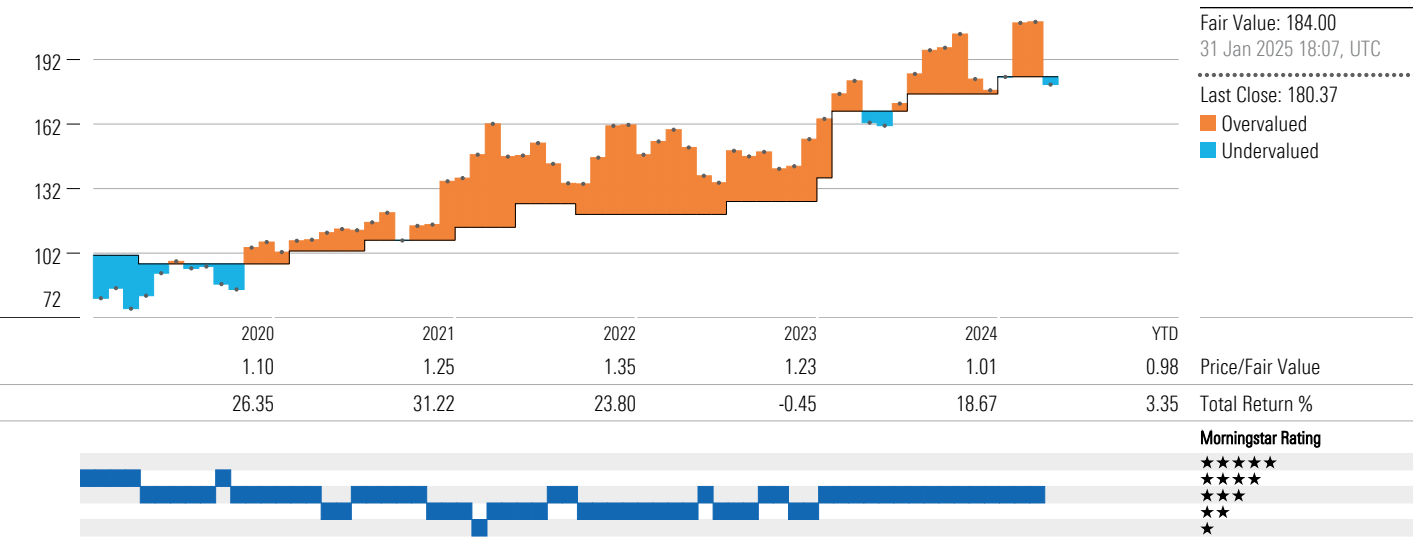


AbbVie Inc ABBV ★★★

24 Apr 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
180.37 USD 24 Apr 2025	184.00 USD 31 Jan 2025 18:07, UTC	0.98	327.38 USD Bil 25 Apr 2025	Wide	Large Value	High	Standard	 2 Apr 2025 05:00, UTC

Price vs. Fair Value



Total Return % as of 24 Apr 2025. Last Close as of 24 Apr 2025. Fair Value as of 31 Jan 2025 18:07, UTC.

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

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

AbbVie Earnings: Higher 2025 Guidance Projects Immunology Confidence Despite Potential Tariff Hit

Analyst Note Karen Andersen, CFA, Director, 25 Apr 2025

AbbVie reported 8.4% revenue growth and 6.5% adjusted diluted EPS growth in the first quarter. Management raised its 2025 adjusted diluted EPS guidance by 10 cents at the midpoint to a range of \$12.09-\$12.29, but this does not include the Gubra licensing agreement or potential pharma tariffs.

Why it matters: Given the significant uncertainty surrounding potential regulatory timeline delays and pharmaceutical tariffs, AbbVie's strong first-quarter performance and guidance were reassuring.

- Skyrizi (71% growth) and Rinvoq (57%) were the strongest drivers of outperformance in the quarter, and management's combined \$900 million guidance raise for these two products more than offset the \$500 million lower Humira guidance due to intense biosimilar competition and lower pricing.
- While management did not quantify any potential tariff exposure for pharmaceuticals, it did signal that the effect would be in line with the industry impact and emphasized its US Skyrizi manufacturing and \$10 billion planned investment in US manufacturing over the next 10 years.

The bottom line: We're maintaining our \$184 fair value estimate for AbbVie, and we think the firm's broad, growing portfolio and intriguing pipeline warrant a wide moat. However, we see shares as fairly valued at recent prices, and we're watching the early-stage pipeline for potential to raise our valuation.

- We're most interested in whether AbbVie can build on its Skyrizi and Rinvoq success in immunology with new combinations in the pipeline, such as programs targeting TL1A, alpha-4 beta-7, and IL-1

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Sector

 Healthcare

Industry

Drug Manufacturers - General

Business Description

AbbVie is a pharmaceutical firm with a strong exposure to immunology (with Humira, Skyrizi, and Rinvoq) and oncology (with Imbruvica and Venclexta). The company was spun off from Abbott in early 2013. The 2020 acquisition of Allergan added several new products and drugs in aesthetics (including Botox).

alpha/beta, and we expect some initial data in 2026.

- The recent Gubra licensing deal brings rights to phase 1 amylin drug ABBV-295, which has had impressive data in obesity over a six-week time horizon at a relatively low 2 mg weekly dose. We're carefully watching for potential 12-week data at higher doses from this study in 2026.

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

AbbVie holds a strong portfolio of marketed and pipeline drugs. While the increasing competition to the company's key drug Humira should slow the growth for the company in the near term, we believe the firm's remaining portfolio will mitigate these losses.

With approvals in rheumatoid arthritis, psoriasis, and Crohn's disease, Humira holds a wide range of indications, but biosimilar versions of the drug led to price erosion beginning in 2023 and significant market share losses in 2024, and we expect double-digit declines over our forecast.

Offsetting Humira's expected declines, AbbVie looks well-positioned with next-generation immunology drugs. In particular, recently launched drugs Skyrizi and Rinvoq have shown improved efficacy over Humira and other currently leading treatment options, which should support combined annual sales of these two newer drugs by 2025 close to Humira's peak sales in 2022. We expect a long runway for these drugs given their leading efficacy across several indications.

Beyond immunology, cancer drug Imbruvica is the next-biggest sales contributor. Imbruvica's strong clinical data in several forms of blood cancer led to peak sales above \$5 billion, but increasing competition has led to recent sales declines. Additionally, the acquisition of Allergan brought several new products, including Botox for both cosmetic and therapeutic uses. Botox's strong entrenchment bodes well for the treatment as new competition is emerging. Also, AbbVie holds several mature drugs with patent expirations long past, but with manufacturing or specific dosing complexities that make generic competition less likely.

Looking forward, AbbVie's pipeline is weighted more toward new cancer and immunology drugs. The company should be able to leverage its solid entrenchment with Humira and Imbruvica to launch the new drugs.

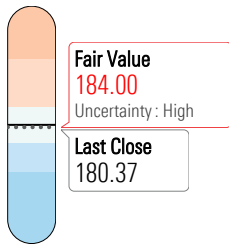
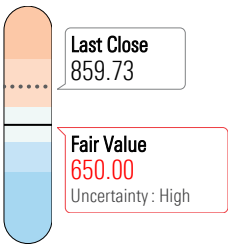
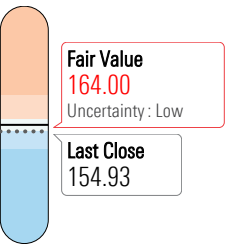
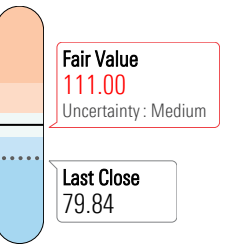
Bulls Say Karen Andersen, CFA, Director, 31 Jan 2025

- AbbVie supports a strong dividend yield, which should act as valuation support, as the cash flows to support the dividend look secure over the next several years.
- AbbVie's strong entrenchment in the aesthetics business (gained through the Allergan acquisition) sets up very long product cycles for several key assets like Botox based on strong brand power and physician entrenchment.
- AbbVie's next-generation immunology drugs targeting the IL23 and JAK pathways should help mitigate

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Competitors

	AbbVie Inc ABBV	Eli Lilly and Co LLY	Johnson & Johnson JNJ	Merck & Co Inc MRK
				
Economic Moat	Wide	Wide	Wide	Wide
Currency	USD	USD	USD	USD
Fair Value	184.00 31 Jan 2025 18:07, UTC	650.00 7 Apr 2025 20:58, UTC	164.00 19 Sep 2022 11:58, UTC	111.00 4 Feb 2025 19:32, UTC
1-Star Price	285.20	1,007.50	205.00	149.85
5-Star Price	110.40	390.00	131.20	77.70
Assessment	Fairly Valued 24 Apr 2025	Overvalued 24 Apr 2025	Undervalued 24 Apr 2025	Undervalued 24 Apr 2025
Morningstar Rating	★★★ 24 Apr 2025 21:29, UTC	★★ 24 Apr 2025 21:23, UTC	★★★★ 24 Apr 2025 21:20, UTC	★★★★ 24 Apr 2025 21:23, UTC
Analyst	Karen Andersen, Director	Karen Andersen, Director	Karen Andersen, Director	Karen Andersen, Director
Capital Allocation	Standard	Exemplary	Standard	Standard
Price/Fair Value	0.98	1.32	0.94	0.72
Price/Sales	5.68	17.26	4.21	3.17
Price/Book	95.76	54.37	4.77	4.36
Price/Earning	49.72	55.18	19.18	10.24
Dividend Yield	3.54%	0.63%	3.20%	3.96%
Market Cap	319.07 Bil	772.03 Bil	373.36 Bil	200.91 Bil
52-Week Range	153.58 — 218.66	677.09 — 972.53	140.68 — 169.99	75.93 — 134.63
Investment Style	Large Value	Large Growth	Large Value	Large Value

the competitive threats facing Humira over the next five years.

Bears Say Karen Andersen, CFA, Director, 31 Jan 2025

- ▶ AbbVie has had to depend on acquisitions to boost its late-stage pipeline, suggesting less successful internal research and development activities.
- ▶ The high profit margins on Humira will likely cause an amplified impact on earnings as sales are lost to biosimilar competition over the next several years.
- ▶ The loss of Humira sales could hurt the company's ability to gain favorable patient access with payers for other immunology drugs, given how robust Humira rebates were before biosimilar pressure.

Economic Moat Karen Andersen, CFA, Director, 25 Jul 2024

We are maintaining AbbVie's wide moat rating as the company has successfully navigated the patent loss on Humira that represented close to 50% of the firm's profits before biosimilars launched. AbbVie

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has diversified its product portfolio to include well-positioned next-generation immunology drugs Skyrizi and Rinvoq and executed well on the Allergan acquisition, expanding the firm's presence in the aesthetics market. The lower single-product concentration risk combined with strong traction with the current product portfolio helps support a wide moat for the firm. Also, an increasingly well-positioned pipeline increases our conviction in the durability of excess returns over the long term.

AbbVie derives enormous cash flows from its current product portfolio to fund ongoing discovery and development of the next generation of drugs. The large cash flows create an economy of scale that enables AbbVie to fund the average \$800 million required for a new drug. AbbVie's R&D has created a database of intellectual insights that should help increase the odds of successful drug development. Finally, AbbVie's entrenched salesforce in one of the most sought-after therapeutic areas of immunology should help the firm launch its next generation of drugs and make the firm a leading candidate for smaller drug firms needing help to develop and commercialize innovative new drugs.

We think the company does face environmental, social, and governance, or ESG, risks, particularly related to potential US drug price-related policy changes (75% of sales are generated in the US) to increase access by lowering drug prices. Also, ongoing product governance issues (including litigation related to side effects and patents) also weigh on the firm. While we have factored these threats into our analysis, we don't see them as material to our moat rating.

Fair Value and Profit Drivers Karen Andersen, CFA, Director, 31 Jan 2025

We have raised our fair value estimate to \$184 per share from \$176, after accounting for even stronger long-term growth potential for newer immunology drugs Skyrizi and Rinvoq.

We think next-generation immunology drugs look increasingly well positioned for growth based on leading efficacy and strong launch trajectories.

In looking at the company in total, while major annual Humira declines began in 2023 in the US, key valuation drivers to offset Humira sales declines are the company's next-generation immunology drugs targeting the IL23 (Skyrizi) and JAK (Rinvoq) pathways. These new pathways seem to offer better efficacy and an improved side effect profile over Humira. Further helping offset Humira sales erosion, aesthetic and therapeutic drug Botox should post steady minor gains based on the entrenchment of the drug and the complexity in creating a generic version. Also, the company has several other late-stage cancer drugs that should further help mitigate Humira sales declines.

On the Allergan acquisition, while it carried a significant premium to the stock price, we viewed Allergan as undervalued. We believe management was opportunistically taking advantage of Allergan's low price combined with the need to reduce AbbVie's dependence on Humira. Allergan cash flows should also help mitigate the Humira pressures.

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On the bottom line, we expect fairly stable operating margins as new immunology drugs carry strong enough margins to offset the lost sales on high-margin Humira. For the weighted average cost of capital, we use a 7.5% cost of equity and market rates for the cost of debt.

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

Similar to other drug firms, AbbVie faces the risks of new drug failures, reimbursement challenges for new drugs, and drug pricing cuts by large payer groups that are growing increasingly price-sensitive. Further, AbbVie's high concentration of Humira sales makes the company exposed to any new competitive threats to Humira, both from biosimilars and new branded drug competition. Also, AbbVie has taken on significant debt to purchase Allergan. AbbVie holds a high proportion of drugs with pricing that looks less cost-effective, opening the firm up to increased exposure if payers implement cost-saving measures. Given all these uncertainties, we view the firm at a high uncertainty level.

Our High Morningstar Uncertainty Rating for AbbVie is not materially affected by environmental, social, and governance, or ESG, risks beyond the potential pricing of drugs beyond the cost-effectiveness mentioned above. We see access to basic services (tied to drug pricing) as the biggest ESG risk that the firm needs to manage. AbbVie generates 75% of total sales in the US (a high amount relative to peers) so additional major pricing reforms could weigh on sales and margins.

Additionally, we assume a more than 50% probability of AbbVie seeing future costs related to product governance ESG risks (such as off-label marketing or litigation related to side effects) and model base case annual legal costs at 1.5% of non-GAAP net income (at the midrange relative to peers based on AbbVie's product portfolio having average exposure to future potential litigation).

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

AbbVie's Capital Allocation Rating is Standard, which reflects our belief that it possesses a sound balance sheet, a reasonable record of investments, and largely fair shareholder distributions.

We believe AbbVie's balance sheet is sound, with low risk regarding the size of its debt, the business cyclicity 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 most large-cap biopharma firms, should hold ample balance sheet strength to support opportunistic acquisitions as dynamic scientific data emerges that might require relatively quick action. Also, a strong balance sheet helps biopharma firms through most product litigation challenges with minimal concern by the market.

Turning to investments, we believe AbbVie is operating at a reasonable level. While the company only spends on research and development at the low- to midteens level as a percentage of sales (below the industry average in the high teens), the company has shown reasonable productivity in pipeline

AbbVie Inc ABBV ★★★

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development. The productivity in creating the next generation of drugs has yielded enough new drugs to help mitigate the major generic competition upcoming for Humira. The productivity in innovative new drugs (largely targeting areas of unmet medical need, especially in immunology) also helps fortify the firm's moat and expand the returns on invested capital. However, on the negative side, more investment would likely position the firm for stronger growth potential through the patent loss of Humira.

On the acquisition side and partnership side, AbbVie has executed reasonably well. The largest recent acquisition of Allergan for over \$60 billion diversified cash flows and opportunistically added products from a firm trading below its fair value. Allergan also opens a new therapeutic segment in aesthetics that doesn't face the same potential pricing risks as the branded drug segment. Additionally, the 2015 acquisition of Pharmacyclics for over \$20 billion looks sound, given that key drug Imbruvica has delivered peak annualized sales of \$5 billion even with some royalties paid to Johnson & Johnson. On the negative side, the failed acquisition of Shire led to a \$1.6 billion breakup fee, and the \$6 billion acquisition of Stemcentrx looks like poor judgment on a key cancer drug that looks less effective in late-stage clinical studies. More recent acquisition announcements for Cerevel and ImmunoGen look reasonable and will be largely measured on the outcome of recently launched and pipeline drugs.

Regarding distributions, we view AbbVie's dividends and share repurchases as about right. Since being divested from Abbott, AbbVie has largely focused on a dividend payout ratio close to 50%, which seems appropriate, given the maturity of the industry. The firm has done several rounds of share repurchases largely at levels that looked undervalued, which seems to be a good use of capital. However, we would argue for more R&D spending to set the firm up for strong growth potential through the Humira patent loss.

Turning to management specifically, AbbVie is currently led by CEO Robert Micheal. In July 2024, Michael succeeded longtime leader Rick Gonzalez, who joined Abbott in 1977 and held many managerial posts throughout his career at the firm. Gonzalez's relatively short tenure in the key field of drug commercialization and development before becoming the CEO was a concern, but execution was going well under his leadership.

Analyst Notes Archive

Biopharma Industry: Trump's Executive Order Could Help Innovation, but Range of Scenarios Still Open

Karen Andersen, CFA, Director, 16 Apr 2025

President Donald Trump issued an executive order on April 15 listing several potential policy changes aimed at lowering US drug prices. Why it matters: Biopharma has been holding its breath as it awaits Trump's plans for reducing drug costs, with a range of possible policy changes that could help or hinder innovation. As a worst-case scenario, international price benchmarks could significantly lower US drug pricing and reduce economic incentives for innovative drug development globally. On a more positive

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note, correcting the "pill penalty" that only gives small molecule drugs nine years of protection from Medicare negotiation (biologics get 13) could encourage innovation regardless of treatment modality. The bottom line: We're not making any changes to our valuations or uncertainty ratings as a result of Trump's recent executive order, which was light on details and could be construed as a positive or negative for the industry. Trump wants US Department of Health and Human Services Secretary Robert F. Kennedy Jr. to work with Congress to correct the pill penalty, although this relies on Congressional action and does not specify how long the protection period should be. Another goal is for RFK to begin a new Medicare payment model to lower drug prices within one year, which could revive Trump's international price benchmarking model that was finalized under Trump in 2020 but halted by President Joe Biden in 2022. Big picture: We think the biopharma industry looks undervalued, as innovation and a promising mergers and acquisitions environment support long-term pricing power and help counter potential near-term tariff pressure, long-term rising tax rates as US manufacturing increases, and likely approval delays.

Biopharma Industry: We Anticipate Tariffs to Bring Short-Term Margin Pressure; No Valuation Changes Karen Andersen, CFA, Director, 9 Apr 2025

President Trump has announced that "major" pharmaceutical product tariffs are likely to be revealed soon, but at the same time, paused broader tariffs for most trade partners for 90 days to allow time for negotiations. Why it matters: The biopharma industry has largely been exempt from tariffs (except for 20% tariffs on imports to the US from China, implemented in March). The industry continues to brace for a potential pharma-specific announcement, which could have implications for global manufacturing strategies. The rumored 25% tariff could be applied to products manufactured in Europe and imported into the US. While there might be some flexibility to move toward a more domestic manufacturing strategy, avoiding tariffs completely would require new facilities that take several years to build. Both US and Europe-based firms have significant European manufacturing exposure due to tax advantages (US firms), home country manufacturing (Europe firms), and other reasons, including lower production costs and lower exposure to currency fluctuations. The bottom line: We are not changing our biopharma uncertainty ratings or fair value estimates, as we think the direct impact from tariffs on earnings is likely to be limited in scope. Moreover, the indirect impact from a potential recession should also be limited given the noncyclical nature of drug spending. We assume pharmaceutical tariffs are enacted but do not last after 2026 due to political pressure from midterm elections. In this scenario, we think biopharma is unlikely to wholesale rethink its manufacturing footprint, apart from incremental US capacity additions. Using a non-GAAP industry average margin analysis of the short-run tariff impact, a 25% tariff would only amount to a 2-percentage-point operating margin headwind in the worst case, or a 6% headwind to operating profits, using an industry average 32% operating profit margin.

Biopharma Industry: Exempt From Global 10% Tariff, but We Still See Margin and Tax Rate Risks

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Karen Andersen, CFA, Director, 3 Apr 2025

On April 2, President Donald Trump announced a 10% tariff on imports from all countries, effective on April 5. However, pharmaceuticals appear to be among the exemptions listed in the full executive order, as part of Annex II. Why it matters: The biopharma industry has been sheltered from tariffs for decades, including during the first Trump administration, but investors had been concerned about potential global tariffs, as the industry has significant manufacturing in European countries like Ireland, Germany, and Switzerland. With roughly \$200 billion in pharmaceutical imports in 2024, a 10% tariff could amount to a \$20 billion headwind across the industry, with the biggest firms seeing potential annual tariffs as high as \$1 billion. Previously implemented tariffs on pharmaceutical imports from China (raised from 10% in February to 20% in March) appear manageable for branded biopharma, due to limited manufacturing in China, and pharmaceuticals are generally exempt from Mexico and Canada tariffs (25%, March 2025). The bottom line: We think a future global pharmaceutical tariff is still a risk and could pressure gross margins and increase long-term tax rates. However, we expect firms to be able to adapt their manufacturing, and nearly all large-cap biopharma firms continue to hold wide economic moats. On margins, we could see near-term pressure from tariffs and long-term pressure from additional investment in US manufacturing facilities, which are not likely to receive approval for several years, even assuming US Food and Drug Administration inspections stay on track following staff reductions. With increased US manufacturing, we expect tax rates could begin to rise closer to the current 21% US corporate tax rate, a level we assume will be maintained as Trump aims to extend his tax cuts via the reconciliation process in the Republican-controlled Congress.

AbbVie Earnings: Raising Our Fair Value Estimate on Solid Long-Term Outlook; Shares Fairly Valued

Karen Andersen, CFA, Director, 31 Jan 2025

AbbVie's 2024 revenue grew 4.6% on a constant currency basis, with 2025 guidance of 5.7% growth and new 2027 guidance for combined sales of immunology drug Skyrizi and Rinvoq of \$31 billion (up from prior guidance of \$27 billion). Why it matters: AbbVie's longstanding immunology blockbuster Humira is in the midst of rapid sales erosion from biosimilar and branded competition in the US, and while this forced the firm's top line to shrink in 2023, AbbVie appears to have righted the ship in 2024. We're particularly encouraged by 2024 growth for Skyrizi (51%) and Rinvoq (50%), with \$17.7 billion in combined sales now expected to rise to \$31 billion in 2027, reflecting potential for a more than 20% compound annual growth rate for these drugs. The bottom line: We're raising our fair value estimate to \$184 per share from \$176 following the solid results and long-term guidance. We think AbbVie's strong transition to more effective immunology products in the face of Humira sales erosion demonstrates its wide economic moat. We think shares look fairly valued, as we balance the excellent outlook for Skyrizi and Rinvoq with more tempered growth prospects in aesthetics, pressure on oncology drug Imbruvica, the recent failure of neuroscience drug emraclidine, and a relatively early-stage pipeline. Long view:

AbbVie Inc ABBV ★★★

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We're accounting for AbbVie's early-stage immunology pipeline in our valuation, but any progress with potential next-generation therapies beyond Skyrizi and Rinvoq or novel coformulations could significantly boost our growth outlook beyond Skyrizi and Rinvoq (patents expire in 2033). We incorporate roughly 5% average annual top-line growth into our model through 2029, which is below AbbVie's high-single-digit growth guidance. We're watching for midstage ulcerative colitis data this year (from NLRX1 small molecule ABBV-113 and next year from IL-1alpha/1beta antibody lutikizumab), among other programs, to assess any long-term forecast changes.

More Trump Healthcare Nominations Largely Aligned With Kennedy Karen Andersen, CFA, Director, 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 been 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, Director, 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

AbbVie Inc

ABBV

★★★

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24 Apr 2025	31 Jan 2025 18:07, UTC		25 Apr 2025					2 Apr 2025 05:00, UTC

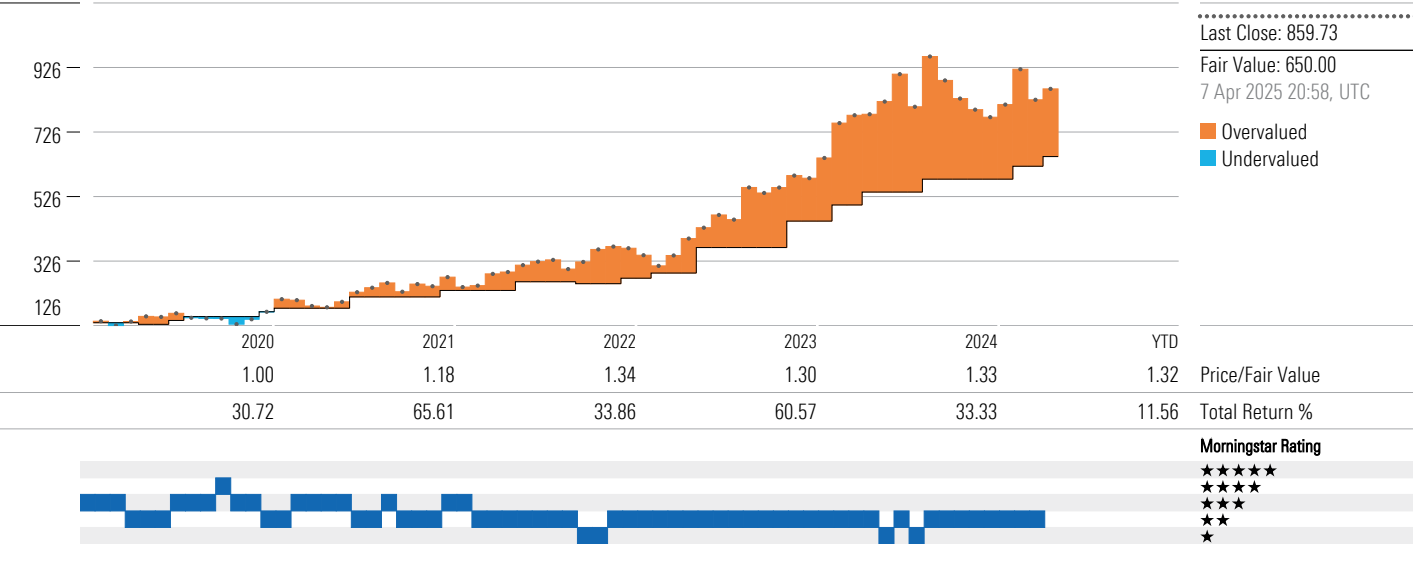
several of the 13 HHS divisions. In our Nov. 8 note, we discussed the potential tailwinds of a Trump administration, including possible repeal of the Medicare negotiation provision in the Inflation Reduction Act, less Federal Trade Commission scrutiny of acquisitions, and a likely continuation of lower 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. ■■■

AbbVie Inc ABBV ★★★

24 Apr 2025 21:29, UTC

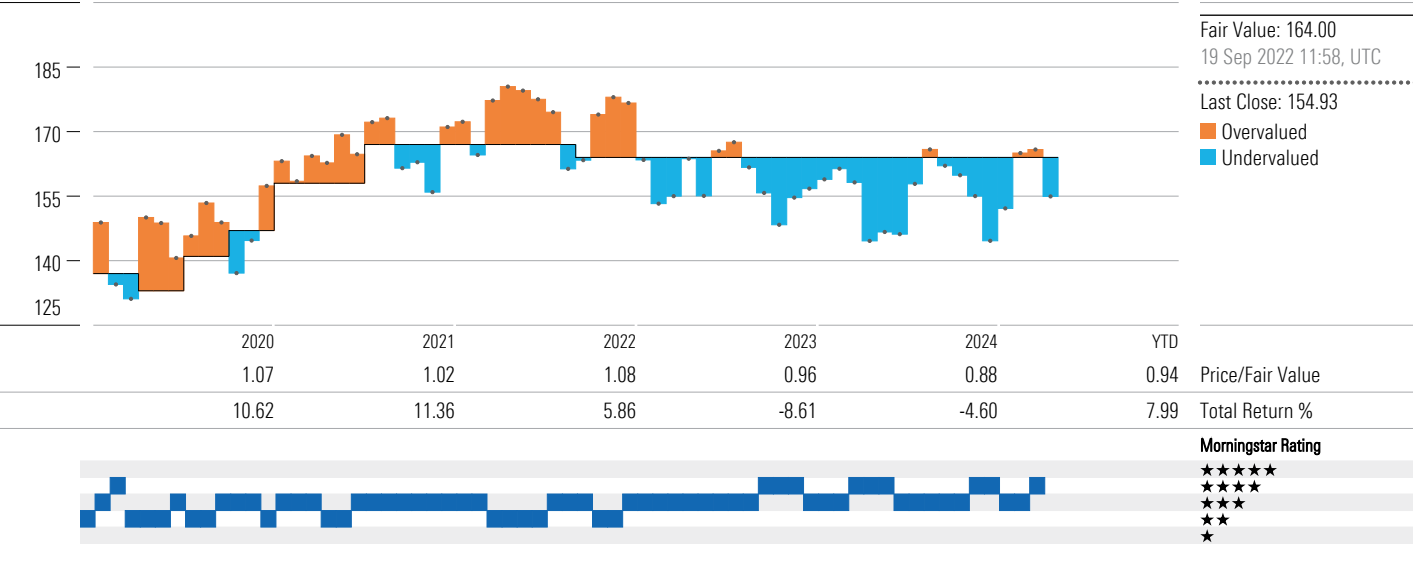
Competitors Price vs. Fair Value

Eli Lilly and Co LLY



Total Return % as of 24 Apr 2025. Last Close as of 24 Apr 2025. Fair Value as of 7 Apr 2025 20:58, UTC.

Johnson & Johnson JNJ



Total Return % as of 24 Apr 2025. Last Close as of 24 Apr 2025. Fair Value as of 19 Sep 2022 11:58, UTC.

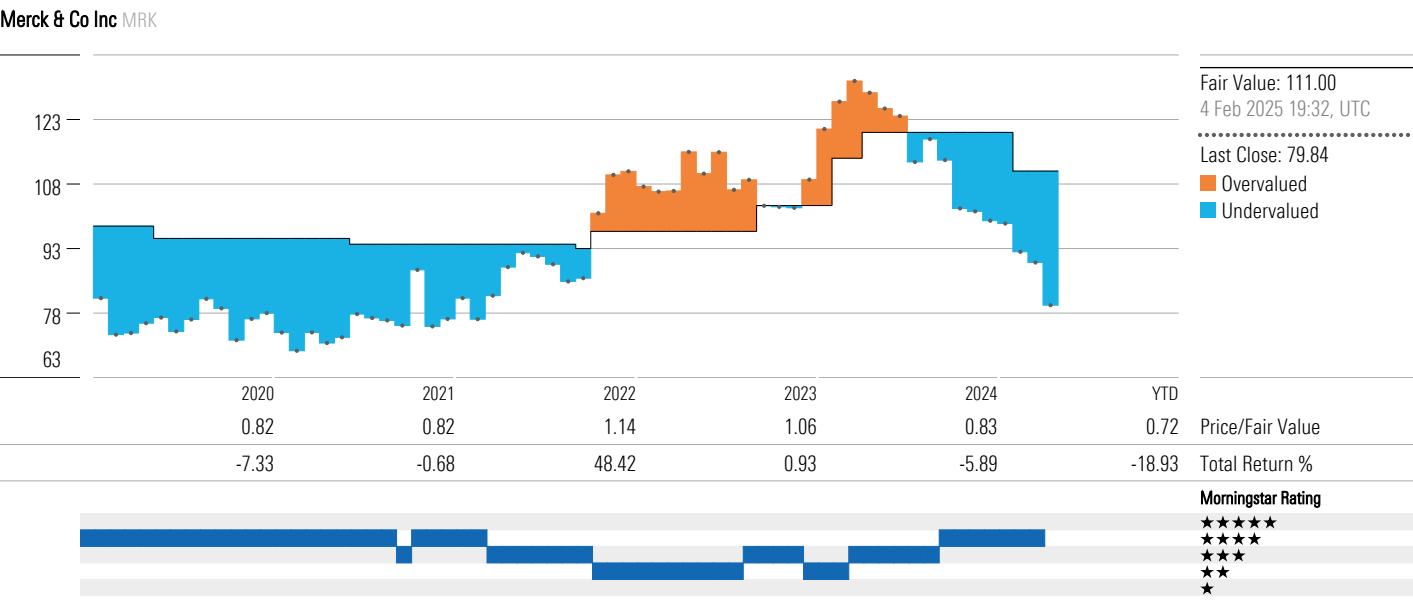
AbbVie Inc

ABBV

★★★

24 Apr 2025 21:29, UTC

Competitors Price vs. Fair Value



Total Return % as of 24 Apr 2025. Last Close as of 24 Apr 2025. Fair Value as of 4 Feb 2025 19:32, UTC.

AbbVie Inc ABBV ★★★

24 Apr 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
180.37 USD 24 Apr 2025	184.00 USD 31 Jan 2025 18:07, UTC	0.98	327.38 USD Bil 25 Apr 2025	Wide	Large Value	High	Standard	 2 Apr 2025 05:00, UTC

Morningstar Valuation Model Summary

Financials as of 11 Apr 2025

Fiscal Year, ends 31 Dec	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Revenue (USD Mil)	58,054	54,318	56,334	59,891	65,340	70,221	73,324	73,861
Operating Income (USD Mil)	18,870	13,356	11,887	20,780	23,356	26,201	27,539	27,722
EBITDA (USD Mil)	23,988	16,632	14,262	29,078	31,163	33,506	35,106	34,599
Adjusted EBITDA (USD Mil)	23,988	16,632	14,262	29,078	31,163	33,506	35,106	34,599
Net Income (USD Mil)	11,836	4,863	4,278	15,006	16,739	18,908	20,030	20,411
Adjusted Net Income (USD Mil)	24,597	19,769	18,000	21,505	22,561	24,108	25,323	25,388
Free Cash Flow To The Firm (USD Mil)	15,844	25,297	3,067	20,686	22,394	23,540	25,416	23,781
Weighted Average Diluted Shares Outstanding (Mil)	1,778	1,773	1,773	1,769	1,757	1,744	1,732	1,720
Earnings Per Share (Diluted) (USD)	6.66	2.74	2.41	8.48	9.53	10.84	11.56	11.87
Adjusted Earnings Per Share (Diluted) (USD)	13.83	11.15	10.15	12.16	12.84	13.82	14.62	14.76
Dividends Per Share (USD)	5.71	5.99	6.29	6.56	6.94	7.08	7.22	7.37

Margins & Returns as of 11 Apr 2025

	3 Year Avg	Actual			Forecast					5 Year Avg
		2022	2023	2024	2025	2026	2027	2028	2029	
Operating Margin %	17.3	32.5	24.6	21.1	34.7	35.8	37.3	37.6	37.5	36.3
EBITDA Margin %	—	41.3	30.6	25.3	48.6	47.7	47.7	47.9	46.8	—
Adjusted EBITDA Margin %	—	41.3	30.6	25.3	48.6	47.7	47.7	47.9	46.8	47.7
Net Margin %	12.3	20.4	9.0	7.6	25.1	25.6	26.9	27.3	27.6	26.5
Adjusted Net Margin %	36.9	42.4	36.4	32.0	35.9	34.5	34.3	34.5	34.4	34.7
Free Cash Flow To The Firm Margin %	26.4	27.3	46.6	5.4	34.5	34.3	33.5	34.7	32.2	33.8

Growth & Ratios as of 11 Apr 2025

	3 Year CAGR	Actual			Forecast					2029 5 Year CAGR
		2022	2023	2024	2025	2026	2027	2028	2029	
Revenue Growth %	0.1	3.3	-6.4	3.7	6.3	9.1	7.5	4.4	0.7	5.6
Operating Income Growth %	-13.5	2.8	-29.2	-11.0	74.8	12.4	12.2	5.1	0.7	18.5
EBITDA Growth %	-14.8	0.4	-30.7	-14.2	103.9	7.2	7.5	4.8	-1.4	24.4
Adjusted EBITDA Growth %	-15.8	0.4	-30.7	-14.2	103.9	7.2	7.5	4.8	-1.4	19.4
Earnings Per Share Growth %	-28.1	2.5	-58.8	-12.0	251.6	12.3	13.8	6.7	2.6	37.5
Adjusted Earnings Per Share Growth %	-28.1	8.9	-19.4	-9.0	19.7	5.7	7.6	5.8	1.0	37.5

Valuation as of 11 Apr 2025

	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
Price/Earning	11.7	13.9	17.5	14.8	14.0	13.1	12.3	12.2
Price/Sales	4.9	5.0	5.6	5.3	4.9	4.5	4.4	4.3
Price/Book	16.7	26.5	94.5	51.4	37.0	24.6	17.4	13.4
Price/Cash Flow	—	—	—	—	—	—	—	—
EV/EBITDA	14.3	19.3	26.5	13.1	12.2	11.4	10.8	11.0
EV/EBIT	18.2	24.0	31.8	18.3	16.3	14.5	13.8	13.7
Dividend Yield %	3.5	3.9	3.5	3.6	3.9	3.9	4.0	4.1
Dividend Payout %	41.3	53.7	62.0	54.0	54.0	51.2	49.4	49.9
Free Cash Flow Yield %	—	—	—	—	—	—	—	—

Operating Performance / Profitability as of 11 Apr 2025

Fiscal Year, ends 31 Dec	Actual			Forecast				
	2022	2023	2024	2025	2026	2027	2028	2029
ROA %	8.5	3.6	3.2	11.3	12.8	14.6	15.4	15.8
ROE %	68.5	46.8	127.2	239.9	194.8	147.2	111.5	88.0
ROIC %	13.7	10.8	12.3	15.8	18.2	20.8	22.3	23.1

AbbVie Inc ABBV ★★★

24 Apr 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment ¹
180.37 USD 24 Apr 2025	184.00 USD 31 Jan 2025 18:07, UTC	0.98	327.38 USD Bil 25 Apr 2025	Wide	Large Value	High	Standard	 2 Apr 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 %	—	—	—	15.5	14.4	13.2	12.1	11.0
Assets/Equity	8.0	13.0	40.2	21.3	15.2	10.1	7.3	5.6
Net Debt/EBITDA	—	—	—	1.7	1.4	1.1	0.7	0.5
Total Debt/EBITDA	—	—	—	2.0	1.8	1.5	1.4	1.3
EBITDA/ Net Interest Expense	11.7	9.9	6.6	10.4	13.0	16.8	21.9	28.8

Forecast Revisions as of 14 Apr 2025	2025		2026		2027	
Prior data as of 25 Feb 2025	Current	Prior	Current	Prior	Current	Prior
Fair Value Estimate Change (Trading Currency)	184.00	181.06	—	—	—	—
Revenue (USD Mil)	59,891	60,099	65,340	65,581	70,221	70,490
Operating Income (USD Mil)	20,780	21,126	23,356	23,631	26,201	26,678
EBITDA (USD Mil)	29,078	29,428	31,163	31,443	33,506	33,987
Net Income (USD Mil)	21,505	21,797	22,561	23,058	24,108	25,089
Earnings Per Share (Diluted) (USD)	8.48	8.65	9.53	9.77	10.84	11.33
Adjusted Earnings Per Share (Diluted) (USD)	12.16	12.32	12.84	13.13	13.82	14.38
Dividends Per Share (USD)	6.56	6.56	6.94	6.94	7.08	7.08

Key Valuation Drivers as of 11 Apr 2025

Cost of Equity %	7.5
Pre-Tax Cost of Debt %	6.5
Weighted Average Cost of Capital %	7.0
Long-Run Tax Rate %	21.0
Stage II EBI Growth Rate %	5.0
Stage II Investment Rate %	16.0
Perpetuity Year	20

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

Discounted Cash Flow Valuation as of 11 Apr 2025

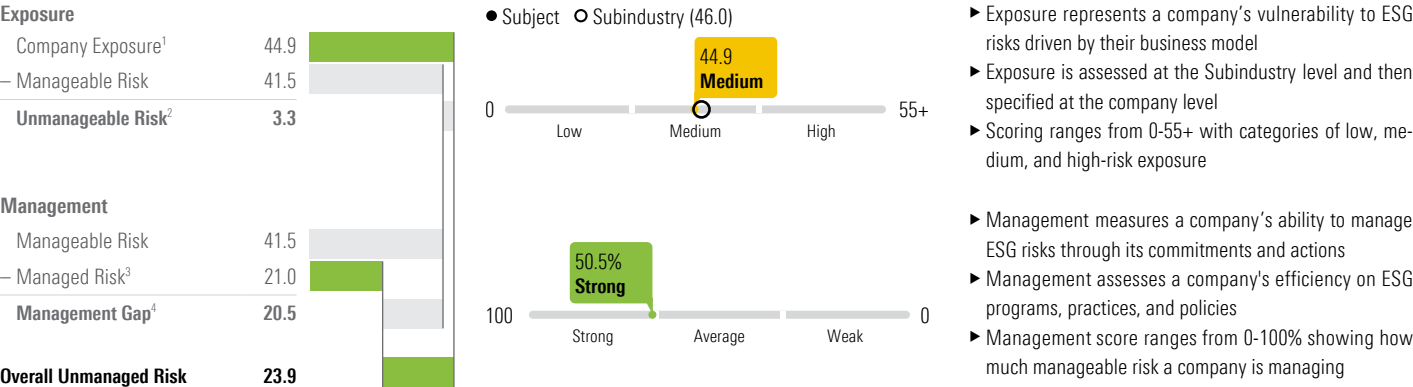
	USD Mil
Present Value Stage I	155,109
Present Value Stage II	78,618
Present Value Stage III	128,127
Total Firm Value	361,855
Cash and Equivalents	5,555
Debt	60,340
Other Adjustments	580
Equity Value	306,048
Projected Diluted Shares	1,769
Fair Value per Share (USD)	184.00

AbbVie Inc ABBV ★★★

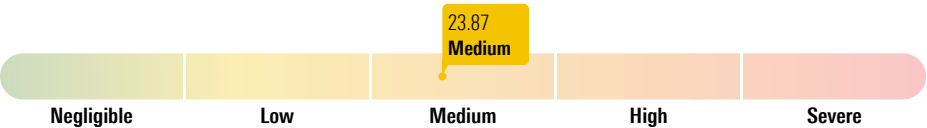
24 Apr 2025 21:29, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Equity Style Box	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
180.37 USD	184.00 USD	0.98	327.38 USD Bil	Wide	Large Value	High	Standard	
24 Apr 2025	31 Jan 2025 18:07, UTC		25 Apr 2025					2 Apr 2025 05:00, UTC

ESG Risk Rating Breakdown



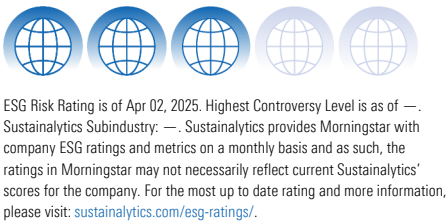
ESG Risk Rating



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 50.5% 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 Assessment⁵



Peer Analysis 02 Apr 2025	Peers are selected from the company's Sustainability-defined Subindustry and are displayed based on the closest market cap values							
Company Name	Exposure			Management			ESG Risk Rating	
AbbVie Inc	44.9 Medium	0	55+	50.5 Strong	100	0	23.9 Medium	0 40+
Eli Lilly and Co	45.8 Medium	0	55+	51.8 Strong	100	0	23.6 Medium	0 40+
Merck & Co Inc	47.5 Medium	0	55+	61.8 Strong	100	0	20.2 Medium	0 40+
Johnson & Johnson	47.1 Medium	0	55+	62.2 Strong	100	0	19.9 Low	0 40+
Pfizer Inc	44.3 Medium	0	55+	63.4 Strong	100	0	18.3 Low	0 40+

Appendix

Historical Morningstar Rating

AbbVie Inc ABBV 24 Apr 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
★★★	★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★

Eli Lilly and Co LLY 24 Apr 2025 21:23, 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
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★	★★	★★	★★★★	★★★★	★★★★

Johnson & Johnson JNJ 24 Apr 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
★★★	★★★★	★★★	★★	★★	★★★★	★★	★★	★★	★★★★	★★★★	★★

Merck & Co Inc MRK 24 Apr 2025 21:23, 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 re-

turns 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 (EBIT) and the net new investment (NNI) to de-

rive 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 EBIT 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.

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

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

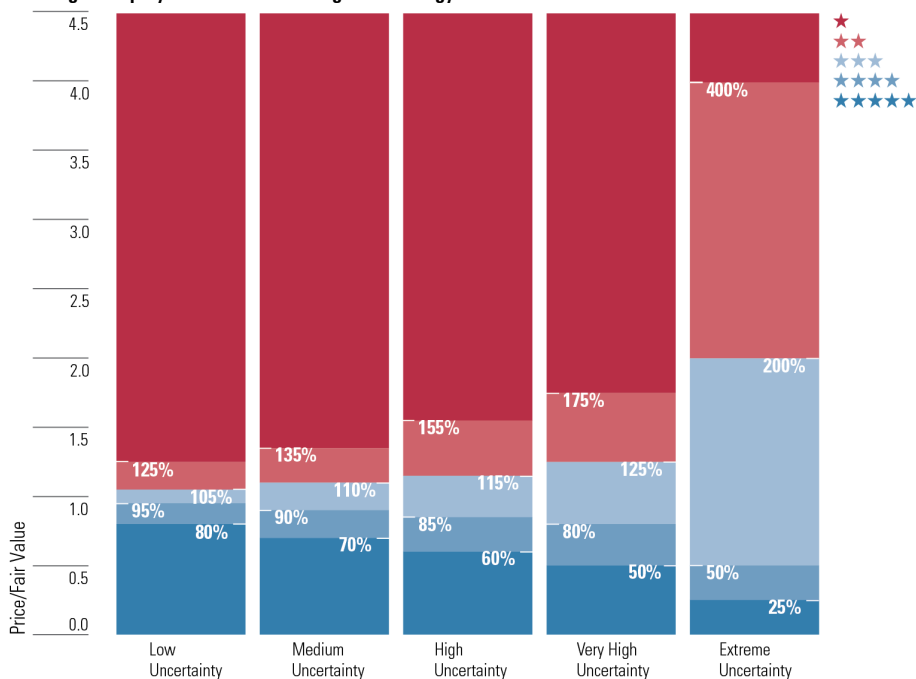
4. Market Price

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

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

Morningstar 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 ad-

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

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

Sustainalytics analyzes over 1,300 data points to assess a company's exposure to and management of ESG risks. In other words, ESG Risk Ratings measures a company's unmanaged ESG Risks represented as a quantitative score. Unmanaged Risk is measured on an open-ended scale

starting at zero (no risk) with lower scores representing less unmanaged risk and, for 95% of cases, the unmanaged ESG Risk score is below 50.

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

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

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