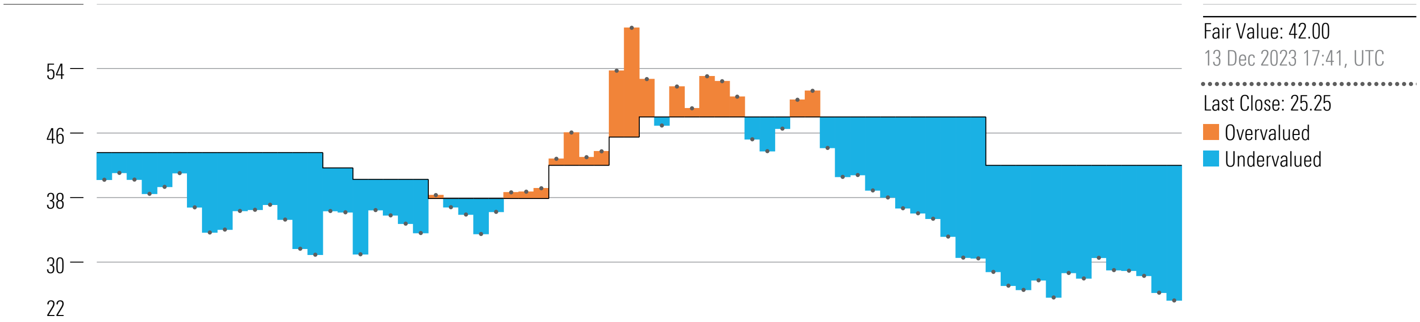
Morningstar Equity Analyst Report | Report as of 17 Dec 2024 20:43, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

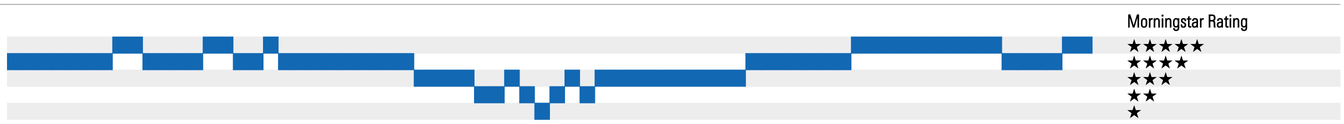
Pfizer Inc PFE ★★★★★ 16 Dec 2024 22:33, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
25.25 USD 16 Dec 2024	42.00 USD 13 Dec 2023 17:41, UTC	0.60	149.16 USD Bil 17 Dec 2024	Wide	Large Value	Medium	Standard	4 Dec 2024 06:00, UTC

Price vs. Fair Value



	2019	2020	2021	2022	2023	YTD	
	0.85	0.97	1.30	1.07	0.69	0.60	Price/Fair Value
	-6.94	1.12	64.66	-10.52	-40.61	-6.46	Total Return %



Total Return % as of 16 Dec 2024. Last Close as of 16 Dec 2024. Fair Value as of 13 Dec 2023 17:41, UTC.

Contents

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

Pfizer: 2025 Guidance Largely Reassuring on Covid Stability and Cost-Saving Execution

Analyst Note Karen Andersen, CFA, Strategist, 17 Dec 2024

Pfizer reaffirmed its 2024 financial outlook and provided 2025 guidance implying 0%-5% top-line growth and 10%-18% non-GAAP earnings per share growth, using the midpoint of 2024 guidance excluding nonrecurring items.

Why it matters: Pfizer's financial performance and strategy have been under scrutiny since management struggled to accurately forecast plummeting covid-related sales in 2023. Activist investor Starboard Value has also questioned the value around recent acquisitions, highlighting the $43 billion Seagen deal in 2023. However, we think Pfizer's ability to execute on cost-saving programs during a transitional time for its portfolio should help boost profit and dividend growth.

The bottom line: As Pfizer has confirmed it is on track for its previously issued 2024 guidance and in a position to see solid revenue and solid non-GAAP net income growth in 2025, we are maintaining our $42 fair value estimate. We see Pfizer's diversified portfolio and advancing pipeline as supporting a wide moat, although recent pipeline setbacks and new competition are still keeping the firm's returns on invested capital below peers. That said, we think investors have overly punished Pfizer shares, which now reflect significant regulatory and competitive risks but little to no value for the pipeline.

Coming up: We expect catalysts for the shares in 2025 that should give more clarity on the potential of

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Sector	Industry
Healthcare	Drug Manufacturers - General

Business Description

Pfizer is one of the world's largest pharmaceutical firms, with annual sales close to $50 billion (excluding covid-19-related product sales). While it historically sold many types of healthcare products and chemicals, now prescription drugs and vaccines account for the majority of sales. Top sellers include pneumococcal vaccine Prevnar 13, cancer drug Ibrance, and cardiovascular treatment Eliquis. Pfizer sells these products globally, with international sales representing close to 50% of total sales. Within international sales, emerging markets are a major contributor.

Pfizer's pipeline. In the first quarter, Pfizer's obesity drug candidate danuglipron should have once-daily dosing data that will help determine if it could move to phase 3 trials. While our expectations are low given poor tolerability at a twice-daily dose, success could mean multi-billion-dollar sales potential. Several oncology programs should generate data in 2025. We're particularly interested in progress with CDK4 breast cancer drug atirmociclib and Seagen's lung cancer drug sigvotatug vedotin.

Business Strategy & Outlook Karen Andersen, CFA, Strategist, 27 Sep 2024

Pfizer's foundation remains solid, based on strong cash flows generated from a basket of diverse drugs. The company's large size confers significant competitive advantages in developing new drugs. This unmatched heft, combined with a broad portfolio of patent-protected drugs, has helped Pfizer build a wide economic moat around its business.

Pfizer's size establishes one of the largest economies of scale in the pharmaceutical industry. In a business where drug development needs a lot of shots on goal to be successful, Pfizer has the financial resources and the established research power to support the development of more new drugs. Also, after many years of struggling to bring out important new drugs, Pfizer is now launching several potential blockbusters in cancer and immunology.

Pfizer's vast financial resources support a leading salesforce. Pfizer's commitment to postapproval studies provides its salespeople with an armamentarium of data for their marketing campaigns. Further, leading salesforces in emerging countries position the company to benefit from the dramatically increasing wealth in nations such as Brazil, India, and China.

Pfizer's 2020 move to divest its off-patent division Upjohn to create a new company (Viatris) in combination with Mylan should drive accelerating growth at the remaining innovative business. With limited patent losses and fewer older drugs, Pfizer is poised for steady growth (excluding the more volatile covid-19-related product sales) before a round of major patent losses hit in 2028.

We believe Pfizer's operations can withstand eventual generic competition; its diverse portfolio of drugs helps insulate the company from any one particular patent loss. Following the merger with Wyeth several years ago, Pfizer has a much stronger position in the vaccine industry with pneumococcal vaccine Prevnar. Vaccines tend to be more resistant to generic competition because of their manufacturing complexity and relatively lower prices.

Bulls Say Karen Andersen, CFA, Strategist, 27 Sep 2024

- Pfizer's pipeline productivity is improving with several successful recent drug launches. In particular, cardiovascular drug Vyndaqel is a potential game-changer in the rare-disease arena.
- Pfizer's strong success in developing a covid-19 vaccine and treatment yielded a massive cash windfall.
- Pfizer's decision to divest its off-patent division should result in a faster-growing, innovative company.

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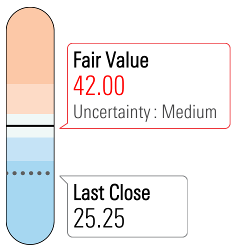
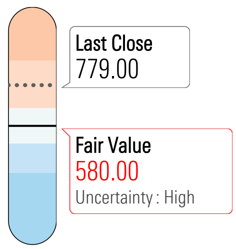
Competitors

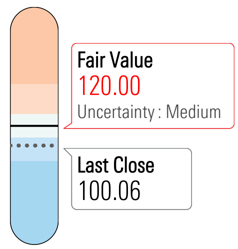
Pfizer Inc PFE



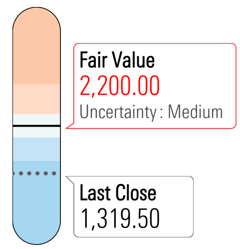
Eli Lilly and Co LLY



Merck & Co Inc MRK



GSK PLC GSK



	Pfizer Inc PFE	Eli Lilly and Co LLY	Merck & Co Inc MRK	GSK PLC GSK
Economic Moat	Wide	Wide	Wide	Wide
Currency	USD	USD	USD	GBX
Fair Value	42.00 13 Dec 2023 17:41, UTC	580.00 8 Aug 2024 17:35, UTC	120.00 25 Apr 2024 20:00, UTC	2,200.00 19 Sep 2022 11:26, UTC
1-Star Price	56.70	899.00	162.00	2,970.00
5-Star Price	29.40	348.00	84.00	1,540.00
Assessment	Undervalued 16 Dec 2024	Overvalued 16 Dec 2024	Undervalued 16 Dec 2024	Undervalued 17 Dec 2024
Morningstar Rating	★★★★★16 Dec 2024 22:33, UTC	★★16 Dec 2024 22:34, UTC	★★★★16 Dec 2024 22:34, UTC	★★★★★17 Dec 2024 03:18, UTC
Analyst	Karen Andersen, Strategist	Karen Andersen, Strategist	Karen Andersen, Strategist	Jay Lee, Senior Equity Analyst
Capital Allocation	Standard	Exemplary	Standard	Standard
Price/Fair Value	0.60	1.34	0.83	0.60
Price/Sales	2.38	17.24	4.03	1.74
Price/Book	1.55	49.23	5.69	3.84
Price/Earning	9.75	59.39	16.79	0.10
Dividend Yield	6.65%	0.67%	3.12%	4.62%
Market Cap	143.09 Bil	700.57 Bil	253.12 Bil	5,384.25 Bil
52-Week Range	24.48—31.54	567.02—972.53	94.48—134.63	1,282.50—1,823.50
Investment Style	Large Value	Large Growth	Large Value	Large Value

Bears Say Karen Andersen, CFA, Strategist, 27 Sep 2024

- Aggressive cost-cutting in research and development could hurt Pfizer's long-term prospects, given the importance of continued investment in innovation.
- Competition is increasing for Prevnar (especially from Merck's new pneumococcal vaccine) and Ibrance (from Novartis' Kisqali).
- Covid-19 product declines are creating a drag on growth as the pandemic recedes.

Economic Moat Karen Andersen, CFA, Strategist, 27 Sep 2024

Patents, economies of scale, and a powerful distribution network support Pfizer's wide moat. Pfizer's patent-protected drugs carry strong pricing power that enables the firm to generate returns on invested capital in excess of its cost of capital. The patents give the company time to develop the next generation of drugs before generic competition arises. Additionally, while Pfizer holds a diversified product

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portfolio, there is some product concentration, with Prevnar representing just over 10% of total sales (excluding covid-19 vaccine sales). However, we don't expect typical generic competition for the vaccine due to complex manufacturing and relatively low prices for the product. Eliquis and Ibrance each represent close to 10% of sales as well. However, we expect new products will mitigate the eventual generic competition of key drugs over the long term. Pfizer's operating structure allows for cost-cutting following patent losses to reduce the margin pressure from lost high-margin drug sales. Overall, Pfizer's established product line creates the enormous cash flows needed to fund the average $800 million in development costs per new drug. A powerful distribution network sets up the company as a strong partner for smaller drug firms that lack Pfizer's resources.

We think the company does face environmental, social, and governance risks, particularly related to potential US drug price-related policy reform to increase access by lowering drug prices. Ongoing product governance issues (including litigation related to side effects and patents) also weigh on the company. While we have factored these threats into our analysis, they are not material to our moat rating.

Fair Value and Profit Drivers Karen Andersen, CFA, Strategist, 27 Sep 2024

We are maintaining our fair value estimate at $42 per share. Following the close of the Seagen acquisition, Pfizer provided 2024 guidance that included covid-19 product guidance of $8 billion, which was $5 billion lower than our expectation. Also, Pfizer acknowledged the firm would be unlikely to hit the previous 6% growth-rate guidance from 2020 to 2025 (excluding covid-19 products sales). Despite the falling outlook, the firm reiterated support for the dividend, which we believe is secure and will likely support the stock valuation.

On the top line, we expect fairly stable sales over the next decade as new products help offset older drugs losing patent protection. On the bottom line, we project a slightly healthier annual growth rate as cost-cutting plans take shape. Pfizer will likely cut $4 billion in operating costs from mid-2023 to the end of 2024. These cuts should fall to the bottom line rather than be redeployed to other initiatives. The cost cuts are helping the firm adapt to the receding pandemic and falling covid-19 product sales.

We don't model unannounced acquisitions, but acquisitions hold the potential to accelerate the company's growth rate. Over the long term, we believe the more diversified lineup of drugs should reduce the volatility of earnings. We anticipate restructuring efforts will help alleviate some margin pressure in the future, as some high-margin products lose exclusivity. We estimate Pfizer's cost of equity at 7.5% and weighted average cost of capital at 7%, in line with the peer group.

Risk and Uncertainty Karen Andersen, CFA, Strategist, 27 Sep 2024

Pfizer faces generic competition, potential drug pricing policy changes by governments, an increasingly stringent Food and Drug Administration, and stronger managed-care and pharmacy benefit manager negotiating power. New-drug development has become challenging in several disease areas with a more risk-conscious FDA. Additionally, managed-care companies and pharmacy benefit managers have grown during the past two decades into powerful entities that can negotiate lower drug prices. However, we give Pfizer a Medium Morningstar Uncertainty Rating partly based on the low volatility of cash flows from a diverse product portfolio with inelastic demand.

Our uncertainty rating for the firm is not materially affected by environmental, social, or governance risks, although we see access to basic services (tied to potential US policy reform on drug pricing) as the biggest ESG risk that the firm needs to manage.

We model in policy changes around reforms to Medicare that are reflected in the Inflation Reduction Act as the firm has exposure to this patient group. For example, Pfizer's Eliquis (cardiovascular), Ibrance (cancer), and Xtandi (cancer) generate almost one fourth of the firm's total sales (excluding covid-19-related sales), and the drugs have significant exposure to the Medicare channel. Additionally, we assume a more than 50% probability of Pfizer seeing future costs related to product governance ESG risks, such as off-label marketing or litigation related to side effects. We model base-case annual legal costs at close to 1% of non-GAAP net income, at the low end of the peer range based on Pfizer's product portfolio having less exposure to potential litigation.

Capital Allocation Karen Andersen, CFA, Strategist, 27 Sep 2024

We give Pfizer a Standard Capital Allocation Rating. This reflects our belief that the firm possesses a sound balance sheet, a reasonable record of investments, and largely fair shareholder distributions.

We believe Pfizer holds a sound balance sheet with low levels of risk regarding the size of the debt carried, the business cyclicality facing the firm, and the debt maturity outlook. While an argument could be made to increase the leverage of the balance sheet to be more active in investing, we believe the company (along with the majority of firms in the large-cap biopharma industry) should hold ample balance sheet strength to support opportunistic acquisitions as dynamic scientific data emerges that might require relatively quick investment action. Also, a strong balance sheet helps biopharma firms through most product litigation challenges with minimal market concern.

Turning to investments, we believe Pfizer is operating at a reasonable level. The company tends to spend on R&D at about a mid- to high-teens percentage of sales (a little below the industry average of high teens). Solid investment in creating the next generation of drugs has yielded a strong pipeline to offset patent losses. The strong investment in innovative new drugs (largely targeting oncology and immunology) also helps fortify the firm's wide moat and expand returns on invested capital.

On the acquisition and divestment side, Pfizer is increasingly making stronger decisions. The decisions to sell the nutritional and animal healthcare businesses appear to have created value for shareholders several years ago. Also, we like the strategic decision to form a joint venture with GSK on the consumer

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healthcare front, giving both firms more scale in the marketplace, which was followed by the divestment of this joint venture. The prices for the acquisitions of Seagen (2023), Biohaven (2022), Global Blood Therapeutics (2022), Array (2019), Medivation (2016), and Hospira (2015) all bordered on the high side but look largely reasonable. The failed attempts to acquire AstraZeneca and Allergan are partly concerning, but several factors outside Pfizer's control helped scuttle those deals.

We view Pfizer's dividends and share repurchases as about right. Pfizer has generally targeted close to a 50% payout in dividends as a percentage of normalized earnings, which seems about right for a more mature industry. Further, Pfizer has shown a strong willingness to buy back shares during generally favorable periods.

Albert Bourla became CEO at the beginning of 2019 after holding several positions at Pfizer. Before taking the leadership role, he was the chief operating officer and led the innovative health division. Bourla brings over 25 years of experience at Pfizer to the top position. This vast experience should help his decision-making. One of the first major decisions Bourla made was to divest the off-patent business, combining it with Mylan. The remaining innovative business should be in a stronger position to expand top-line sales. Also, the newly created off-patent business should have increased scale, which is important in the highly competitive generic business. Overall, we view this corporate restructuring as a modest positive that will allow both the innovative and off-patent firms more focus to drive better returns for each segment.

Analyst Notes Archive

More Trump Healthcare Nominations Largely Aligned With Kennedy Karen Andersen, CFA, Strategist, 2 Dec 2024

Following President-elect Donald Trump's Nov. 14 announcement of the nomination of Robert F. Kennedy Jr. as secretary of the US Department of Health and Human Services, there have seen several more nominations for leadership in the 13 HHS divisions, including Dr. Mehmet Oz (Centers for Medicare and Medicaid Services) on Nov. 19, Dr. Marty Makary (US Food and Drug Administration) and Dr. Dave Weldon (Centers for Disease Control and Prevention) on Nov. 22, and Dr. Jay Bhattacharya (National Institutes of Health) on Nov. 26. Overall, we think these selections show a consistent theme of introducing potential disruptive forces to US healthcare, although their lack of experience and the power of career staffers in these agencies could serve to blunt any significant proposed changes. We continue to see obesity drugs and vaccines as areas of potential scrutiny, although without any clarity on proposals, we're not making any changes to our fair value estimates following these announcements.

As discussed in our Nov. 18 note, we think biopharma industry tailwinds under the new Trump administration could include repealing the Medicare negotiation provision in the Inflation Reduction

Act, less Federal Trade Commission scrutiny of acquisitions, as well as continued lower corporate taxes. However, Kennedy's skepticism of vaccine and obesity drug benefits could erode public trust and we think his team could slow the approval of new drugs and vaccines and de-emphasize CDC vaccine guidelines. Views on obesity drugs will likely be front and center in 2025, given the proposed rule from the Biden administration to expand obesity drug coverage in Medicare and Medicaid and the upcoming announcement of the 2027 list of negotiated drugs (which is likely to include Novo Nordisk's semaglutide). The Trump administration would need to finalize the rule and we expect Kennedy will be conflicted over whether to discourage reliance on weight loss drugs or reduce obesity drug costs significantly.

Trump's Nomination of RFK Jr. to Lead HHS a Potential Industry Headwind Karen Andersen, CFA, Strategist, 18 Nov 2024

President-elect Donald Trump announced on Nov. 14 that he is nominating Robert F. Kennedy Jr. to be secretary of the Department of Health and Human Services under his new administration in 2025. RFK Jr. has strong views on public health and, if confirmed, could use his position to make changes at several of the 13 HHS divisions. In our Nov. 8 note, we discussed the potential tailwinds of a Trump administration, including possible repeal of the Medicare negotiation provision in the Inflation Reduction Act, less Federal Trade Commission scrutiny of acquisitions, and a likely continuation of lower corporate taxes. However, if RFK's nomination is confirmed, we expect more "wild card" headwinds to the industry will come to fruition. As the HHS covers the US Food and Drug Administration and the Centers for Disease Control and Prevention, an HHS secretary skeptical of vaccine and obesity drug benefits could work to erode public trust, put up roadblocks for approval of new vaccines, and prevent the CDC from recommending any vaccines that make it through the approval process. With less federal guidance, we think it is possible certain states could waver in support of broad mandates for childhood vaccines. All of these could weigh on sales of vaccines in the US, including covid vaccine makers Moderna and BioNTech and big biopharma vaccine makers like GSK (we model 14% of GSK revenue from US vaccine sales in 2024), Pfizer (12%), Merck (9%), and Sanofi (6%).

If RFK Jr. is confirmed, we may lower our US vaccine sales estimates, although we don't think reductions would be long-lasting, and we don't yet see this as a significant hit to our valuations. Broad international price benchmarks could be a bear-case scenario under RFK Jr., which may increase our Morningstar Uncertainty Ratings. That said, any proposal would likely start with a smaller portion of the Medicare market and not extend to private markets, and we would be unlikely to include this in our fair value estimates.

Biopharma Election Impact: Potential Reduced IRA Headwind but Unpredictable Challenges Karen Andersen, CFA, Strategist, 8 Nov 2024

We think that President-elect Donald Trump brings a mix of potential headwinds and tailwinds to the biopharma industry, and we're not making any adjustments to our fair value estimates at this time. We had previously assumed that the most likely case was split control of the presidency and Congress by Democrats and Republicans. However, with Republicans locking in control of the Senate and holding a lead in elections in the House, we think it looks increasingly likely that Trump and his party could have control across both branches of government, making any potential policy priorities more likely to be implemented.

In terms of industry tailwinds, Trump could lessen pressure from the Federal Trade Commission on mergers and acquisitions, making it easier for large firms with sufficient cash to expand their pipelines. He could also try to repeal the Medicare negotiation portion of the Inflation Reduction Act, lessening pricing pressure on the industry.

However, Trump's alignment with and potential to place RFK Jr. in a prominent role in the Department of Health and Human Services or the Food and Drug Administration could lead to less predictable outcomes, ranging from White House influence in approval decisions (possibly fewer approvals of certain new types of drugs, and particularly vaccines) to high turnover of FDA staff (leading to significant backlogs in applications).

One of the first priorities could be an attempt to repeal the IRA. We think it would be difficult to repeal the IRA in its entirety, as many parts of its multiyear implementation are already in progress, and legislators might be unwilling to stop funding on projects in their states and districts. However, a more piecemeal approach to dismantling some upcoming provisions might work.

Pfizer Earnings: Maintaining Our Valuation as Management Pressed for Evidence of Productivity

Karen Andersen, CFA, Strategist, 29 Oct 2024

Pfizer reported stronger third-quarter results than we had anticipated, largely due to significantly higher sales of covid-19 treatment Paxlovid that also drove management to increase top- and bottom-line guidance for the full year. However, after updating our model for Paxlovid's solid demand in 2024 (but also a likely dip in 2025 as certain sales won't repeat), we're not making any changes to our $42 fair value estimate for Pfizer. While the firm's strong 14% operational sales growth for its noncovid product line is encouraging, we think Pfizer faces significant competition to existing drugs that is putting pressure on the pipeline to succeed. We still assign Pfizer a wide moat rating, despite a series of pipeline disappointments and the uncertain value around recent acquisitions, which pressure our long-term ROIC forecast. We're particularly concerned about growth prospects for new RSV vaccine Abrysvo (market breadth and need for repeat dosing could be more limited than we thought) and competition to the firm's established Prevnar-based pneumococcal vaccine business (which faces new competition from Merck as well as impending competition from Vaxcyte) and breast cancer drug Ibrance. We think the market is overly bearish about Pfizer's ability to right the ship, and we see shares as undervalued at recent prices.

While the recall of the sickle cell drug Oxbryta certainly doesn't improve Pfizer's business development track record, we think management is executing on track with its $4 billion cost-cutting initiative to be completed by the end of 2024, although the value of the $43 billion Seagen acquisition in 2023 remains a key uncertainty. We include roughly $8 billion in revenue for Seagen drugs in our model in 2030, below Pfizer's $10 billion target. We expect the firm to continue to trim its ownership of former consumer division Haleon (now at 15%) as it works to reduce debt levels and focus on driving research and development investment and the dividend.

Pfizer Earnings: Seagen Sales Help Offset Lost Covid Sales as Pipeline Strengthens Damien Conover, CFA, Sector Director, 30 Jul 2024

We are holding steady to our $42 fair value estimate for Pfizer following slightly better-than-expected second-quarter results. We continue to view the stock as undervalued, with the market not fully appreciating the firm's cost-cutting and developing pipeline, which reinforce Pfizer's wide moat.

Total sales increased 3% operationally, and we expect slight acceleration of growth in 2025 as the firm laps challenging covid declines that have been partly mitigated by acquired Seagen revenue. We expect continued growth from several growth drivers, including rare disease drug Vyndaqel (up 71%, but with less than 50% market penetration), pain drug Nurtec (up 44%, with significant market potential remaining), and bladder cancer drug Padcev (recently launched with leading efficacy data).

We expect steady growth until 2028 when patent losses will likely increase, but pipeline advancements hold the potential to mitigate pressures. Oral weight loss drug danuglipron is undergoing dose optimization studies and could enter pivotal studies in 2025. Within a projected $100 billion weight loss market, daniglipron's potential is likely underappreciated. Additionally, Pfizer's rapid advancement of several cancer drugs into phase 3 development opens the door to new blockbusters, including vepdegestrant (breast), sigvotatug vedotin (lung), atirmociclib (breast), and mevrometostat (prostate).

On the vaccine side, Pfizer expects the data from its covid/flu combination later in the year, which should help support over $5 billion of long-term annual sales of Pfizer's covid-specific vaccine Comirnaty. Also, Pfizer has moved its next-generation pneumococcal vaccine into phase 2 development that should help protect the $6 billion in annualized Prevnar sales from increasing competition.

On the cost side, Pfizer is tracking well to deliver $4 billion in savings by the end of 2024, and we expect continued margin improvement into 2025 as the firm cuts previous heavy covid-related investments.

GSK, Pfizer, and Moderna: New RSV Vaccine Guidance Shrinks, but Long-Term Potential Remains Damien Conover, CFA, Sector Director, 27 Jun 2024

The Centers for Disease Control and Prevention refined its RSV vaccine recommendations to adults aged 75 and older as well as those 60 to 74 years old at higher risk for RSV disease, which is a smaller group than the initial guidance for adults aged 60 and older. However, we don't expect a major impact on the long-term potential for the RSV vaccines from GSK, Pfizer, and Moderna. We are maintaining our fair value estimates and moat ratings for the firms.

Over the next several years, we expect the RSV vaccine recommendations to evolve to include wider patient groups based on strong clinical efficacy that can reduce one of the most prevalent viruses. Further, based on the waning efficacy of the vaccines, we expect the need for the RSV vaccines every other year, which should drive continual demand over the long term. We continue to expect a global RSV vaccine market close to $10 billion annually over the long term.

Importantly, the side effect profile of the RSV vaccines looks favorable based on real-world data. The concerns around the potential adverse side effect of Guillain Barre syndrome, or GBS, from the vaccine should be tempered as the incidence rate of GBS within RSV vaccine use looks similar to the expected rate within the non-RSV vaccine population. We expect increased RSV vaccine utilization as more data confirms the favorable side effect profile of the vaccines.

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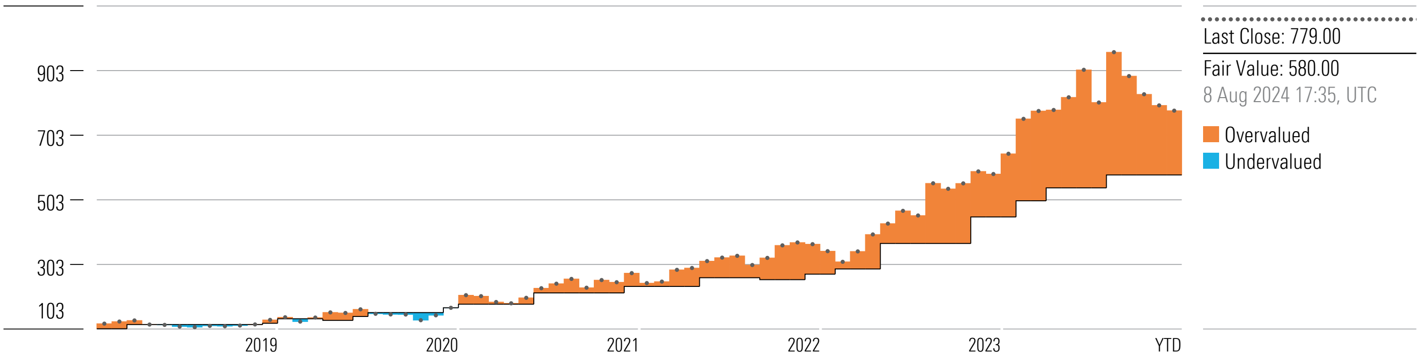
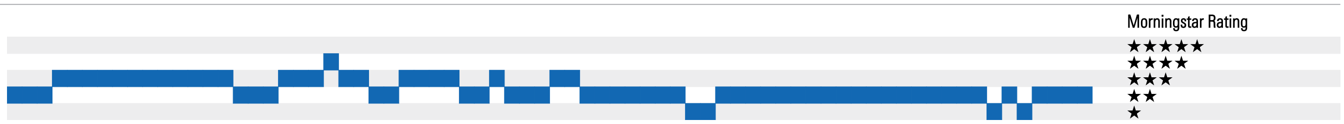
Competitors Price vs. Fair Value

Eli Lilly and Co LLY

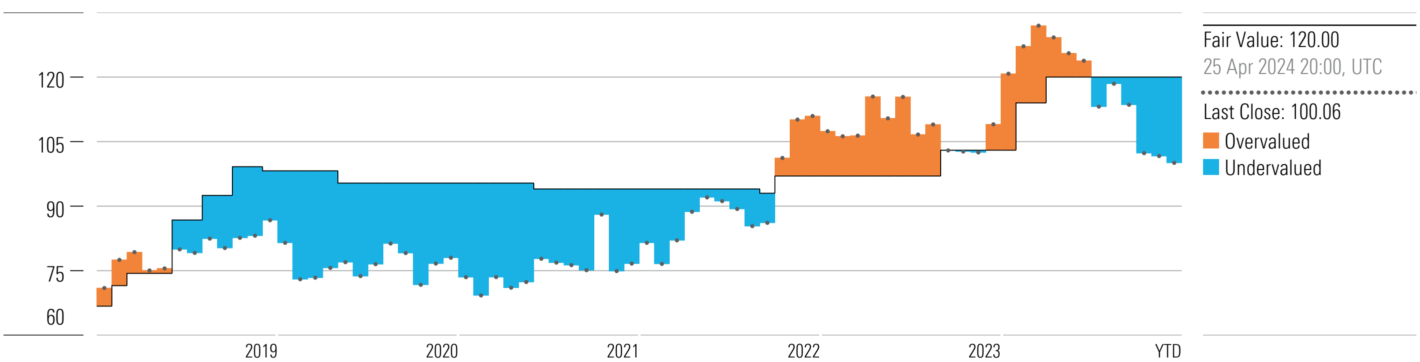


	2019	2020	2021	2022	2023	YTD
Price/Fair Value	1.09	1.00	1.18	1.34	1.30	1.34
Total Return %	15.81	30.72	65.61	33.86	60.57	34.53

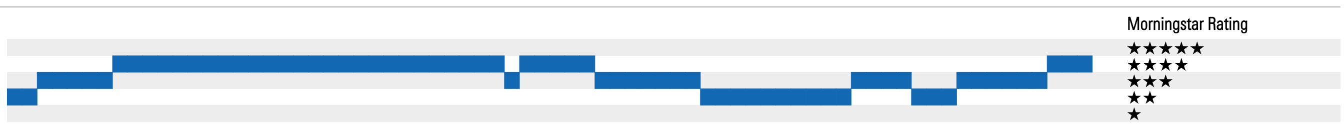


Total Return % as of 16 Dec 2024. Last Close as of 16 Dec 2024. Fair Value as of 8 Aug 2024 17:35, UTC.

Merck & Co Inc MRK



	2019	2020	2021	2022	2023	YTD
Price/Fair Value	0.88	0.82	0.82	1.14	1.06	0.83
Total Return %	21.99	-7.33	-0.68	48.42	0.93	-5.36



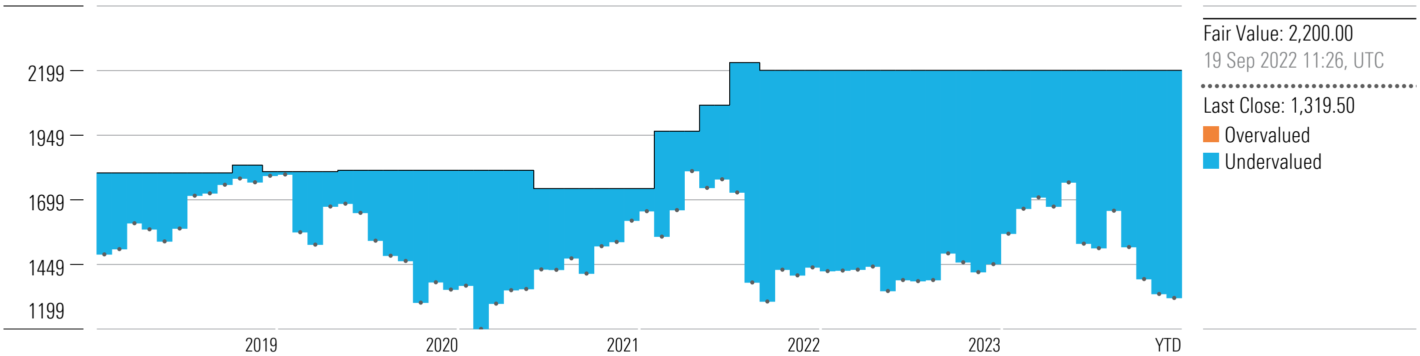
Total Return % as of 16 Dec 2024. Last Close as of 16 Dec 2024. Fair Value as of 25 Apr 2024 20:00, UTC.

Morningstar Equity Analyst Report | Report as of 17 Dec 2024 20:43, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

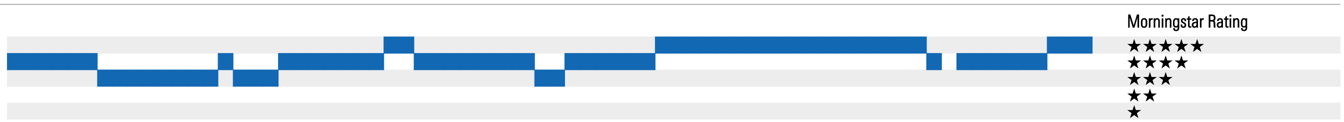
Pfizer Inc PFE ★★★★★ 16 Dec 2024 22:33, UTC

Competitors Price vs. Fair Value

GSK PLC GSK



	2019	2020	2021	2022	2023	YTD
Price/Fair Value	0.99	0.75	0.93	0.65	0.66	0.60
Total Return %	24.66	-20.07	25.68	-4.12	4.75	-4.81



Total Return % as of 16 Dec 2024. Last Close as of 16 Dec 2024. Fair Value as of 19 Sep 2022 11:26, UTC.

Morningstar Equity Analyst Report | Report as of 17 Dec 2024 20:43, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 13 of 21

Pfizer Inc PFE ★★★★★ 16 Dec 2024 22:33, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
25.25 USD 16 Dec 2024	42.00 USD 13 Dec 2023 17:41, UTC	0.60	149.16 USD Bil 17 Dec 2024	Wide	Large Value	Medium	Standard	4 Dec 2024 06:00, UTC

Morningstar Historical Summary

Financials as of 30 Sep 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
Revenue (USD Bil)	50	49	53	53	41	41	42	81	100	58	46	59
Revenue Growth %	-3.8	-1.5	8.1	-0.5	-22.3	0.2	1.8	95.2	23.4	-41.7	2.0	-13.4
EBITDA (USD Bil)	19.14	15.32	15.29	19.84	11.06	18.65	13.26	30.79	41.03	9.56	15.61	13.84
EBITDA Margin %	38.6	31.4	29.0	37.8	27.1	45.6	31.8	37.9	40.9	16.3	34.0	23.3
Operating Income (USD Bil)	13.50	12.98	13.71	14.07	6.73	7.31	8.83	23.70	37.27	3.36	11.75	9.04
Operating Margin %	27.2	26.6	26.0	26.8	16.5	17.9	21.2	29.2	37.2	5.7	25.6	15.2
Net Income (USD Bil)	9.14	6.96	7.22	21.31	11.15	16.03	9.16	21.98	31.37	2.12	7.62	4.25
Net Margin %	18.4	14.2	13.7	40.6	27.3	39.2	22.0	27.0	31.3	3.6	16.6	7.2
Diluted Shares Outstanding (Mil)	6,424	6,257	6,159	6,058	5,977	5,675	5,632	5,708	5,733	5,643	5,699	5,659
Diluted Earnings Per Share (USD)	1.42	1.11	1.17	3.52	1.87	2.82	1.63	3.85	5.47	0.37	1.34	0.75
Dividends Per Share (USD)	1.04	1.12	1.20	1.28	1.36	1.44	1.52	1.56	1.60	1.64	1.26	1.67

Valuation as of 29 Nov 2024

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Price/Sales	4.0	4.2	3.8	4.2	4.9	4.2	4.3	4.8	2.9	2.4	3.0	2.5
Price/Earnings	19.2	24.3	32.5	22.4	11.0	13.7	23.8	17.2	9.8	15.7	-62.9	35.0
Price/Cash Flow	11.6	13.4	13.7	14.2	14.7	16.6	16.5	10.4	11.0	13.7	20.4	13.2
Dividend Yield %	3.34	3.47	3.69	3.53	3.12	3.68	4.13	2.64	3.12	5.7	5.77	6.41
Price/Book	2.5	3.0	3.1	3.6	3.5	3.3	3.1	4.4	3.1	1.7	1.9	1.6
EV/EBITDA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Operating Performance / Profitability as of 30 Sep 2024

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD	TTM
ROA %	5.4	4.2	4.3	12.4	6.7	9.8	5.7	13.1	16.6	1.0	—	2.0
ROE %	12.4	10.2	11.6	32.6	16.6	25.3	14.5	31.3	36.3	2.3	—	4.5
ROIC %	8.9	7.1	7.7	20.4	10.8	15.8	9.7	21.5	26.4	1.8	—	3.7
Asset Turnover	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.5	0.5	0.3	—	0.3

Financial Leverage

Fiscal Year, ends 31 Dec	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Recent Qtr	TTM
Debt/Capital %	30.7	30.8	33.8	31.4	34.2	35.4	36.0	31.0	25.0	40.5	38.2	—
Equity/Assets %	42.5	38.7	34.7	41.5	39.8	37.7	41.0	42.5	48.5	39.3	42.0	—
Total Debt/EBITDA	1.9	2.5	2.7	2.1	3.8	2.7	2.9	1.2	0.8	7.4	4.3	—
EBITDA/Interest Expense	14.1	12.8	12.9	15.6	8.4	11.9	9.2	23.8	33.1	4.3	6.6	4.5

Morningstar Analyst Historical/Forecast Summary as of 17 Dec 2024

Financials

			Estimates		
Fiscal Year, ends 31 Dec 2023	2022	2023	2024	2025	2026
Revenue (USD Mil)	100,330	58,496	62,737	63,404	64,833
Revenue Growth %	23.4	-41.7	7.2	1.1	2.3
EBITDA (USD Mil)	40,780	7,933	24,224	24,719	25,909
EBITDA Margin %	40.7	13.6	38.6	39.0	40.0
Operating Income (USD Mil)	37,272	3,359	13,367	14,841	16,653
Operating Margin %	37.2	5.7	21.3	23.4	25.7
Net Income (USD Mil)	37,348	10,501	16,831	17,089	18,444
Net Margin %	37.2	18.0	26.8	27.0	28.4
Diluted Shares Outstanding (Mil)	5,733	5,643	5,701	5,701	5,701
Diluted Earnings Per Share(USD)	6.51	1.86	2.95	3.00	3.24
Dividends Per Share(USD)	1.61	1.65	1.67	1.70	1.73

Forward Valuation

			Estimates		
	2022	2023	2024	2025	2026
Price/Sales	2.9	2.8	2.3	2.3	2.2
Price/Earnings	7.9	15.5	8.6	8.4	7.8
Price/Cash Flow	—	—	—	—	—
Dividend Yield %	3.1	5.7	6.6	6.7	6.9
Price/Book	3.1	1.8	1.6	1.6	1.5
EV/EBITDA	7.0	22.9	8.2	8.1	7.7

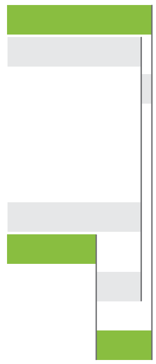
Morningstar Equity Analyst Report | Report as of 17 Dec 2024 20:43, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC.

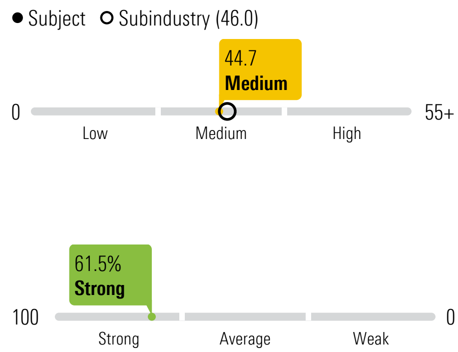
Pfizer Inc PFE ★★★★★ 16 Dec 2024 22:33, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
25.25 USD 16 Dec 2024	42.00 USD 13 Dec 2023 17:41, UTC	0.60	149.16 USD Bil 17 Dec 2024	Wide	Large Value	Medium	Standard	4 Dec 2024 06:00, UTC

ESG Risk Rating Breakdown

Exposure	
Company Exposure[1]	44.7
– Manageable Risk	41.4
Unmanageable Risk[2]	**3.3**
Management	
Manageable Risk	41.4
– Managed Risk[3]	25.4
Management Gap[4]	**15.9**
Overall Unmanaged Risk	**19.2**





- 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 61.5% 4. Management Gap assesses risks that are not managed, but are considered manageable 5. ESG Risk Rating Assessment = Overall Unmanaged Risk = Management Gap plus Unmanageable Risk

ESG Risk Rating Assessment[5]

ESG Risk Rating is of Dec 04, 2024. Highest Controversy Level is as of Dec 08, 2024. Sustainalytics Subindustry: Pharmaceuticals. 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 04 Dec 2024

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

Company Name	Exposure		Management		ESG Risk Rating	
Pfizer Inc	44.7 | Medium	0 – 55+	61.5 | Strong	100 – 0	19.2 | Low	0 – 40+
Eli Lilly and Co	45.8 | Medium	0 – 55+	51.8 | Strong	100 – 0	23.6 | Medium	0 – 40+
GSK PLC	42.8 | Medium	0 – 55+	70.0 | Strong	100 – 0	15.0 | Low	0 – 40+
Merck & Co Inc	47.5 | Medium	0 – 55+	62.3 | Strong	100 – 0	20.0 | Low	0 – 40+
AbbVie Inc	46.9 | Medium	0 – 55+	47.5 | Average	100 – 0	26.1 | Medium	0 – 40+

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Appendix
Historical Morningstar Rating

Pfizer Inc PFE 16 Dec 2024 22:33, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★	★★★	★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★	★★	★★★	★★	★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★

Eli Lilly and Co LLY 16 Dec 2024 22:34, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★	★★	★★	★★	★	★★	★	★★	★★	★★	★★	★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★	★★	★★	★★	★★	★★	★★	★★	★★	★★	★★	★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★	★	★	★★	★★	★★	★★	★★	★★	★★	★★★	★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★	★★	★★	★★★	★★	★★	★★★	★★★	★★★	★★★	★★	★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★	★★★	★★★★	★★★	★★★	★★★	★★	★★	★★	★★★	★★★	★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★	★★	★★

Merck & Co Inc MRK 16 Dec 2024 22:34, UTC

Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★	★★	★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★	★★★	★★★	★★★	★★	★★	★★	★★	★★	★★	★★	★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★	★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★★	★★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★	★★

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Dec 2024	Nov 2024	Oct 2024	Sep 2024	Aug 2024	Jul 2024	Jun 2024	May 2024	Apr 2024	Mar 2024	Feb 2024	Jan 2024
★★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	—	★★★★	★★★★★
Dec 2023	Nov 2023	Oct 2023	Sep 2023	Aug 2023	Jul 2023	Jun 2023	May 2023	Apr 2023	Mar 2023	Feb 2023	Jan 2023
★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
Dec 2022	Nov 2022	Oct 2022	Sep 2022	Aug 2022	Jul 2022	Jun 2022	May 2022	Apr 2022	Mar 2022	Feb 2022	Jan 2022
★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★
Dec 2021	Nov 2021	Oct 2021	Sep 2021	Aug 2021	Jul 2021	Jun 2021	May 2021	Apr 2021	Mar 2021	Feb 2021	Jan 2021
★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★★	★★★★★	★★★★
Dec 2020	Nov 2020	Oct 2020	Sep 2020	Aug 2020	Jul 2020	Jun 2020	May 2020	Apr 2020	Mar 2020	Feb 2020	Jan 2020
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★★	★★★	★★★
Dec 2019	Nov 2019	Oct 2019	Sep 2019	Aug 2019	Jul 2019	Jun 2019	May 2019	Apr 2019	Mar 2019	Feb 2019	Jan 2019
★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★

Research Methodology for Valuing Companies

Overview

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

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

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

1. Economic Moat

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

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

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

2. Estimated Fair Value

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

Our model is divided into three distinct stages:

Stage I: Explicit Forecast

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

Stage II: Fade

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

Stage III: Perpetuity

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

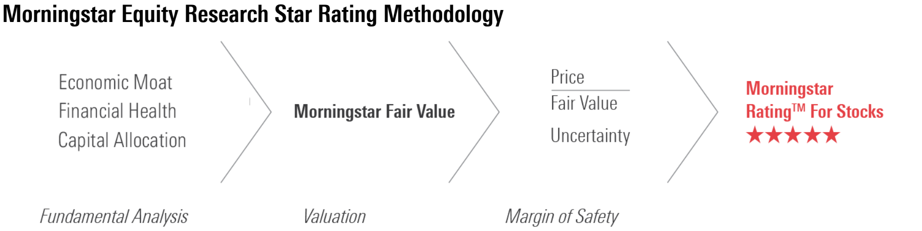
Because a dollar earned today is worth more than a dollar earned tomorrow, we discount our projections of cash flows in stages I, II, and III to arrive at a total present value of expected future cash flows. Because we are modeling free cash flow to the firm—representing cash available to provide a return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

3. Uncertainty Around That Fair Value Estimate

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

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

Morningstar Equity Research Star Rating Methodology



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

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

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

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

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

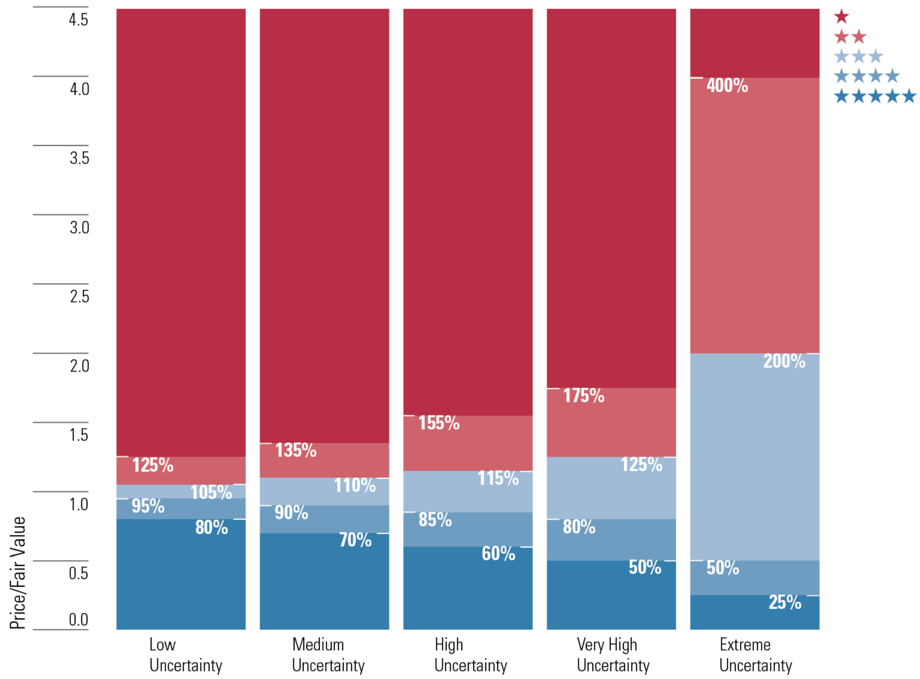
4. Market Price

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

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

Morningstar Star Rating for Stocks

Morningstar Equity Research Star Rating Methodology



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

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

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

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

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

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

Other Definitions

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

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

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

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

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

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Sustainalytics' ESG Risk 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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