migrate off Oracle databases. It took both companies more than five years to execute the migration, and the process would be even longer if we included the planning stage. Moreover, switching database systems can lead to significant operational risks if the company would like to keep business as usual during the transition. On Amazon Prime Day in June 2018, one of Amazon's warehouses experienced an outage, causing 15,000 packages to have shipping delays. An Amazon internal report said that Oracle Database would have handled the issue more efficiently. Overall, we believe the number of existing Oracle Database customers that have the capability of migrating away their databases is small, and they need a very compelling reason to justify the significant cost and potential disruption that could happen during the migration process.

Similar to Oracle Database, we see strong switching costs across Oracle's applications lineup. The company has built a robust array of enterprise software through acquisitions, including enterprise

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resource planning, or ERP, supply chain management, or SCM, and human capital management, or HCM, platforms. It also has cloud-based enterprise software targeting small and medium-sized businesses called NetSuite. Clients can deploy Oracle's applications via software-as-a-service, cloud license, and on-premises license versions. Implementing a new software package typically requires significant time and financial resources from the customer. Employees onboarding new enterprise software also face a learning curve, which can sometimes lead to lost productivity. Therefore, we usually see extremely long upgrade cycles for enterprise software, especially among companies in traditional industries that lack digital transformation capabilities.

Besides switching costs, we also see traces of intangible assets in Oracle. Ever since pioneering the commercialization of relational databases in the 1980s, Oracle has faced strong competitive pressure from other closed- and open-source relational database products like Microsoft SQL Server, IBM Db2, and PostgreSQL. More recently, the rise of NoSQL databases, such as MongoDB, and data warehouses, such as Snowflake, has made the database market even more competitive. However, Oracle remains one of the top three database vendors due to its reliability, scalability, and security. Enterprises nowadays rely significantly on data to be the backbone of their business—internally and through their products. Therefore, how such data is stored and accessed becomes one of the highest-stake decisions for chief information officers. Although Oracle Database products usually come with a higher price tag, many enterprises are still willing to pay the premium in exchange for its reliability and performance.

According to DB-Engines, Oracle has been the most popular database management system for over 12 years in a row based on a score calculated using Google search trends, technical discussions on Stack Overflow, and engineer profiles on LinkedIn. Meanwhile, Oracle also owns the second most popular database, MySQL, through the acquisition of Sun Microsystems in 2010. The company monetizes MySQL through an enterprise-grade, cloud-based MySQL product called Heatwave MySQL to solidify its leadership in the database realm. As one of the top database system vendors, we believe Oracle is uniquely equipped to handle some of the most important data workflows in the world that require the highest level of availability and accuracy. An example of such a workflow is real-time order execution at stock exchanges. One can imagine the chaos that would occur if a major stock exchange needed to halt all transactions during trading hours because of database glitches. In this case, the potential economic loss can far exceed the price premium Oracle charges its customers.

Oracle also operates a smaller hardware and services business that provides physical servers, storage systems, and consulting services to customers. While these two segments do not merit a moat by themselves, we view them as a crucial part of the overall Oracle ecosystem. Oracle's proprietary servers, storage, and networking hardware are designed to optimize the performance of Oracle Database. The Exadata computing platform is the industry's first to handle mixed database workloads without compromising efficiency. They provide a seamless experience to customers looking for hybrid cloud solutions. Without the Exadata hardware, Oracle cannot guarantee top-of-the-class database

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performance when customers transition across different computing environments. Potential compatibility issues can occur when a customer tries to connect different Oracle databases between Microsoft Azure servers and third-party on-premises servers.

Fair Value and Profit Drivers Luke Yang, CFA, Equity Analyst, 17 Oct 2025

Our fair value estimate for Oracle is \$340 per share, which implies a fiscal 2026 enterprise value/sales multiple of 15 times and an adjusted price/earnings multiple of 54 times. Following a period of rapid growth, Oracle's adjusted price/earnings should gradually step down to 25 times by fiscal 2030. We expect Oracle's annual revenue growth to accelerate to 31% over the next five years as the adoption of Oracle Cloud Infrastructure, or OCI, and Oracle Cloud Applications, or OCA, continues to tick up. The ramp-up of AI data centers is also a major driver of Oracle's top-line growth. Cloud should become Oracle's key growth driver and account for around 85% of the company's revenue by fiscal 2030. Meanwhile, we expect a five-year CAGR of 74% for OCI and 9% for OCA. Total cloud revenue (OCI+OCA) is expected to grow around tenfold over the next seven years. However, we acknowledge the high degree of uncertainty in this forecast, including long-term demand from key customers like OpenAI and Oracle's ability to secure the necessary resources for its data center build-out. As cloud services become the mainstream choice for customers, we model a low-single-digit revenue decline for both the license and hardware segments over the next decade. The services segment should fare better with low-single-digit revenue growth as customers continue to rely on Oracle for data infrastructure consulting services.

Thanks to the economies of scale and business mix shift to the cloud, We model a roughly flat operating margin between fiscal 2025 and 2035 as a business mix shift toward the lower margin cloud infrastructure, which largely offsets incremental efficiency gains. We also think that Oracle's research and development expense ratio will remain in the teens as the competition among database and enterprise cloud products intensifies.

Risk and Uncertainty Luke Yang, CFA, Equity Analyst, 17 Oct 2025

We give Oracle a High Morningstar Uncertainty Rating due to the high degree of uncertainty regarding genuine long-term AI cloud infrastructure demand and, to a lesser extent, intensified competition among database products.

The majority of OCI's existing remaining performance obligations come from AI companies that operate large language models. Most notably, OpenAI booked over \$300 billion of OCI capacity that is set to deliver starting in 2027. Considering that AI is probably the fastest-evolving technology in our recent history, it is extremely challenging to give an accurate prediction of the long-term data center demand of large language models. We see a scenario where OCI successfully converts all bookings into revenue as AI becomes prevalent. However, customers like OpenAI can also dramatically reduce or cancel their

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bookings if AI's ramp-up is slower than expected, which can bring very high uncertainty to OCI's long-term growth prospects.

Nowadays, Oracle often has to sell its database and cloud-based enterprise software through marketplaces operated by competitors like Amazon, Microsoft, or Google, which can weaken its bargaining power in pricing and contract renewal. The addition of an intermediary between Oracle and customers means less attractive margins and weaker client relationships compared with what the company used to enjoy in the license-based era. To the extent that these relationships are disrupted more than we think, it could bring additional uncertainty to our growth forecasts for Oracle's cloud products.

We think the plethora of new database is another major risk for Oracle. Unit prices of data storage processing have been decreasing over the past few years. The strong market demand led to many new data products. However, we believe Oracle's cloud portfolio is sufficient to serve its core customers that prioritizes stability and security. Their adoption of cloud solutions should continue to support Oracle's top-line growth.

Capital Allocation Luke Yang, CFA, Equity Analyst, 17 Oct 2025

We give Oracle a Standard Morningstar Capital Allocation Rating. This rating reflects our assessment of a sound balance sheet, fair investment strategy, and appropriate shareholder distributions. We think Oracle's shift to prioritize organic growth, when there is clear demand for its cloud infrastructure, is a better approach than the acquisition model the company previously employed.

Although Oracle's leverage is high among our software coverage, we still believe the company's balance sheet is sound. Less than 25% of Oracle's debt matures over the next three years, and the company's net debt accounts for less than a quarter of the enterprise value. In addition, Oracle enjoys strong free cash flow generation thanks to its database and enterprise software business. We believe the company has the capacity to keep its leverage stable without compromising its capital expenditure or shareholder distribution plans.

Acquisitions used to be a major part of Oracle's growth strategy, especially for the enterprise software segment. However, in recent years, Oracle has become less active in the mergers and acquisitions market with only two major acquisitions, NetSuite at \$9.3 billion and Cerner at \$28.3 billion. We view this as a welcome change as Oracle has historically paid large premiums for the companies it acquired. For the Cerner acquisition, the price Oracle paid was over 45% higher than our fair value estimate back then. Although Cerner turned out to be an important piece of Oracle's healthcare-oriented enterprise software offering, we do not think the synergy we see so far justifies the premium. We believe deploying more resources to expand Oracle's cloud infrastructure capacity is a better strategy that helps the company capture tailwinds in AI model training.

We think that Oracle has been fair with its allocation of capital toward dividends and share

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repurchases. Oracle has consistently increased its total annual dividends over the last 10 years, and we think dividends will remain an important channel for Oracle's shareholder distributions. Given substantial ongoing investments in Oracle Cloud Infrastructure, we do not expect the payout ratio to increase over the next several years. Oracle also has an ongoing stock repurchase program, which was particularly effective in the decade following 2010, with the share count almost getting cut in half by 2022 at much lower prices than today; however, given the current setup, we think the most value will be created for shareholders from continuing internal investments.

Analyst Notes Archive

Oracle: Co-CEO Appointment Should Deepen Synergy Between Cloud Infrastructure and Applications Luke Yang, CFA, Equity Analyst, 22 Sep 2025

Oracle announced on Sept. 22 that Safra Catz will move to a board role after 11 years as CEO. Clay Magouyrk, president of Oracle Cloud Infrastructure, and Mike Sicilia, president of Oracle Industries, have been promoted to co-CEOs. The shares were up 4% in intraday trading. Why it matters: We think the co-CEO appointment shows Oracle's dedication to fostering closer synergies between its cloud infrastructure and applications units. Despite recent explosive booking additions for OCI, the company is also leveraging artificial intelligence to reinvent its Oracle Cloud Applications offerings. Magouyrk joined OCI in 2014 and is one of its founding members. Sicilia, also an Oracle veteran, holds deep expertise in vertical applications, an area of strategic importance for OCA. We think both appointees are seasoned executives who are ready to lead Oracle's next stage of growth. The immediate challenge that the new co-CEOs need to tackle, in our view, is balancing OCI's and OCA's investment needs. OCI should experience strong investment pressure to ramp up data center capacities, but integrating AI across applications also requires continued investment in OCA. The bottom line: We maintain our \$330 fair value estimate for wide-moat Oracle as we await more details about the new co-CEOs' strategic vision and financial plans during the investor day in four weeks. We view the shares as fairly valued at the moment. While OCI is already a clear beneficiary of skyrocketing AI demand, we think there is much potential for AI to drive OCA's growth, too. AI-based new features that unlock unique insights from enterprises' private data residing in Oracle Database may become a new growth point for OCA, giving the stock additional upside potential. Between the lines: Oracle announced that Larry Ellison will continue to serve as board chair and chief technology officer, which should provide continuity through the transition.

Oracle: Participation in the TikTok Deal Secures Business From Key Cloud Infrastructure Customer Luke Yang, CFA, Equity Analyst, 17 Sep 2025

The Wall Street Journal reported that an investor consortium including Oracle, Silver Lake, and Andreessen Horowitz is finalizing a deal to hold a roughly 80% stake in the new entity that operates

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TikTok in the US. Oracle shares are down 3% following the news. Why it matters: We believe the deal's main value for Oracle is that Oracle Cloud Infrastructure can keep hosting TikTok. Oracle's constrained cash position and heavy pressure to deliver AI data center capacities are unlikely to make it a major stakeholder among the three investors. Notably, Oracle did not mention ByteDance or other longtime major OCI customers during its most recent earnings call. While OCI's relationship with ByteDance should remain solid, we surmise that Oracle has shifted its priorities to delivering capacities related to AI model training and inferencing. The reported 80% stake for the American consortium was larger than we expected. While the US investors' stake should give them an outsize share of TikTok's growth, the group also has limited experience in social media. ByteDance's commitment is necessary for TikTok's continued success. The bottom line: We are maintaining our \$330 fair value estimate for wide-moat Oracle, as we think the deal maintains its existing benefit from hosting TikTok with limited upside, especially given OCI's gigantic AI data center bookings. Shares look slightly undervalued to us at the moment. We reiterate our Morningstar Uncertainty Rating of High for Oracle, as demand for AI now has an oversize impact on OCI's performance. We think Oracle stock has become a proxy for many investors to gain exposure to privately held OpenAI, as it accounts for about two-thirds of OCI bookings. Key stats: We estimate that less than 5% of OCI's fiscal 2025 revenue comes from ByteDance. As OCI's AI workloads continue to scale, ByteDance's revenue contribution to OCI should decrease rapidly over the next five years.

Oracle Earnings: Skyrocketing AI Data Center Demand Fuels Outlook; Raising FVE to \$330 From \$205

Luke Yang, CFA, Equity Analyst, 10 Sep 2025

Oracle's remaining performance obligations for the first quarter increased 359% to \$455 billion, primarily due to expanding relationships with large language model providers. Management also expects Oracle cloud infrastructure to grow 77% in 2026 and reach a five-year annualized growth of 70%. Why it matters: Oracle's five-year OCI revenue outlook of \$144 billion means the business will have a size similar to Google Cloud by fiscal 2030, which completely blew our expectations. Incremental capital expenditure is necessary for Oracle to ramp up its data center capacity for new workloads. We have a fair degree of confidence in OCI achieving its five-year revenue goal based on this quarter's colossal RPO figure. Oracle's relationship with esteemed artificial intelligence firms, such as OpenAI, as well as its participation in Stargate, puts it center stage for AI training and inference workloads. We now model a peak capital expenditure of \$88 billion by fiscal 2030, close to the investment scale of the other three leading hyperscalers. Consequently, we forecast three years of negative free cash flow for Oracle due to substantial investment pressure. The bottom line: We are raising our fair value estimate for wide-moat Oracle to \$330, from \$205, after incorporating a materially higher OCI growth outlook. We see further upside to Oracle stock following the 28% after-hours jump, if Oracle can convert OCI bookings into revenue as planned. We believe OCI, like other hyperscalers, enjoys high switching costs due to technical challenges and additional costs of egressing data. Meanwhile, many enterprises are

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also getting comfortable with sourcing cloud computing capacity from multiple vendors, giving latecomers like OCI a chance. Coming up: Oracle is hosting a financial analyst day at its AI World conference in October, where we expect to hear more about its long-term capex forecasts, a centerpiece of Oracle's plan to meet significant client demands.

Oracle Earnings: AI-Based Product Innovation Reinforces High Switching Costs for Core Customers

Luke Yang, CFA, Equity Analyst, 12 Jun 2025

Wide-moat Oracle reported fourth-quarter results largely in line with our expectations. We see a healthy ramp-up of artificial intelligence-related workloads for Oracle's cloud services, with remaining performance obligations up 41% year over year to \$138 billion. We like how Oracle leverages its existing customer footprint to reinforce strong switching costs through constant product innovation. Thanks to new offerings like multicloud database, Oracle products should remain a critical part of enterprise customers' data tech stack in the AI era. We are raising our fair value estimate to \$205 per share, from \$184 previously, as we lift our forecasts for Oracle's long-term revenue growth. Shares currently look fairly valued to us. This quarter, Oracle's total revenue was up 11% in constant currency to \$16 billion. Oracle cloud infrastructure and Oracle cloud applications recorded constant-currency revenue growth of 52% and 12%, respectively, leading to an overall cloud revenue growth of 27%. OCI continues to benefit from exceptional demand, and management expects further increase in OCI consumption growth for fiscal 2026. We think new agentic AI capabilities are accelerating customers' back-office workflow migration from on-premises to the cloud, contributing to the reacceleration in revenue growth for both fusion cloud ERP and OCA in general. Oracle's non-GAAP operating margin of 44% for fiscal 2025 was largely flat compared with the previous year. However, total operating expense for the fourth quarter increased 12% year over year, the largest increase in over two years. Management attributed the cost hike to the continuous buildout of new data centers. We believe Oracle cloud's margin should stabilize over the long term, given the front-end-loaded nature of some of the expenses associated with building out new cloud capacity.

Oracle Earnings: Strong Booking Dynamics Lead the Way for Future Cloud Revenue Growth

Luke Yang, CFA, Equity Analyst, 11 Mar 2025

Wide-moat Oracle reported third-quarter results slightly below our expectations. Total revenue went up by 8% in constant currency to \$14.1 billion, maintaining a stable growth trend similar to previous quarters. However, Oracle's remaining performance obligations jumped to \$130 billion in the quarter. The \$33 billion net RPO addition is the largest in the company's history, doubling total RPO in just two years. Thanks to strong booking dynamics, we are raising our fair value estimate to \$184 per share from \$172 as we incorporate a higher revenue growth outlook in the near term. Shares currently look moderately undervalued to us. Oracle Cloud Infrastructure remains the main growth driver for the company, with quarterly revenue up 51% in constant currency to \$2.7 billion. Just like competing

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hyperscalers, OCI is enjoying a strong tailwind in artificial intelligence, with demand continuing to outstrip supply. The business is on track to record \$10 billion in annual revenue in fiscal 2025, and we expect an additional \$5 billion of revenue growth in fiscal 2026 as component delays ease. With Oracle bringing more data centers online, OCI should continue to expand its market share in the cloud infrastructure space over the next few years. Cloud database is another bright spot for the quarter, with revenue growing 28% year over year. Specifically, multicloud database revenue from Amazon, Microsoft, and Google went up by 92% in the quarter. We like Oracle's strategy of bringing its database to other cloud service providers, as it facilitates a smoother process for traditional on-premises Oracle database users to bring their data workflows to the cloud. The company is also planning to expand its partnership by adding 40 more database cloud regions, which should reinforce the strong switching costs Oracle's database system boasts.

Oracle: Moat Upgraded to Wide From Narrow as Cloud Offerings Gain Traction; Shares Fairly Valued

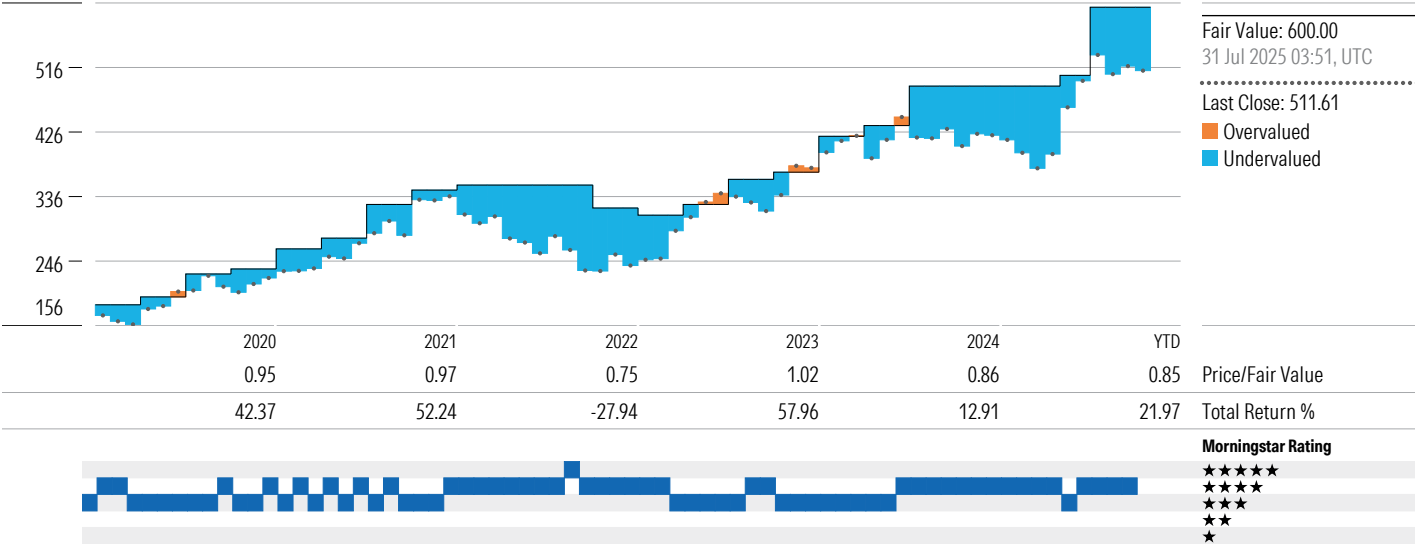
Luke Yang, CFA, Equity Analyst, 14 Feb 2025

We are upgrading our moat rating for Oracle to wide from narrow as we transfer coverage to a new analyst. In our view, Oracle Cloud Infrastructure, or OCI, and Oracle Cloud Applications, or OCA, both enjoy strong switching costs with customers sticking with the same vendor for up to several decades. We are also lowering our fair value estimate to \$172 from \$195 as we incorporate more conservative margin outlooks due to competitive pressure from established hyperscalers and alternative data management software providers. Oracle is known as a major supplier of premium relational database systems and enterprise software. Following a years-long process of building out cloud infrastructure and application offerings, Oracle now boasts a comprehensive cloud-based product lineup that can satisfy the needs of its key customers, such as financial institutions and governments. We believe OCI will continue its rapid growth at an average of 32% annually over the next five years, doubling its market share in the enterprise cloud market. OCI has already gained critical mass and is no longer a drag on profitability. The cloud transition of Oracle's traditional on-premises customers should serve as a tailwind to the company's top-line growth in the coming years. Despite the plethora of open-source and NoSQL database management solutions, Oracle remains the go-to option for the world's most important data workflows. We believe the competitive pressure from other database providers is manageable as the majority of competing products do not offer the same level of reliability and security as Oracle Database. We are also encouraged by the company's recent partnerships with Amazon, Microsoft, and Google. This arrangement ensures that Oracle continues to provide a best-in-class database management experience in the cloud era, a crucial move to keeping customers within its ecosystem. ■■■

Oracle Corp **ORCL** ★★★ 17 Oct 2025 01:28, UTC

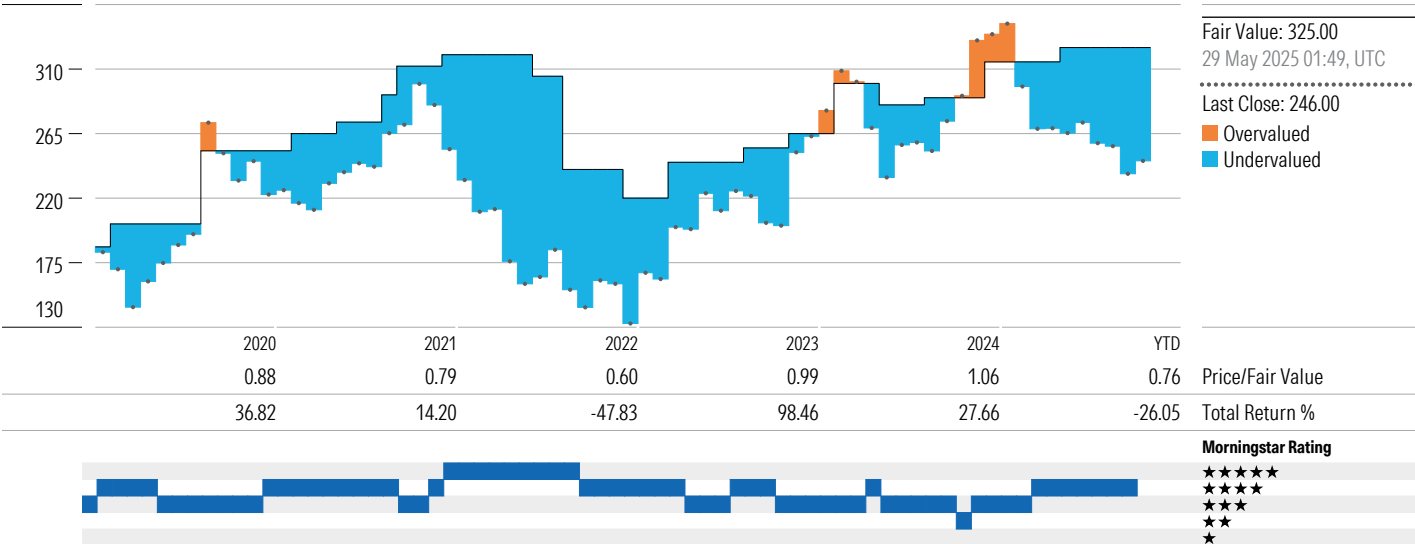
Competitors Price vs. Fair Value

Microsoft Corp **MSFT**



Total Return % as of 16 Oct 2025. Last Close as of 16 Oct 2025. Fair Value as of 31 Jul 2025 03:51, UTC.

Salesforce Inc **CRM**



Total Return % as of 16 Oct 2025. Last Close as of 16 Oct 2025. Fair Value as of 29 May 2025 01:49, UTC.

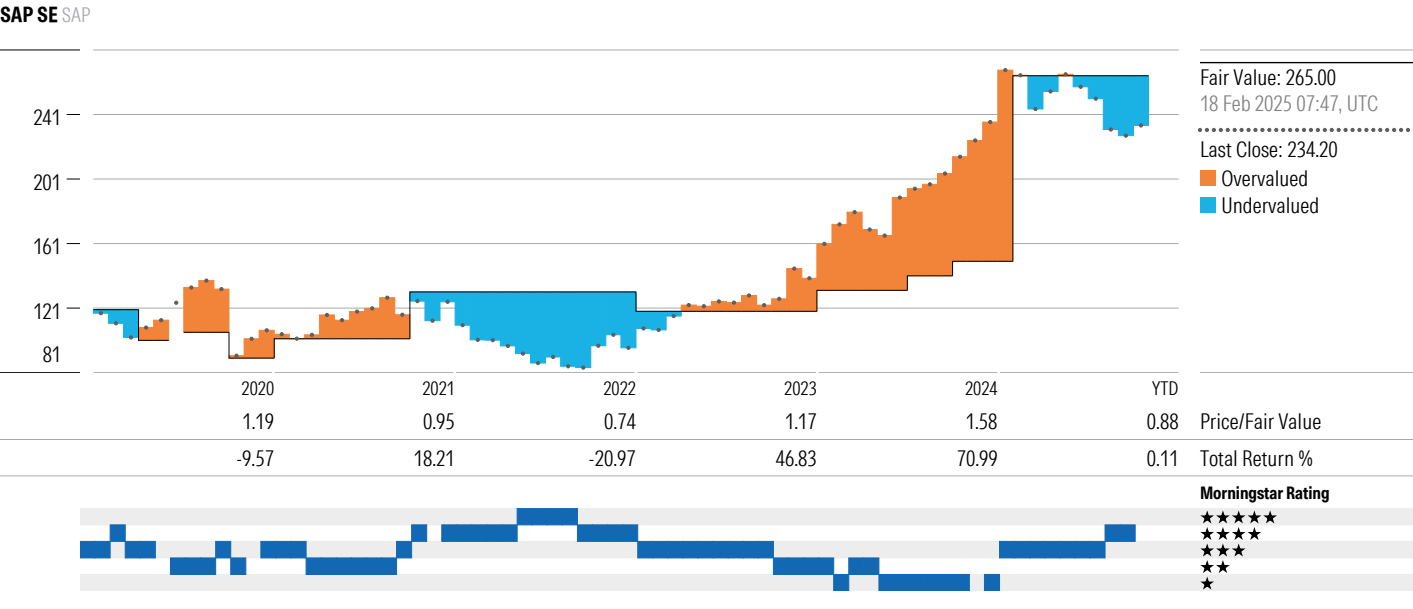
Oracle Corp

ORCL

★★★

17 Oct 2025 01:28, UTC

Competitors Price vs. Fair Value



Total Return % as of 15 Oct 2025. Last Close as of 15 Oct 2025. Fair Value as of 18 Feb 2025 07:47, UTC.

Oracle Corp ORCL ★★★ 17 Oct 2025 01:28, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
313.00 USD 16 Oct 2025	340.00 USD 17 Oct 2025 01:25, UTC	0.92	892.30 USD Bil 16 Oct 2025	Wide	Large Growth	High	Standard	3 Sep 2025 05:00, UTC

Morningstar Valuation Model Summary

Financials as of 16 Oct 2025

Fiscal Year, ends 31 May	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
Revenue (USD Mil)	49,955	52,961	57,399	66,549	84,184	129,100	182,472	220,059
Operating Income (USD Mil)	13,775	16,071	18,053	20,619	26,309	36,951	50,364	57,591
EBITDA (USD Mil)	18,741	21,395	23,910	28,334	43,003	60,724	86,863	101,542
Adjusted EBITDA (USD Mil)	26,551	29,096	31,266	37,582	54,078	78,133	111,920	131,780
Net Income (USD Mil)	8,504	10,467	12,443	12,675	16,557	23,442	31,976	36,985
Adjusted Net Income (USD Mil)	14,178	15,709	17,283	19,288	24,381	36,132	50,491	59,615
Free Cash Flow To The Firm (USD Mil)	-14,005	16,236	5,554	-7,318	-10,740	-5,883	-151	2,309
Weighted Average Diluted Shares Outstanding (Mil)	2,766	2,823	2,866	3,056	3,053	3,050	3,047	3,045
Earnings Per Share (Diluted) (USD)	3.07	3.71	4.34	4.15	5.42	7.69	10.49	12.15
Adjusted Earnings Per Share (Diluted) (USD)	5.13	5.56	6.03	6.31	7.99	11.85	16.57	19.58
Dividends Per Share (USD)	1.36	1.60	1.80	2.20	2.40	2.60	2.80	3.00

Margins & Returns as of 16 Oct 2025

	3 Year Avg	Actual			Forecast					5 Year Avg
		2023	2024	2025	2026	2027	2028	2029	2030	
Operating Margin %	28.3	27.6	30.3	31.5	31.0	31.3	28.6	27.6	26.2	27.5
EBITDA Margin %	—	37.5	40.4	41.7	42.6	51.1	47.0	47.6	46.1	—
Adjusted EBITDA Margin %	—	53.2	54.9	54.5	56.5	64.2	60.5	61.3	59.9	60.5
Net Margin %	19.5	17.0	19.8	21.7	19.1	19.7	18.2	17.5	16.8	18.3
Adjusted Net Margin %	29.4	28.4	29.7	30.1	29.0	29.0	28.0	27.7	27.1	28.1
Free Cash Flow To The Firm Margin %	4.1	-28.0	30.7	9.7	-11.0	-12.8	-4.6	-0.1	1.1	-5.5

Growth & Ratios as of 16 Oct 2025

	3 Year CAGR	Actual			Forecast					5 Year CAGR
		2023	2024	2025	2026	2027	2028	2029	2030	
Revenue Growth %	10.6	17.7	6.0	8.4	15.9	26.5	53.3	41.3	20.6	30.8
Operating Income Growth %	4.5	-13.0	16.7	12.3	14.2	27.6	40.5	36.3	14.4	26.1
EBITDA Growth %	21.5	38.5	14.2	11.8	18.5	51.8	41.2	43.1	16.9	34.3
Adjusted EBITDA Growth %	12.1	19.6	9.6	7.5	20.2	43.9	44.5	43.2	17.7	33.3
Earnings Per Share Growth %	21.6	27.4	20.6	17.1	-4.5	30.8	41.7	36.5	15.8	22.9
Adjusted Earnings Per Share Growth %	21.6	4.5	8.6	8.4	4.7	26.5	48.3	39.9	18.2	22.9

Valuation as of 16 Oct 2025

	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
Price/Earning	20.7	21.1	27.5	49.6	39.2	26.4	18.9	16.0
Price/Sales	5.8	6.1	8.1	13.4	10.6	6.9	4.9	4.1
Price/Book	271.6	38.0	22.6	36.8	27.9	19.6	13.4	9.7
Price/Cash Flow	—	—	—	—	—	—	—	—
EV/EBITDA	14.0	13.8	17.4	26.3	18.2	12.6	8.8	7.5
EV/EBIT	26.9	24.9	30.1	47.9	37.5	26.7	19.6	17.1
Dividend Yield %	1.3	1.4	1.1	0.7	0.8	0.8	0.9	1.0
Dividend Payout %	26.5	28.7	29.8	34.9	30.0	22.0	16.9	15.3
Free Cash Flow Yield %	—	—	—	—	—	—	—	—

Operating Performance / Profitability as of 16 Oct 2025

Fiscal Year, ends 31 May	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
ROA %	6.3	7.4	7.4	6.5	6.5	6.7	6.8	6.9
ROE %	546.5	113.3	59.3	47.9	47.8	47.7	44.7	37.6
ROIC %	14.2	13.1	13.4	12.9	14.0	16.7	18.8	17.8

Oracle Corp ORCL ★★★

17 Oct 2025 01:28, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
313.00 USD 16 Oct 2025	340.00 USD 17 Oct 2025 01:25, UTC	0.92	892.30 USD Bil 16 Oct 2025	Wide	Large Growth	High	Standard	 3 Sep 2025 05:00, UTC

Financial Leverage (Reporting Currency)

Fiscal Year, ends 31 May	Actual			Forecast				
	2023	2024	2025	2026	2027	2028	2029	2030
Debt/Capital %	24.0	22.4	18.3	9.3	11.3	13.7	16.2	16.2
Assets/Equity	86.4	15.3	8.0	7.3	7.3	7.1	6.6	5.5
Net Debt/EBITDA	4.3	3.9	3.9	3.7	3.1	2.7	2.3	2.3
Total Debt/EBITDA	3.4	3.2	3.3	3.0	2.8	2.6	2.4	2.2
EBITDA/ Net Interest Expense	7.6	8.3	8.7	8.8	9.4	10.2	11.0	12.0

Forecast Revisions as of 16 Oct 2025

Prior data as of 9 Sep 2025	2026		2027		2028	
	Current	Prior	Current	Prior	Current	Prior
Fair Value Estimate Change (Trading Currency)	340.00	329.53	—	—	—	—
Revenue (USD Mil)	66,549	66,549	84,184	82,234	129,100	123,695
Operating Income (USD Mil)	20,619	19,455	26,309	24,591	36,951	38,538
EBITDA (USD Mil)	37,582	36,940	54,078	50,279	78,133	75,755
Net Income (USD Mil)	19,288	18,557	24,381	23,093	36,132	36,185
Earnings Per Share (Diluted) (USD)	4.15	3.85	5.42	5.06	7.69	8.21
Adjusted Earnings Per Share (Diluted) (USD)	6.31	6.07	7.99	7.56	11.85	11.86
Dividends Per Share (USD)	2.20	2.20	2.40	2.40	2.60	2.60

Key Valuation Drivers as of 16 Oct 2025

Cost of Equity %	9.0
Pre-Tax Cost of Debt %	6.5
Weighted Average Cost of Capital %	8.6
Long-Run Tax Rate %	18.0
Stage II EBI Growth Rate %	10.5
Stage II Investment Rate %	29.0
Perpetuity Year	20

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

Discounted Cash Flow Valuation as of 16 Oct 2025

	USD Mil
Present Value Stage I	81,104
Present Value Stage II	317,056
Present Value Stage III	616,397
Total Firm Value	1,014,557
Cash and Equivalents	11,203
Debt	92,568
Other Adjustments	0
Equity Value	933,192
Projected Diluted Shares	2,831
Fair Value per Share (USD)	340.00

Oracle Corp **ORCL** ★★★ 17 Oct 2025 01:28, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
313.00 USD 16 Oct 2025	340.00 USD 17 Oct 2025 01:25, UTC	0.92	892.30 USD Bil 16 Oct 2025	Wide	Large Growth	High	Standard	 3 Sep 2025 05:00, UTC

ESG Risk Rating Breakdown

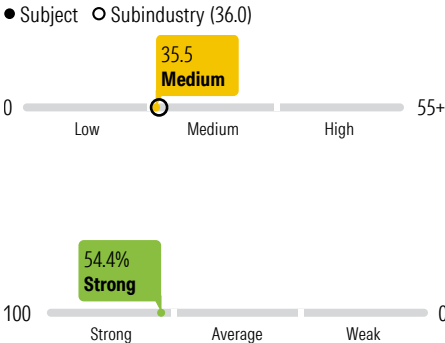
Exposure

Company Exposure¹	35.5
- Manageable Risk	33.1
Unmanageable Risk²	2.4

Management

Manageable Risk	33.1
- Managed Risk³	18.0
Management Gap⁴	15.1

Overall Unmanaged Risk 17.5



- ▶ 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 54.4% 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



ESG Risk Rating is of Sep 03, 2025. Highest Controversy Level is as of Oct 08, 2025. 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 03 Sep 2025

Company Name	Exposure	Management	ESG Risk Rating
Oracle Corp	35.5 Medium 0 —●— 55+	54.4 Strong 100 —●— 0	17.5 Low 0 —●— 40+
Microsoft Corp	34.9 Low 0 —●— 55+	55.5 Strong 100 —●— 0	16.9 Low 0 —●— 40+
Salesforce Inc	36.0 Medium 0 —●— 55+	51.3 Strong 100 —●— 0	18.8 Low 0 —●— 40+
SAP SE	34.5 Low 0 —●— 55+	66.8 Strong 100 —●— 0	13.0 Low 0 —●— 40+
Workday Inc	32.2 Low 0 —●— 55+	52.4 Strong 100 —●— 0	16.4 Low 0 —●— 40+

Appendix

Historical Morningstar Rating

Oracle Corp ORCL 16 Oct 2025 21:24, 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 ★★★★

Microsoft Corp MSFT 16 Oct 2025 21:24, 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 ★★★

Salesforce Inc CRM 16 Oct 2025 21:32, 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 ★★★

SAP SE SAP 17 Oct 2025 00:29, 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 ★★★

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, 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

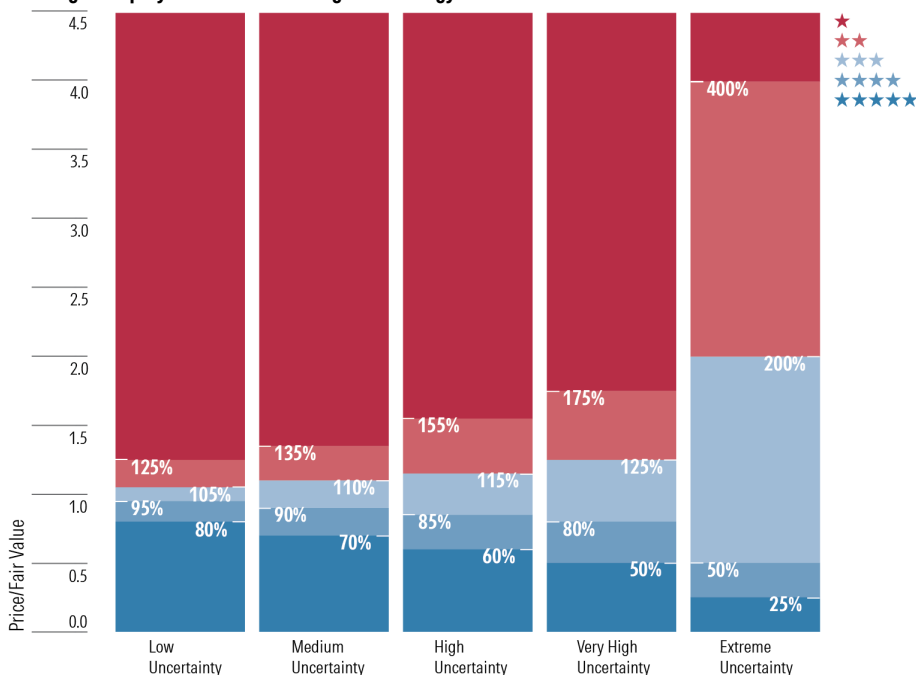
Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly,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

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

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

Sustainalytics analyzes over 1,300 data points to assess a company's exposure to and management of ESG risks. In other words, ESG Risk Ratings measures a company's unmanaged ESG Risks represented as a quantitative score.

Unmanaged Risk is measured on an open-ended scale starting at zero (no risk) with lower scores representing less unmanaged risk and, for 95% of cases, the unmanaged ESG Risk score is below 50.

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

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

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