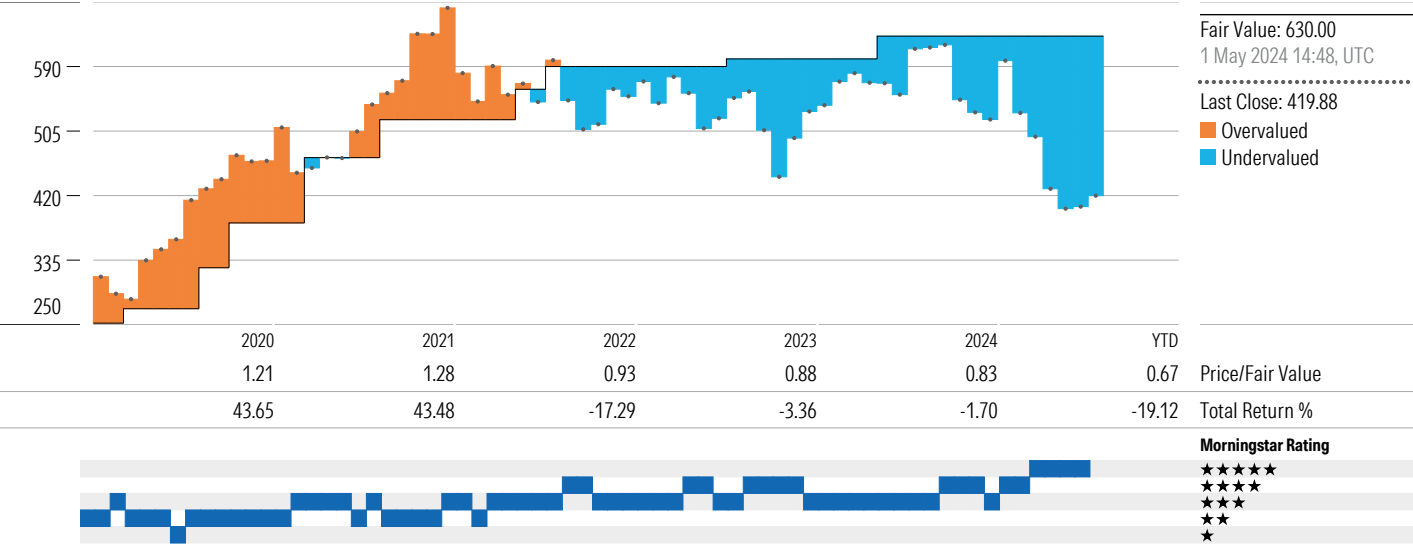


Thermo Fisher Scientific Inc TMO ★★★★★ 9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD 9 Jul 2025	630.00 USD 1 May 2024 14:48, UTC	0.67	159.37 USD Bil 10 Jul 2025	Wide	Large Value	Medium	Exemplary	 4 Jun 2025 05:00, UTC

Price vs. Fair Value



Total Return % as of 09 Jul 2025. Last Close as of 09 Jul 2025. Fair Value as of 1 May 2024 14:48, UTC.

Contents

- Business Description
- Business Strategy & Outlook (8 Jul 2025)
- Bulls Say / Bears Say (10 Jul 2025)
- Economic Moat (8 Jul 2025)
- Fair Value and Profit Drivers (10 Jul 2025)
- Risk and Uncertainty (8 Jul 2025)
- Capital Allocation (10 Jul 2025)
- Analyst Notes Archive
- Financials
- ESG Risk
- Appendix
- Research Methodology for Valuing Companies

Important Disclosure

The conduct of Morningstar's analysts is governed by Code of Ethics/Code of Conduct Policy, Personal Security Trading Policy (or an equivalent of), and Investment Research Policy. For information regarding conflicts of interest, please visit: <http://global.morningstar.com/equitydisclosures>.

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

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

Thermo Fisher's 2025 Will Remain Challenging With Slow Academic and China Demand

Business Strategy & Outlook Alex Morozov, CFA, Regional Director, 8 Jul 2025

While Thermo Fisher is weathering the pullback in global biopharmaceutical spending and China softness better than most of its peers, it is still not immune to the overall softness in the life science market. Having an unmatched portfolio of products, resources, and manufacturing capabilities have allowed the firm to retain and grow its wallet share among its customers across all channels. We expect the current budget-constrained environment to stay suppressed this year, but return to more normalized growth in 2026. Thermo Fisher remains in a great position to leverage its share gains in the biopharma channel and capitalize on strong long-term demand.

While bigger is not always better, Thermo Fisher had long committed itself to accumulate as robust a product offering, under one roof, as possible. To reach its ultimate goal of being a one-stop shop go-to provider of life science instruments and consumables, the company has spent aggressively throughout the years on internal efforts but particularly on acquisitions. More than \$50 billion has been deployed since 2010 on this strategy (including the recent PPD acquisition), which, while accretive to the company's reach, scale and product breadth, has historically suppressed its returns on invested capital, or ROICs, to rather modest levels. Not anymore.


While the uplift from covid-19 tests and vaccines has been significant, the swiftness and extent of the

Thermo Fisher Scientific Inc

TMO★★★★★

9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD 9 Jul 2025	630.00 USD 1 May 2024 14:48, UTC	0.67	159.37 USD Bil 10 Jul 2025	Wide	Large Value	Medium	Exemplary	 4 Jun 2025 05:00, UTC

Sector	Industry
 Healthcare	Diagnostics & Research

Business Description

Thermo Fisher Scientific sells scientific instruments and laboratory equipment, diagnostics consumables, and life science reagents. The firm operates through four segments as of year end-2024 (revenue figures include some cross-segment revenue): analytical technologies (17% of sales); specialty diagnostic products (11%); life science solutions (23%); and lab products and services, which includes CRO services (54%).

company's response has cemented Thermo Fisher's integral role within the segment. The company has long found a receptive audience to its pitch with large pharma clients, which see sizable benefits in the simplified procurement process Thermo Fisher offers. Accelerated by the pandemic, the critical supplier status has been extended to the firm by a much wider audience, including governments. We anticipate the firm's penetration of all its customer channels to grow, aided by its expansion into contract research and manufacturing. We also think the company's global reach will continue to resonate, and its already strong presence within rapidly growing emerging markets to expand further.

Bulls Say Alex Morozov, CFA, Regional Director, 10 Jul 2025

- ▶ Thermo Fisher is among the industry's best when it comes to cost control. As near-term spending is constrained, the company's margins show exceptional resilience.
- ▶ PPD business has been growing at above-market rates, implying share gains. The company's scale and reach have boosted performance in this already-attractive business.
- ▶ Thermo Fisher is successfully implementing price hikes within its portfolio, offsetting inflation and future tariff pressures.

Bears Say Alex Morozov, CFA, Regional Director, 10 Jul 2025

- ▶ Tariffs introduce uncertainty for the entire life science space.
- ▶ Thermo Fisher's 2024 performance was materially affected by weakness in China. We expect this market to rebound, but 2025 will still remain muted.
- ▶ Thermo Fisher's academic and government channel is soft, as the current US administration is taking a more stringent approach to grants.

Economic Moat Alex Morozov, CFA, Regional Director, 8 Jul 2025

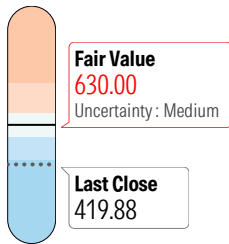
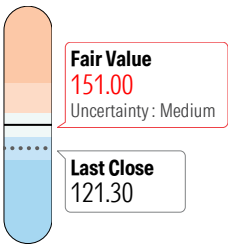
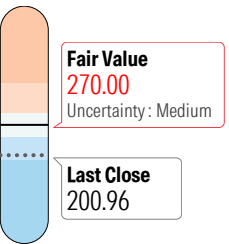
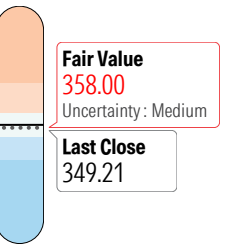
Thermo Fisher has a wide economic moat, continuously supported by its ongoing acquisition strategy. The company is an aggressive and a desirable acquisition partner, as only a handful of other life science firms have the balance sheet to support comparable large deals. From 2010 the firm has spent on average \$4.7 billion on acquisitions per year, and we expect this to continue. However, with the total company size now dwarfing its peers, there are only a very few scenarios probable of an acquisition large enough to make a material dent in ROICs.

Strategically the firm's acquisitions have been an enormous boon for its competitive positioning. There are only limited product gaps now in the company offering to the life science research sector, which in turn has allowed it to steadily gain wallet share (average organic growth of 4%-5% versus industry growth of approximately 3% over the past decade). The one-stop shop approach, made possible in part by acquisitions, affords it pricing flexibility and results in strong customer relationships. The company finds a receptive audience with large pharma clients, which see sizable benefits in the simplified procurement process Thermo Fisher offers. As a result, the firm's penetration and entrenchment within the pharma end market (switching costs) are expanding, which we expect to continue.

Thermo Fisher Scientific Inc TMO ★★★★★ 9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD 9 Jul 2025	630.00 USD 1 May 2024 14:48, UTC	0.67	159.37 USD Bil 10 Jul 2025	Wide	Large Value	Medium	Exemplary	4 Jun 2025 05:00, UTC

Competitors

	Thermo Fisher Scientific Inc TMO	Agilent Technologies Inc A	Danaher Corp DHR	Waters Corp WAT
				
Economic Moat	Wide	Wide	Wide	Wide
Currency	USD	USD	USD	USD
Fair Value	630.00 1 May 2024 14:48, UTC	151.00 31 May 2023 16:01, UTC	270.00 29 Jan 2025 16:46, UTC	358.00 6 May 2025 15:05, UTC
1-Star Price	850.50	203.85	364.50	483.30
5-Star Price	441.00	105.70	189.00	250.60
Assessment	Undervalued 9 Jul 2025	Undervalued 9 Jul 2025	Undervalued 9 Jul 2025	Fairly Valued 9 Jul 2025
Morningstar Rating	★★★★★ 9 Jul 2025 21:29, UTC	★★★★★ 9 Jul 2025 21:20, UTC	★★★★★ 9 Jul 2025 21:20, UTC	★★★ 9 Jul 2025 21:26, UTC
Analyst	Alex Morozov, Regional Director	Julie Utterback, Senior Equity Analyst	Julie Utterback, Senior Equity Analyst	Julie Utterback, Senior Equity Analyst
Capital Allocation	Exemplary	Exemplary	Exemplary	Exemplary
Price/Fair Value	0.67	0.80	0.74	0.98
Price/Sales	3.74	5.25	6.16	6.98
Price/Book	3.21	5.61	2.83	10.59
Price/Earning	19.17	29.88	38.09	31.64
Dividend Yield	0.39%	0.81%	0.59%	0.00%
Market Cap	158.50 Bil	34.46 Bil	143.82 Bil	20.78 Bil
52-Week Range	385.46—627.88	96.43—153.84	171.00—281.70	283.41—423.56
Investment Style	Large Value	Mid Blend	Large Value	Mid Growth

The company has long been a ubiquitous name in the life science supplies, going back to the days of Fisher catalog. The company's access to customer channels is unparalleled; the legacy Fisher (virtual) catalog still dominates the marketplace, and its next-largest competitors in the laboratory consumable segment are materially smaller. Thermo Fisher's salesforce is by far the largest in the industry and its distribution network gives the firm unmatched reach and scale. To get a better sense of the omnipresence of the life science supplies business, the company's revenue (excluding analytical instruments and diagnostics businesses) is nearly equal to the next three largest life science suppliers combined; its products reach nearly twice as many customers as competitors and its salesforce in this segment is four times its largest peer. The company utilizes its reach effectively; every business it has acquired has been fully integrated in its core operations and typically growth from the acquired businesses accelerates once the initial integration stage is complete.

Thermo Fisher Scientific Inc

TMO★★★★★9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD	630.00 USD	0.67	159.37 USD Bil	Wide	Large Value	Medium	Exemplary	
9 Jul 2025	1 May 2024 14:48, UTC		10 Jul 2025					4 Jun 2025 05:00, UTC

The argument for the Analytical business moat is similar to the wide moat argument for its key competitors here Agilent and Waters. This segment serves a slightly less life science-tilted customer base than its other segments, but it benefits from switching costs and intangible assets. The intangible asset is the firm's differentiated technology and its leadership positions within tools such as mass spectrometry, chromatography, microscopy and others. Instrumentation is a high-ticket item, and typically comes with a recurring revenue stream attached. The business is also rather sticky, particularly within the biopharma end market, where the regulatory process assures high switching costs. Production methods have to stay uniform throughout the life cycle of a drug, which often extends beyond the life cycle of a typical mass spectrometer. Any changes to the production method automatically triggers approval from a regulator, which isn't common. The market share among the big three in instrumentation hasn't materially changed over the past few decades, suggesting rational competition. Outside biopharma, switching costs aren't as strong and are mainly a factor of interoperability (a typical customer acquires multiple tools from the same vendor) and to a lesser degree customer inertia driven by the accustomed-to expectations of a high-quality product portfolio.

The recently acquired contract research operations is typically viewed by us as a narrow-moat business, but within Thermo Fisher it adds to the spectrum of research services provided for biopharma clients, further entrenching its customer base. Previously, this was the only missing meaningful offering, but by acquiring PPD, the company offers its clients even greater incentive to consolidate their activities with just one vendor.

The company is also gradually becoming less and less sensitive to economic cycles, as more of its revenue is tied to the "lights on" activities of research laboratories rather than capital budgets. The business mix has gradually shifted to consumables and services, large portion of which are recurring, and now constitute 82% of total sales. A shift toward biopharma clients has also made the company less susceptible to more volatile infrastructure and applied end markets, even in emerging-market geographies where the biopharma channel is experiencing particularly high growth.

Fair Value and Profit Drivers Alex Morozov, CFA, Regional Director, 10 Jul 2025

Our fair value estimate is \$630 per share. We anticipate the current constrained environment to remain in 2025, but slowly return to historic mid-single-digit growth in the following year.

Thermo Fisher is a rare example of a company that has delivered its best years ever in arguably one of the worst years economically in history. In the normalized environment, we forecast Thermo Fisher's sales will increase approximately 5%-6% per year organically, boosted by the faster-growing CRO segment and wallet share gains. We expect the analytical instruments and life sciences segments to drive future growth, while the mature catalog business will provide cash flows to fund investments in growth areas, such as clinical trials (PPD). We anticipate Thermo Fisher's adjusted operating margin

Thermo Fisher Scientific Inc

TMO★★★★★

9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD 9 Jul 2025	630.00 USD 1 May 2024 14:48, UTC	0.67	159.37 USD Bil 10 Jul 2025	Wide	Large Value	Medium	Exemplary	 4 Jun 2025 05:00, UTC

will steadily improve over the next five years. The company's improved product mix, internal sourcing efforts, manufacturing shift to lower-cost regions, and efficiency improvements should more than offset pricing pressure in many of its commodity products.

We forecast Thermo Fisher to continue spending materially on bolt-on acquisitions. The company's historical capital allocation strategy has favored acquisitions, and while we don't forecast any material deals, we expect approximately 100 basis points of top-line benefit coming inorganically. We use a 7% cost of capital in our assumptions.

Risk and Uncertainty Alex Morozov, CFA, Regional Director, 8 Jul 2025

We assign Thermo Fisher a Medium Morningstar Uncertainty Rating. The company as a supplier to the biopharma channel relies on continued investments and funding; current biopharma spending is somewhat constrained and will likely remain muted throughout 2025. Academic and government spending are also at the depressed levels and could stay there throughout the current US administration. The firm's exposure to industrial end markets leads to some cyclicity within its revenue stream; the semiconductor business in particular could be severely affected if the industry's spending declines. If the company's key environmental instruments target markets—China and India—reduce their environmental quality testing due to fiscal concerns or currency headwinds, this could more than offset Thermo's recovery in the life sciences market. The company faces competition in its analytical instruments business, particularly from low-end instrument manufacturers. Finally, its acquisition strategy continually exposes the firm to risk of overpaying for increasingly environmental, social, and governance-related risks, but it's worth noting that its efficiency in tax-avoidance strategies could make the company a target for regulators.

Capital Allocation Alex Morozov, CFA, Regional Director, 10 Jul 2025

We assign an Exemplary Morningstar Capital Allocation Rating to Thermo Fisher. The company's management team is one of the strongest in the life science industry.

The company's balance sheet risk is quite low. While Thermo Fisher is a serial acquirer, even at its peak, the company's net debt/EBITDA was below 4. Following the PPD deal, leverage is elevated but we anticipate it to be reduced to a more normal 2 times debt/EBITDA fairly quickly.

When it comes to the company's track record with its acquisitions, purchase price aside, it is nearly impeccable. Every major deal it has made has contributed to market share gains we've seen from the firm over the past decade. Thermo Fisher deploys a very swift acquisition integration approach, leveraging its scale and reach to actually extract ever-elusive revenue synergies. Whether filling in the product gaps or geography penetration, the strategy has been largely successful. The issue has always been with the price it is willing to pay, and its appetite and aggressiveness have been further fueled by cheap financing it has been able to obtain. We aren't assuming material value creation through

Thermo Fisher Scientific Inc

TMO★★★★★

9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD 9 Jul 2025	630.00 USD 1 May 2024 14:48, UTC	0.67	159.37 USD Bil 10 Jul 2025	Wide	Large Value	Medium	Exemplary	 4 Jun 2025 05:00, UTC

acquisitions, but we note that qualitatively they have been moat-enhancing even as ROICs have not materially improved.

Our only qualm is with the shareholder distribution part of our analysis. The company's dividend policy is absurdly low, as the dividend payout ratio is in single digits. The preferred way of shareholder distribution (what is left after acquisitions) has long been through buybacks. We consider them at best value-neutral based on our assessment of the company's value at the time. We do think the company's reinvestment policy is appropriate.

Analyst Notes Archive

Thermo Fisher Earnings: Strong Underlying Performance; Tariffs' Bite Is Manageable Alex Morozov, CFA,Regional Director,23 Apr 2025

Thermo Fisher Scientific delivered strong first-quarter results. The company reduced its full-year guidance after incorporating the direct impact of tariffs on its revenue and profitability. Why it matters: Direct and indirect effects of tariffs were in focus during the earnings call. The direct impact is an approximately 5% earnings reduction to the full-year guidance. The indirect impact, particularly a slowdown in China-US trade activity, is less certain but potentially more damaging. Thermo Fisher's massive geographic manufacturing footprint gives the company an advantage over smaller peers as it pertains to mitigating tariffs. Longer term, the firm's natural hedge and pricing power should successfully offset the impact of tariffs. The company is seeing a slowdown in government and academic activity in the US. The contract research services business saw \$200 million in vaccine contract cancellations, stemming from the Trump administration directives. The bottom line: We're maintaining our fair value estimate and wide moat rating. The shares appear slightly undervalued as the near-term environment remains highly volatile. We're adjusting the pace of China demand normalization as the current US-China trade wars will likely compress the pace of activity recovery. We also anticipate lower demand related to the National Institutes of Health's budget. Our long-term profitability forecast is unchanged. Given the highly uncertain environment, we anticipate Thermo Fisher will keep a lid on its investments.

Life Science Industry: Tariffs Remain Concerning, but No Major Change to Our Views Currently Julie Utterback, CFA,Senior Equity Analyst,10 Apr 2025

Over the past week, life science shares have experienced significant volatility related to a deepening trade war with China and as broader US tariffs were implemented and then paused for 90 days to allow time for negotiations. A pharmaceutical-specific tariff is also being considered.Why it matters: Near-term life science demand, margins, and tax rates may be directly affected by tariffs, especially with China. However, the durability of tariffs is highly uncertain, and we wouldn't anticipate many drug manufacturers altering their footprint notably, given the significant costs and time required. In our

Thermo Fisher Scientific Inc

TMO★★★★★9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD	630.00 USD	0.67	159.37 USD Bil	Wide	Large Value	Medium	Exemplary	
9 Jul 2025	1 May 2024 14:48, UTC		10 Jul 2025					4 Jun 2025 05:00, UTC

coverage, China sales range from around 19% of sales at Agilent down to 7% at Illumina in 2024, with most of our remaining list typically in the midteens. This creates moderate concerns around profitability in that deepening trade war. Although unlikely, one of the major times when a biopharmaceutical manufacturer would consider switching life science tool suppliers is when building a new manufacturing facility, so we will remain on the lookout for major plans on that front. The bottom line: While short- or intermediate-term pressures may arise, we are not changing our views on the life science firms at this point, as we think the direct impact from tariffs on long-term profits will likely be limited in scope. Life science shares appear largely undervalued to us currently. On China, most of these firms, including one of the most exposed players, Agilent, have "in China, for China" manufacturing status, which limits tariff risk. European firms may have a leg up on US firms, though, if China takes further retaliatory steps specifically against US firms. Life science toolmakers that sell to the drug manufacturers will likely still enjoy very wide moats too. We would only get concerned for the near-term stickiness if significant drug manufacturing looks likely to shift back to the US, which looks unlikely to us.

Thermo Fisher Earnings: Strong Top-Line and Margin Results, Improving 2025 Dynamics

Alex Morozov, CFA, Regional Director, 30 Jan 2025

Thermo Fisher Scientific delivered strong fourth-quarter results. Guidance for 2025 implies healthier demand in the first half and reacceleration to historical levels in the second half. Improving demand and the company's expectation for material margin improvement in 2025 led the shares higher. Why it matters: Core organic revenue grew 5% in the quarter, a material step up from the prior quarter. The company continued to deliver strong improvement on the margin line, up 70 basis points. Most important, Thermo Fisher's guidance for 2025 suggests an improvement in global demand, with potential growth reacceleration to historical levels toward the end of the year. All segments performed above expectations. Analytical technologies, with 8% organic growth, was a particular standout. Demand for electronic microscopy instrumentation, mass spectrometry, and liquid chromatography was strong. The company performed better than some of its main peers in the quarter, implying market share gains. By geographies, North America and China were up midsingle digits, Europe was up low single digits, and Asia-Pacific was up high single digits. The 2025 guidance does not suggest a strong China rebound, however; even as Thermo Fisher starts seeing some stimulus-related orders, the overall environment is still challenging. The bottom line: We're maintaining our \$630 fair value estimate and wide moat rating. The shares appear slightly undervalued as muted growth and regulatory uncertainty weigh on investor sentiment. We're modeling more normalized revenue growth in 2025 and beyond as the biopharma channel returns to growth and China demand starts to rebound. Our profitability forecast is unchanged. Given the still uncertain environment, we anticipate Thermo Fisher will keep a lid on its investments.

Thermo Fisher Scientific Inc

TMO★★★★★9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD	630.00 USD	0.67	159.37 USD Bil	Wide	Large Value	Medium	Exemplary	
9 Jul 2025	1 May 2024 14:48, UTC		10 Jul 2025					4 Jun 2025 05:00, UTC

Thermo Fisher Earnings: Modest Improvement in Demand, Revenue Growth Return Imminent

Alex Morozov, CFA,Regional Director,23 Oct 2024

While Thermo Fisher's results were largely as expected, we anticipate end markets to start improving next quarter and into 2025. Why it matters: Core organic revenue growth was flat in the quarter, still moderately affected by the run-off of pandemic revenue and the tight spending environment. We expect the company to return to growth in the near term. Thermo Fisher continues to manage its expenses prudently. All segments largely performed within expectations. Analytical technologies continue to see strong demand for electronic microscopy instrumentation. The biopharma channel improved sequentially in the quarter but remains below our long-term expectations for this end market. With funding constraints easing, we expect demand to return across all segments, particularly in bioproduction and clinical research services. The bottom line: We're maintaining our fair value estimate and wide moat rating. Shares are slightly undervalued as muted growth is still weighing on investor sentiment. We're modeling more normalized revenue growth in 2025 and beyond as the biopharma channel returns to growth and China demand rebounds. Our profitability forecast is unchanged. Given the still uncertain environment, we anticipate Thermo Fisher will keep a lid on its investments.

Thermo Fisher Earnings: More of the Same, Second Half Should Return to Growth

Alex Morozov, CFA,Regional Director,24 Jul 2024

We are maintaining our \$630 fair value estimate for wide-moat Thermo Fisher following its second-quarter results. Organic revenue declined 1% in the quarter but was effectively flat once adjusted for the remainder of the covid-19 revenue in the prior year. Performance on the top and bottom lines is in line with our forecast, and the company is now set to recover in the second half of the year. Flat revenue in the quarter is a sequential improvement and was largely in line with the prior commentary. Moderate improvement in analytical instruments (up 3% in the quarter) was offset by a 3% decline in the life sciences segment, though this is better than the segment's first-quarter performance of negative 12%. Muted performance in diagnostics and lab products shows that the industrywide pressures are starting to abate but are still present. Underlying conditions improved moderately across all end markets though still below our long-term demand expectations. While pharma and biotech declined in the low single digits, much of it was a result of the run-off of the vaccine revenue. Academic and industrial end markets showed healthy growth due to strong demand for electronic microscopy. Core businesses within diagnostics and healthcare channels also delivered positive performance. China delivered a surprising mid-single-digit growth in the quarter, but this was largely due to easy comparisons; the company still views the China environment as muted, though we expect growth to continue in the second half. Thermo Fisher held the line on expenses, with the adjusted operating margin flat year on year and improving slightly sequentially. The life sciences segment had a very strong performance on the bottom line (up 350 basis points) despite declining revenue; prudent cost management was enough

Thermo Fisher Scientific Inc

TMO★★★★★

9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD	630.00 USD	0.67	159.37 USD Bil	Wide	Large Value	Medium	Exemplary	
9 Jul 2025	1 May 2024 14:48, UTC		10 Jul 2025					4 Jun 2025 05:00, UTC

to offset still materially negative volume effect.

Thermo Fisher Earnings: Demand Outlook Improves With Biotech Funding and China Recovering

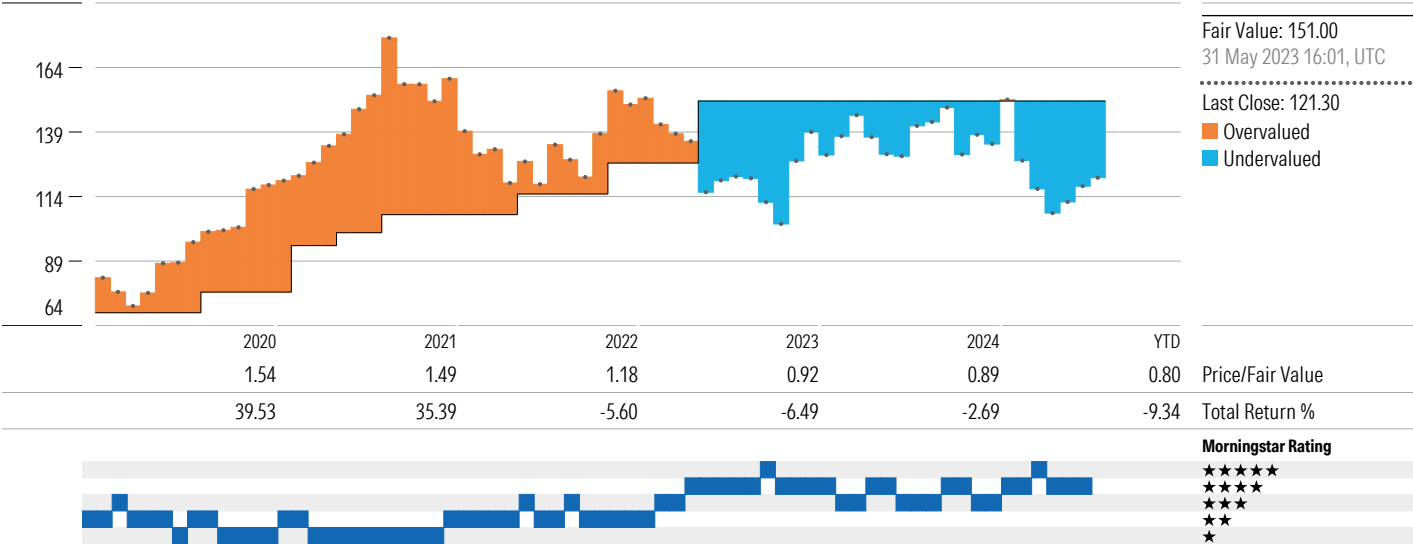
Alex Morozov, CFA,Regional Director,24 Apr 2024

We are maintaining our \$600 fair value estimate for wide-moat Thermo Fisher following its first-quarter results. Organic revenue declined 4% in the quarter, in line with recent trends. The company, however, noted a moderately improved demand environment, which allowed it to slightly raise the lower end of its annual revenue guidance. We reiterate our wide moat rating. Revenue softness in the quarter was in line with prior expectations, and the company still anticipates the market to decline by midsingle digits. There was a bit more optimism about the health of the market, with overall spending expected to start recovering earlier in the year. The broad biotech funding environment is recovering notably, which is showing up in the activity levels of Thermo Fisher's CRO and CDMO businesses, with revenue acceleration to follow. North America and Europe results were as expected. While China declined in midsingle digits in the quarter, the outlook improved with the announced stimulus. The company was a bit cautious on the actual impact of the stimulus, particularly to this year's order book, suggesting the effect of signaling to a long-term commitment to funding. However, given the company's material exposure to the China market and its strong competitive positioning there, improving sentiment is a major positive. With revenue still down, Thermo Fisher is doing what it always does—pulling a lever on expenditures. The company saw another quarter of improving operating margins, up 20 basis points (excluding adjustments), with cost control primarily responsible. **IM**

Thermo Fisher Scientific Inc TMO ★★★★★ 9 Jul 2025 21:29, UTC

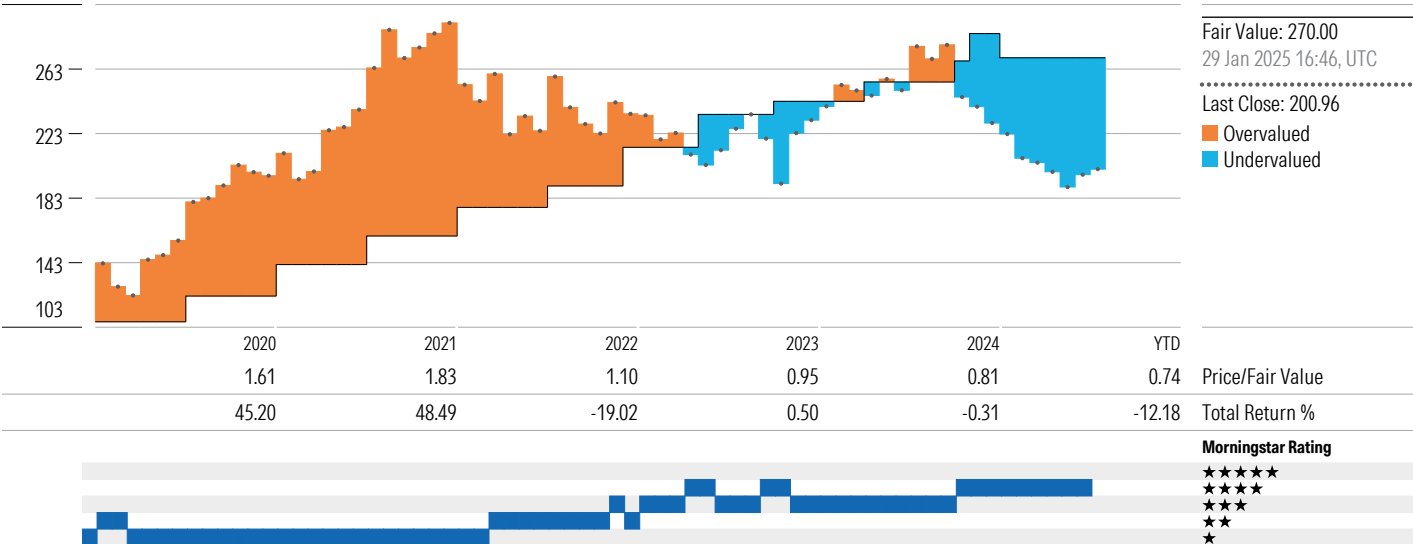
Competitors Price vs. Fair Value

Agilent Technologies Inc A



Total Return % as of 09 Jul 2025. Last Close as of 09 Jul 2025. Fair Value as of 31 May 2023 16:01, UTC.

Danaher Corp DHR



Total Return % as of 09 Jul 2025. Last Close as of 09 Jul 2025. Fair Value as of 29 Jan 2025 16:46, UTC.

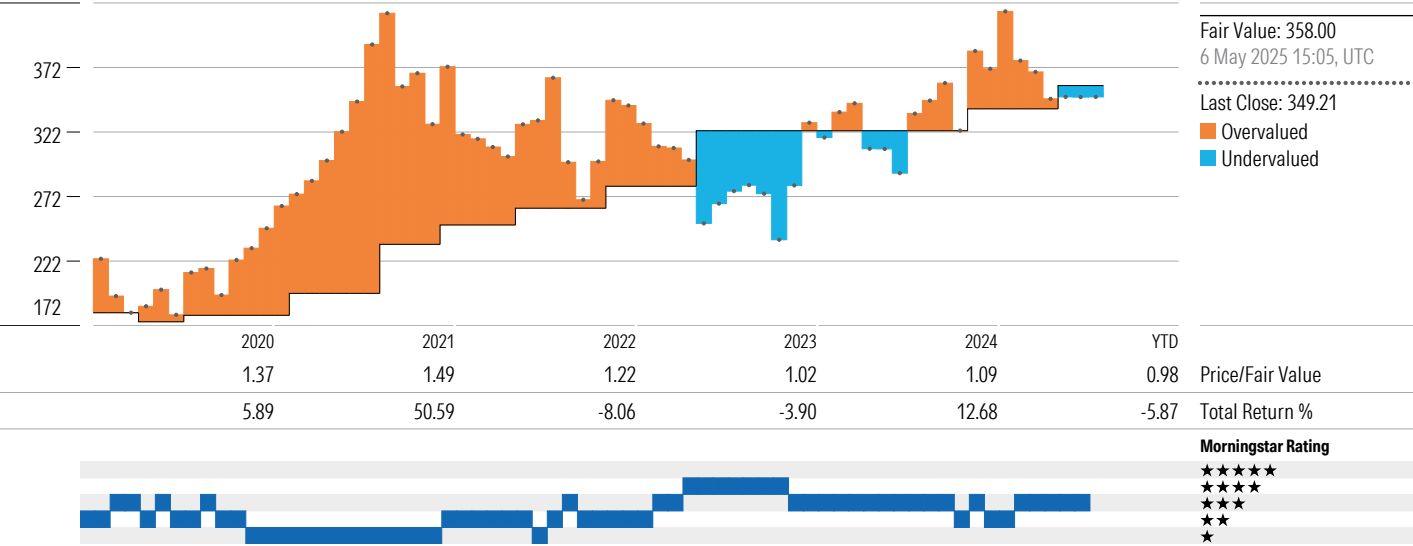
Thermo Fisher Scientific Inc

TMO★★★★★

9 Jul 2025 21:29, UTC

Competitors Price vs. Fair Value

Waters Corp



Total Return % as of 09 Jul 2025. Last Close as of 09 Jul 2025. Fair Value as of 6 May 2025 15:05, UTC.

Thermo Fisher Scientific Inc TMO ★★★★★ 9 Jul 2025 21:29, UTC

Last Price 419.88 USD 9 Jul 2025	Fair Value Estimate 630.00 USD 1 May 2024 14:48, UTC	Price/FVE 0.67	Market Cap 159.37 USD Bil 10 Jul 2025	Economic Moat™ Wide	Equity Style Box Large Value	Uncertainty Medium	Capital Allocation Exemplary	ESG Risk Rating Assessment¹ 4 Jun 2025 05:00, UTC
---	---	--------------------------	--	-------------------------------	--	------------------------------	--	---

Morningstar Valuation Model Summary

Financials as of 08 Jul 2025

Fiscal Year, ends 31 Dec	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Revenue (USD Mil)	44,915	42,857	42,879	43,707	46,220	48,547	51,013	53,627
Operating Income (USD Mil)	8,507	7,318	7,730	7,974	9,325	10,340	11,169	11,914
EBITDA (USD Mil)	11,774	10,265	10,445	10,753	11,995	13,045	13,910	14,614
Adjusted EBITDA (USD Mil)	14,366	13,216	12,829	12,612	13,754	14,703	15,468	16,071
Net Income (USD Mil)	6,950	5,995	6,335	6,758	8,001	8,921	9,673	10,348
Adjusted Net Income (USD Mil)	9,156	8,362	8,373	8,532	9,768	10,681	11,426	12,094
Free Cash Flow To The Firm (USD Mil)	7,220	2,863	4,448	4,126	5,831	6,588	7,145	7,481
Weighted Average Diluted Shares Outstanding (Mil)	394	388	383	379	378	376	375	373
Earnings Per Share (Diluted) (USD)	17.64	15.45	16.54	17.83	21.19	23.73	25.83	27.74
Adjusted Earnings Per Share (Diluted) (USD)	23.24	21.55	21.86	22.51	25.87	28.41	30.51	32.42
Dividends Per Share (USD)	1.15	1.35	1.52	1.62	1.70	1.79	1.89	1.99

Margins & Returns as of 08 Jul 2025

	3 Year Avg	Actual			Forecast					5 Year Avg
		2022	2023	2024	2025	2026	2027	2028	2029	
Operating Margin %	17.3	18.9	17.1	18.0	18.2	20.2	21.3	21.9	22.2	20.6
EBITDA Margin %	—	26.2	24.0	24.4	24.6	26.0	26.9	27.3	27.3	—
Adjusted EBITDA Margin %	—	32.0	30.8	29.9	28.9	29.8	30.3	30.3	30.0	29.8
Net Margin %	14.8	15.5	14.0	14.8	15.5	17.3	18.4	19.0	19.3	17.9
Adjusted Net Margin %	19.8	20.4	19.5	19.5	19.5	21.1	22.0	22.4	22.6	21.5
Free Cash Flow To The Firm Margin %	11.0	16.1	6.7	10.4	9.4	12.6	13.6	14.0	14.0	12.7

Growth & Ratios as of 08 Jul 2025

	3 Year CAGR	Actual			Forecast					5 Year CAGR
		2022	2023	2024	2025	2026	2027	2028	2029	
Revenue Growth %	3.0	14.5	-4.6	0.1	1.9	5.8	5.0	5.1	5.1	4.6
Operating Income Growth %	-8.9	-16.8	-14.0	5.6	3.2	16.9	10.9	8.0	6.7	9.0
EBITDA Growth %	-5.9	-6.7	-12.8	1.8	2.9	11.6	8.8	6.6	5.1	7.0
Adjusted EBITDA Growth %	-4.5	-2.5	-8.0	-2.9	-1.7	9.0	6.9	5.2	3.9	4.6
Earnings Per Share Growth %	-5.3	-9.4	-12.4	7.0	7.8	18.9	11.9	8.9	7.4	10.9
Adjusted Earnings Per Share Growth %	-5.3	-7.5	-7.3	1.4	3.0	14.9	9.8	7.4	6.3	10.9

Valuation as of 08 Jul 2025

	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Price/Earning	23.7	24.6	23.8	18.7	16.2	14.8	13.8	13.0
Price/Sales	4.8	4.8	4.6	3.6	3.4	3.3	3.1	3.0
Price/Book	4.9	4.4	4.0	3.0	2.8	2.5	2.3	2.1
Price/Cash Flow	—	—	—	—	—	—	—	—
EV/EBITDA	16.9	17.7	17.7	14.8	13.6	12.7	12.1	11.6
EV/EBIT	28.5	32.0	29.3	23.4	20.0	18.1	16.7	15.7
Dividend Yield %	0.2	0.3	0.3	0.4	0.4	0.4	0.4	0.5
Dividend Payout %	5.0	6.3	7.0	7.2	6.6	6.3	6.2	6.2
Free Cash Flow Yield %	—	—	—	—	—	—	—	—

Operating Performance / Profitability as of 08 Jul 2025

Fiscal Year, ends 31 Dec	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
ROA %	7.1	6.1	6.5	7.0	8.3	9.1	9.5	9.8
ROE %	15.8	12.8	12.8	12.8	14.0	14.3	14.2	13.8
ROIC %	18.4	15.7	14.4	13.4	14.0	14.3	14.3	14.2

Thermo Fisher Scientific Inc TMO ★★★★★ 9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD 9 Jul 2025	630.00 USD 1 May 2024 14:48, UTC	0.67	159.37 USD Bil 10 Jul 2025	Wide	Large Value	Medium	Exemplary	4 Jun 2025 05:00, UTC

Financial Leverage (Reporting Currency)	Actual			Forecast				
Fiscal Year, ends 31 Dec	2022	2023	2024	2025	2026	2027	2028	2029
Debt/Capital %	13.8	14.5	13.6	9.7	7.9	6.4	5.1	4.1
Assets/Equity	2.2	2.1	2.0	1.8	1.7	1.6	1.5	1.4
Net Debt/EBITDA	2.2	2.6	2.5	2.2	1.7	1.3	0.9	0.5
Total Debt/EBITDA	2.4	2.6	2.4	2.1	1.6	1.3	1.1	0.9
EBITDA/ Net Interest Expense	25.7	23.6	42.8	31.5	34.4	36.8	38.7	40.2

Forecast Revisions as of 8 Jul 2025	2025		2026		2027	
Prior data as of 14 Mar 2025	Current	Prior	Current	Prior	Current	Prior
Fair Value Estimate Change (Trading Currency)	630.00	633.70	—	—	—	—
Revenue (USD Mil)	43,707	43,757	46,220	46,332	48,547	48,694
Operating Income (USD Mil)	7,974	8,506	9,325	9,563	10,340	10,605
EBITDA (USD Mil)	12,612	13,279	13,754	14,127	14,703	15,104
Net Income (USD Mil)	8,532	9,378	9,768	10,329	10,681	11,266
Earnings Per Share (Diluted) (USD)	17.83	19.26	21.19	21.86	23.73	24.44
Adjusted Earnings Per Share (Diluted) (USD)	22.51	24.58	25.87	27.18	28.41	29.76
Dividends Per Share (USD)	1.62	1.60	1.70	1.69	1.79	1.78

Key Valuation Drivers as of 08 Jul 2025

Cost of Equity %	7.5
Pre-Tax Cost of Debt %	5.8
Weighted Average Cost of Capital %	7.0
Long-Run Tax Rate %	16.0
Stage II EBI Growth Rate %	7.0
Stage II Investment Rate %	20.0
Perpetuity Year	20

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

Discounted Cash Flow Valuation as of 08 Jul 2025

	USD Mil
Present Value Stage I	22,131
Present Value Stage II	103,291
Present Value Stage III	132,278
Total Firm Value	257,700
Cash and Equivalents	5,569
Debt	31,275
Other Adjustments	-311
Equity Value	232,305
Projected Diluted Shares	383
Fair Value per Share (USD)	630.00

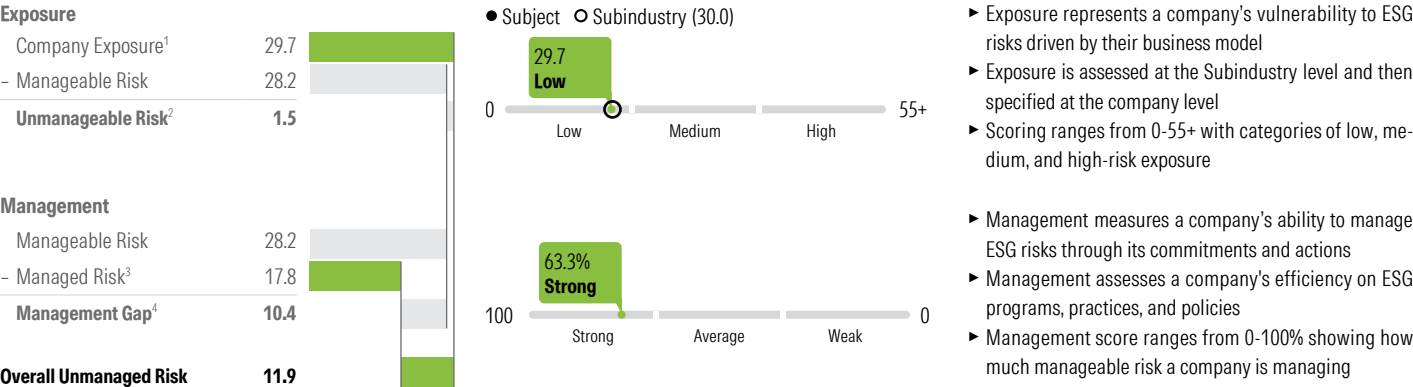
Thermo Fisher Scientific Inc

TMO★★★★★

9 Jul 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
419.88 USD	630.00 USD	0.67	159.37 USD Bil	Wide	Large Value	Medium	Exemplary	
9 Jul 2025	1 May 2024 14:48, UTC		10 Jul 2025					4 Jun 2025 05:00, UTC

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 63.3% 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 04 Jun 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	
Thermo Fisher Scientific Inc	29.7 Low	0 — ● — 55+	63.3 Strong	100 — ● — 0	11.9 Low	0 — ● — 40+
Agilent Technologies Inc	28.6 Low	0 — ● — 55+	68.1 Strong	100 — ● — 0	10.1 Low	0 — ● — 40+
Waters Corp	28.6 Low	0 — ● — 55+	70.1 Strong	100 — ● — 0	9.6 Negligible	0 — ● — 40+
Danaher Corp	28.6 Low	0 — ● — 55+	73.9 Strong	100 — ● — 0	8.5 Negligible	0 — ● — 40+
Merck KGaA	45.9 Medium	0 — ● — 55+	72.1 Strong	100 — ● — 0	15.1 Low	0 — ● — 40+

Appendix

Historical Morningstar Rating

Thermo Fisher Scientific Inc TMO 9 Jul 2025 21:29, 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
★★	★★	★★	★★	★★	★	★★	★★	★★	★★★	★★	★★

Agilent Technologies Inc A 9 Jul 2025 21:20, 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
★	★	★	★★	★★	★	★★	★★	★★	★★★	★★	★★

Danaher Corp DHR 9 Jul 2025 21:20, 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
★	★	★	★	★	★	★	★	★	★★	★★	★

Waters Corp **WAT** 9 Jul 2025 21:26, 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



Research Methodology for Valuing Companies

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
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

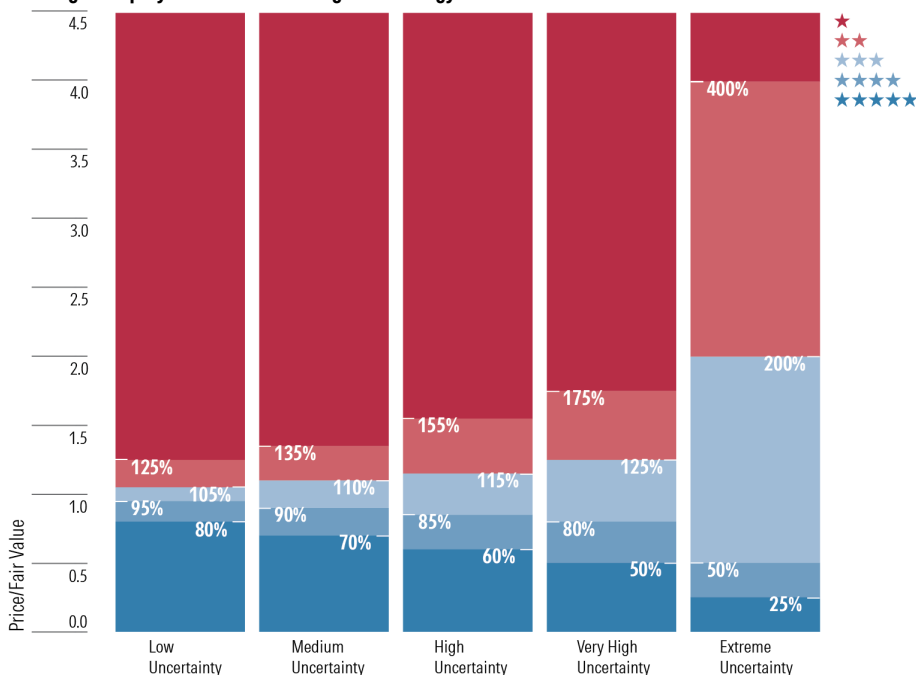
Our uncertainty rating is based on the interquartile range, or the middle 50% of potential outcomes, covering the 25th percentile–75th percentile. This means that when a stock hits 5 stars, we expect there is a 75% chance that the intrinsic value of that stock lies above the current market price. Similarly,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

Research Methodology for Valuing Companies

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.

Risk Warning

Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the report. Morningstar's Uncertainty Rating serves as a useful data point with respect to sensitivity analysis of the assumptions used in our determining a fair value price.

General Disclosure

Unless otherwise provided in a separate agreement, recipients accessing this report may only use it in the country in which the Morningstar distributor is based. Unless stated otherwise, the original distributor of the report is Morningstar Research Services LLC, a U.S.A. domiciled financial institution.

This Report is for informational purposes, should not be the sole piece of information used in making an investment decision, and has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. This publication is intended to provide information to assist investors in making their

own investment decisions, not to provide investment advice to any specific investor. Therefore, investments discussed herein may not be suitable for all investors; investors must exercise their own independent judgment as to the suitability of such investments and recommendations in the light of their own investment objectives, experience, taxation status and financial position. Morningstar encourages Report recipients to read all relevant issue documents (e.g., prospectus) pertaining to the security concerned, including without limitation, information relevant to its investment objectives, risks, and costs before making an investment decision and when deemed necessary, to seek the advice of a financial, legal, tax, and/or accounting professional. The information, data, analyses and opinions presented herein are not warranted to be accurate, correct, complete or timely. Unless otherwise provided in a separate agreement, neither Morningstar, Inc. or the Equity Research Group represents that the report contents meet all of the presentation and/or disclosure standards applicable in the jurisdiction the recipient is located.

Except as otherwise required by law or provided for in a separate agreement, the analyst, Morningstar, Inc. and the Equity Research Group and their officers, directors and employees shall not be responsible or liable for any trading decisions, damages or other losses resulting from, or related to, the information, data, analyses or opinions within the report.

The Report and its contents are not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject Morningstar, Inc. or its affiliates to any registration or licensing requirements in such jurisdiction.

Where this report is made available in a language other than English and in the case of inconsistencies between the English and translated versions of the report, the English version will control and supersede any ambiguities associated with any part or section of a report that has been issued in a foreign language. Neither the analyst, Morningstar, Inc., or the Equity Research Group guarantees the accuracy of the translations.

This report may be distributed in certain localities, countries and/or jurisdictions ("Territories") by independent third parties or independent intermediaries and/or distributors ("Distributors"). Such Distributors are not acting as agents or representatives of the analyst, Morningstar, Inc. or the Equity Research Group. In Territories where a Distributor distributes our report, the Distributor is solely responsible for complying with all applicable regulations, laws, rules, circulars, codes and guidelines established

Research Methodology for Valuing Companies

by local and/or regional regulatory bodies, including laws in connection with the distribution third-party research reports.

Conflicts of Interest

- ▶ No interests are held by the analyst with respect to the security subject of this investment research report.
- ▶ Morningstar, Inc. may hold a long position in the security subject of this investment research report that exceeds 0.5% of the total issued share capital of the security. To determine if such is the case, please click <http://msi.morningstar.com> and <http://mdi.morningstar.com>
- ▶ Analysts' compensation is derived from Morningstar, Inc.'s overall earnings and consists of salary, bonus and in some cases restricted stock.
- ▶ Neither Morningstar, Inc. or the Equity Research Group receives commissions for providing research nor do they charge companies to be rated.
- ▶ Morningstar's overall earnings are generated in part by the activities of the Investment Management and Research groups, and other affiliates, who provide services to product issuers.
- ▶ Morningstar employees may not pursue business and employment opportunities outside Morningstar within the investment industry (including but not limited to, working as a financial planner, an investment professional or investment professional representative, a broker-dealer or broker-dealer agent, a financial writer, reporter, or analyst) without the approval of Morningstar's Legal and if applicable, Compliance teams.
- ▶ Neither Morningstar, Inc. or the Equity Research Group is a market maker or a liquidity provider of the security noted within this report.
- ▶ Neither Morningstar, Inc. or the Equity Research Group has been a lead manager or co-lead manager over the previous 12-months of any publicly disclosed offer of financial instruments of the issuer.
- ▶ Morningstar, Inc.'s investment management group does have arrangements with financial institutions to provide portfolio management/investment advice some of which an analyst may issue investment research reports on. However, analysts do not have authority over Morningstar's investment management group's business arrangements nor allow employees from the investment management group to participate or influence the analysis or opinion prepared by them.
- ▶ Morningstar, Inc. is a publicly traded company (Ticker Symbol: MORN) and thus a financial institution the security of which is the subject of this report may own more than 5% of Morningstar, Inc.'s total outstanding shares. Please access Morningstar, Inc.'s proxy statement, "Security Ownership of Certain Beneficial Owners and Management" section <https://shareholders.morningstar.com/investor-relations/financials/sec-filings/default.aspx>

- ▶ Morningstar, Inc. may provide the product issuer or its related entities with services or products for a fee and on an arms' length basis including software products and licenses, research and consulting services, data services, licenses to republish our ratings and research in their promotional material, event sponsorship and website advertising.

Further information on Morningstar, Inc.'s conflict of interest policies is available from <http://global.morningstar.com/equitydisclosures>. Also, please note analysts are subject to the CFA Institute's Code of Ethics and Standards of Professional Conduct.

Risk Warning Please note that investments in securities are subject to market and other risks and there is no assurance or guarantee that the intended investment objectives will be achieved. Past performance of a security may or may not be sustained in future and is no indication of future performance. A security's investment return and an investor's principal value will fluctuate so that, when redeemed, an investor's shares may be worth more or less than their original cost. A security's current investment performance may be lower or higher than the investment performance noted within the report. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions.

For more information about Morningstar's methodologies, please visit global.morningstar.com/equitydisclosures

For a list of securities which the Equity Research Group currently covers and provides written analysis on please contact your local Morningstar office. In addition, for historical analysis of securities covered, including their fair value estimate, please contact your local office.

For recipients in Australia: This Report has been issued and distributed in Australia by Morningstar Australasia Pty Ltd (ABN: 95 090 665 544; ASFL: 240892). Morningstar Australasia Pty Ltd is the provider of the general advice ('the Service') and takes responsibility for the production of this report. The Service is provided through the research of investment products.

To the extent the Report contains general advice it has been prepared without reference to an investor's objectives, financial situation or needs. Investors should consider the advice in light of these matters and, if applicable, the relevant Product Disclosure Statement before making any decision to invest. Refer to our Financial Services Guide (FSG) for more information at <http://www.morningstar.com.au/fsg.pdf>

For recipients in New Zealand: This report has been is-

sued and distributed by Morningstar Australasia Pty Ltd and/or Morningstar Research Ltd (together 'Morningstar'). This report has been prepared and is intended for distribution in New Zealand to wholesale clients only and has not been prepared for use by New Zealand retail clients (as those terms are defined in the Financial Markets Conduct Act 2013). The information, views and any recommendations in this material are provided for general information purposes only, and solely relate to the companies and investment opportunities specified within. Our reports do not take into account any particular investor's financial situation, objectives or appetite for risk, meaning no representation may be implied as to the suitability of any financial product mentioned for any particular investor. We recommend seeking financial advice before making any investment decision.

For recipients in Hong Kong: The Report is distributed by Morningstar Investment Management Asia Limited, which is regulated by the Hong Kong Securities and Futures Commission to provide services to professional investors only. Neither Morningstar Investment Management Asia Limited, nor its representatives, are acting or will be deemed to be acting as an investment professional to any recipients of this information unless expressly agreed to by Morningstar Investment Management Asia Limited.

For recipients in India: This investment research is issued by Morningstar Investment Adviser India Private Limited. Morningstar Investment Adviser India Private Limited is registered with SEBI as a Portfolio Manager (registration number INP000006156) and as a Research Entity (registration number INH000008686). Morningstar Investment Adviser India Private Limited has not been the subject of any disciplinary action by SEBI or any other legal/regulatory body. Morningstar Investment Adviser India Private Limited is a wholly owned subsidiary of Morningstar Investment Management LLC. In India, Morningstar Investment Adviser India Private Limited has one associate, Morningstar India Private Limited, which provides data-related services, financial data analysis, and software development. The research analyst has not served as an officer, director, or employee of the fund company within the last 12 months, nor have they or their associates engaged in market-making activity for the fund company. The ESG-related information, methodologies, tool, ratings, data and opinions contained or reflected herein are not directed to or intended for use or distribution to India-based clients or users and their distribution to Indian resident individuals or entities is not permitted, and Morningstar/Sustainalytics accepts no responsibility or liability whatsoever for the actions of third parties in this respect.

*The Conflicts of Interest disclosure above also applies to relatives and associates of Manager Research Analysts in

Research Methodology for Valuing Companies

India # The Conflicts of Interest disclosure above also applies to associates of Manager Research Analysts in India. The terms and conditions on which Morningstar Investment Adviser India Private Limited offers Investment Research to clients, varies from client to client, and are detailed in the respective client agreement.

For recipients in Japan: The Report is distributed by Ibbotson Associates Japan, Inc., which is regulated by Financial Services Agency, for informational purposes only. Neither Ibbotson Associates Japan, Inc., nor its representatives, are acting or will be deemed to be acting as an investment professional to any recipients of this information.

For recipients in Singapore: The Report is intended for Institutional Investor audiences and is distributed by Morningstar Investment Adviser Singapore Pte. Limited, which is licensed by the Monetary Authority of Singapore to provide financial advisory services in Singapore. Morningstar Investment Adviser Singapore Pte. Limited is the entity responsible for the creation and distribution of the research services described in this Report.

This content is provided for informational purposes only and may be shared or redistributed by Institutional Investors to their clients or other permitted persons, subject to obtaining the appropriate licence from Morningstar. Redistribution of this content is subject to any applicable conditions or limitations, including those agreed commercially or contractually with Morningstar. The person who shares or redistributes this content shall be solely responsible for compliance with all relevant legal and regulatory obligations in the jurisdictions in which the material is made available.

Investors should consult a financial adviser regarding the suitability of any investment product, taking into account their specific investment objectives, financial situation or particular needs, before making any investment decision.

Morningstar, Inc., and its affiliates rely on certain exemptions (Financial Advisers Regulations, Section 27(1)(e), Section 32B and 32C) to provide its investment research to recipients in Singapore.

For recipients in Korea: The report is distributed by Morningstar Korea Ltd., which has filed to the Financial Services Committee, for informational purposes only. Neither Morningstar Korea Ltd. nor its representatives are acting or will be deemed to be acting as an investment advisor to any recipients of this information.