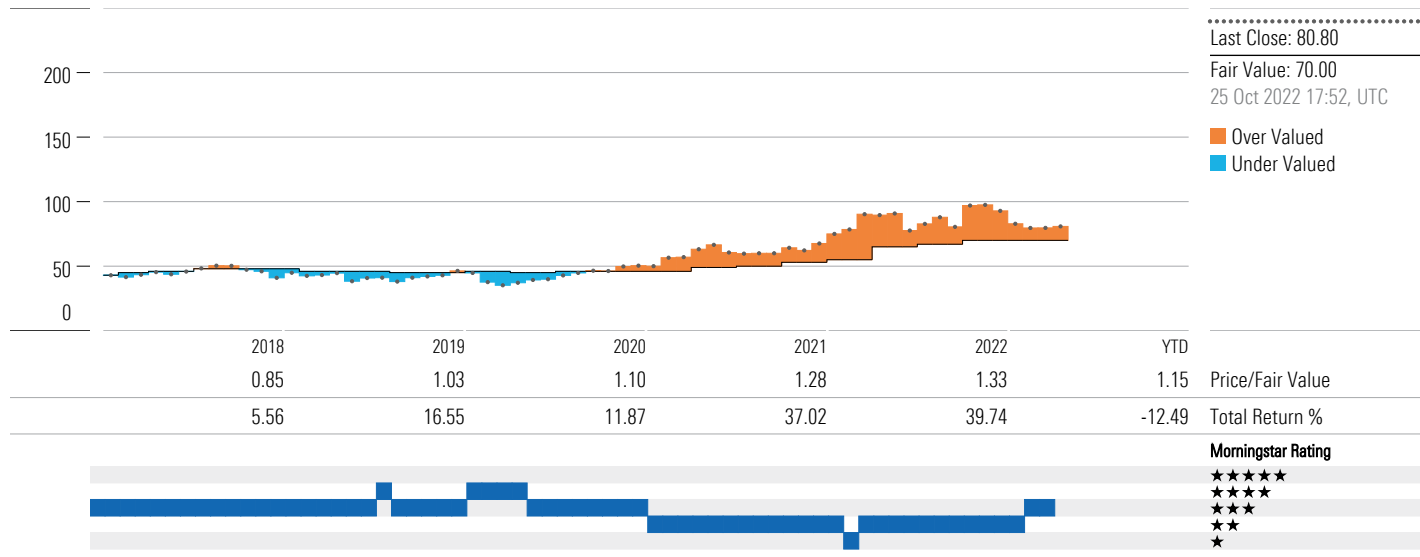


Archer-Daniels Midland Co ADM ★★★ 24 Apr 2023 21:16, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
80.80 USD 24 Apr 2023	70.00 USD 25 Oct 2022 17:52, UTC	1.15	44.15 USD Bil 24 Apr 2023	None	Stable	High	Exemplary	5 Apr 2023 05:00, UTC

Price vs. Fair Value



Total Return % as of 24 Apr 2023. Last Close as of 24 Apr 2023. Fair Value as of 25 Oct 2022 17:52, UTC.

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Research Methodology for Valuing Companies

Important Disclosure

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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.

ADM Earnings: Shares Fall as Management Expects Favorable Grain Merchandising Conditions to Moderate

Analyst Note Seth Goldstein, CFA, Strategist, 25 Apr 2023

After incorporating Archer Daniels-Midland's first-quarter results into our valuation model, we maintain our \$70 per share fair value estimate. Our no moat rating is also unchanged.

ADM shares were down 6% at the time of writing on management's outlook for grain merchandising conditions to moderate throughout 2023. However, at current prices, we view ADM shares as fairly valued with the stock trading a little less than 10% above our fair value estimate and in 3-star territory. As a result, we encourage investors to wait until shares fall below our fair value estimate and offer a margin of safety before considering an entry point.

ADM's first quarter reflected the continued strength of the ag services and oilseeds business, which saw profits grow 20% year on year due to a favorable grain merchandising environment. However, we expect conditions will normalize through the remainder of 2023 as a result of falling crop prices and fewer price dislocations. Starting in the second quarter of 2022, ADM has benefited from crop price volatility due to the Russia-Ukraine conflict, which created cyclical peak grain merchandising conditions, where ADM could make elevated profits in its ag services business. However, as crop prices have fallen and Russia and Ukraine continue to export crops, we expect fewer dislocations, leading to smaller profits.

Archer-Daniels Midland Co ADM ★★★

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Sector

Consumer Defensive

Industry

Farm Products

Business Description

Archer-Daniels Midland is a major processor of oilseeds, corn, wheat, and other agricultural commodities.

Additionally, the company owns an extensive network of logistical assets to store and transport crops around the globe. ADM also runs a nutrition business that focuses on both human and animal ingredients. The company is also a large producer of corn-based sweeteners, starches, and ethanol.

In nutrition, profits were down largely due to lower animal nutrition demand. Management expects lower demand will persist and plans to focus on cost and footprint reduction to mitigate the lower profit environment. We slightly lowered our outlook for the animal nutrition business and are now skeptical of management's 2025 segment operating profit target of \$1.25 billion-\$1.5 billion due to lower animal nutrition profits. However, human nutrition, the larger profit driver, should continue to benefit from a growing portfolio of premium-priced, specialty ingredients, driving segment profit margin expansion over time.

Business Strategy & Outlook Seth Goldstein, CFA, Strategist, 26 Jan 2023

Archer-Daniels Midland buys, processes, and sells agricultural commodities. The firm purchases crops from farmers and then transports, stores, and/or processes the crops before selling them to food, feed, and energy buyers. The commodity products ADM moves around the world are readily available from competitors, and the company has little pricing power over the products it buys and sells, making for slim margins. In addition, the capital intensity of its operations makes it difficult, but not impossible, for ADM to generate economic profits.

ADM is a major processor of soybeans and corn. Soybean oil and meal are the firm's primary soybean products, with oils sold mainly to food customers and meal to feed customers. As such, ADM's ag services and oilseeds segment is exposed to the soy crush margin, or the difference between the price of soybeans and the prices of soy meal and oil. The soybean trading business has benefited from increased Chinese soybean consumption. We expect demand will increase as China's population and income per capita advance.

Corn processed by ADM makes its way into sweeteners and starches or ethanol. The sweeteners and starches business sells primarily commodity-grade products, such as high-fructose corn syrup, which have little pricing power. In response to declining demand for high-fructose corn syrup, the company has been developing more starches. ADM's ethanol business, called Vantage Corn Processors, has been aided by an important U.S. mandate for ethanol use in fuel, which provides a floor for demand. Expansion into biofuels for aviation should provide a long-term growth opportunity for the business.

ADM has expanded its nutrition business primarily through acquisitions. ADM acquired Wild Flavors in 2014, Neovia in early 2019, and has made multiple tuck-in deals as well. Specialty flavors and ingredients are value-added, requiring additional processing and, in many cases, proprietary formulations. As ADM continues to invest in the development of new products, we expect the nutrition business to grow from 11% of profits in 2022 to 27% by 2027. This should provide ADM with a more stable earnings base over time.

Bulls Say Seth Goldstein, CFA, Strategist, 25 Apr 2023

Archer-Daniels Midland Co ADM ★★★ 24 Apr 2023 21:16, UTC

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Competitors

	Archer-Daniels Midland Co ADM	Ingredion Inc INGR	International Flavors & Fragrances Inc IFF	Kerry Group PLC Class A KRZ
Economic Moat	None	Narrow	Wide	Wide
Moat Trend	Stable	Stable	Stable	Stable
Currency	USD	USD	USD	EUR
Fair Value	70.00 25 Oct 2022 17:52, UTC	120.00 4 Aug 2020 20:18, UTC	140.00 9 Feb 2023 17:21, UTC	—
1-Star Price	108.50	162.00	189.00	—
5-Star Price	42.00	84.00	98.00	—
Assessment	Fairly Valued 24 Apr 2023	Under Valued 24 Apr 2023	Significantly Undervalued 24 Apr 2023	—
Morningstar Rating	★★★ 24 Apr 2023 21:16, UTC	★★★★ 24 Apr 2023 21:16, UTC	★★★★★ 24 Apr 2023 21:16, UTC	—
Analyst	Seth Goldstein, Strategist	Seth Goldstein, Strategist	Seth Goldstein, Strategist	—
Capital Allocation	Exemplary	Standard	Standard	Exemplary
Price/Fair Value	1.15	0.88	0.69	—
Price/Sales	0.45	0.89	1.99	2.00
Price/Book	1.82	2.18	1.40	2.81
Price/Earning	10.48	14.36	—	28.88
Dividend Yield	2.04%	2.64%	3.32%	1.06%
Market Cap	44.15 Bil	6.95 Bil	24.76 Bil	17.45 Bil
52-Week Range	70.02—98.28	78.81—106.98	81.53—135.17	84.10—107.90
Investment Style	Large Value	Small Core	Mid Value	Mid Core

- With a global network of processing, storage, and transportation assets, ADM has scale advantages over regional competitors. Its trading operations are often able to generate arbitrage opportunities from extensive market knowledge produced by the global origination and logistics network.
- ADM's investments in building a global nutrition business will create value for shareholders as the company continues to expand its product portfolio.
- As a major processor of soybeans—a key component in animal feeds—ADM should benefit as emerging economies consume more meat.

Bears Say Seth Goldstein, CFA, Strategist, 25 Apr 2023

- Grain merchandisers, including ADM, will continue to face structural headwinds as farmers and grain buyers have better access to price information. This will limit trading profits over the long term.
- Profitability is subject to operating rates in each segment, which can be negatively affected by a number of factors outside ADM's control.

Archer-Daniels Midland Co ADM ★★★

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- As a trader of commodity products, ADM is essentially a price-taker competing in a market where similar products are available from rivals.

Economic Moat Seth Goldstein, CFA, Strategist, 26 Jan 2023

We assign a no-moat rating to Archer-Daniels Midland. As one of four dominant players, the company holds a solid position in global agribusiness. The company owns a massive network of processing plants, storage facilities, mills, port operations, and transportation options that would be difficult to replicate from scratch. That said, the capital intensity of Archer Daniels Midland's operations and the generally razor-thin margins generated in the ag-services business have historically made it difficult for the company to generate returns on invested capital above our estimated cost of capital.

The specialty sweeteners and starches business in the carbohydrate solutions segment as well as the specialty ingredients products in the nutrition segment deliver higher margins, likely due to intangible assets and switching costs. Intangible assets are related to proprietary formulations stemming from research and development spending for the development of new specialty products. Customer switching costs come from consumer packaged goods companies' unwillingness to jeopardize the brand equity of their products by changing specialized ingredients that are critical to the consumer experience. That said, the majority of Archer Daniels Midland's products are commodities where the company does not benefit from any particular moat source. As such, we do not have a high degree of confidence that the company as a whole will be able to outearn its cost of capital over the next decade.

Fair Value and Profit Drivers Seth Goldstein, CFA, Strategist, 25 Apr 2023

Our fair value estimate is \$70 per share. We assume a weighted average cost of capital of roughly 8%.

In the ag services and oilseeds business, which generates the majority of profits, continued increases in crop yields and new land brought under agricultural production, particularly in South America, are likely to lead to an increase in crops transported around the globe. This bodes well for the ag services business; however, better global pricing information for farmers and stronger, more consistent crop yields should also reduce crop price volatility over time, which will limit the trading desk's arbitrage opportunities. The ag services business is all about capacity utilization, and weather can cause fluctuations in operating rates year to year--as seen with the 2012 drought. In the near term, we see a favorable grain merchandising environment for ADM, as its North American footprint should benefit from high crop prices that encourage farmer selling. This should boost near-term segment profits to cyclically high levels in 2022. Longer term, we forecast 1% sales growth for the segment with an average operating margin of roughly 4%, slightly above the trailing 10-year average as growing grains demand should result in higher midcycle capacity utilization in the grain merchandising and processing operations.

We expect the starches and sweeteners business and the nutrition business to benefit from the

Archer-Daniels Midland Co ADM ★★★

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continued development of new products. Over the long term, we expect specialty ingredients will continue to make up a greater portion of the business. In nutrition, we forecast operating margins to expand from a little over 10% in 2021 to around 13% by 2026 as the company sells a higher volume of premium-priced specialty products. We forecast 2025 operating profits will be just below the bottom of management's target of \$1.25 billion to \$1.5 billion. However, we assume no additional acquisitions. If the company makes acquisitions to expand the nutrition portfolio, it would likely put ADM closer to the middle of management's targeted range.

ADM's ethanol business, Vantage Corn Processors, has been a potential divestiture candidate as management focuses on the nutrition business. While it could be sold or spun off in the future, we include it in our explicit forecast until a deal is announced.

In a scenario where crop prices remain elevated and grain merchandising conditions stay favorable, we would expect to see higher revenue growth and profit margins for ADM. In this scenario, our fair value estimate would increase to \$100 per share.

In a scenario where crop prices fall below our base-case forecast and grain merchandising conditions remain unfavorable, we would expect to see little revenue growth and lower profit margins for ADM. In this scenario, our fair value estimate would fall to \$40 per share.

Risk and Uncertainty Seth Goldstein, CFA, Strategist, 26 Jan 2023

We assign a High Morningstar Uncertainty Rating to ADM.

In many cases, ADM is an intermediary between farmers and food companies. The company is subject to large profit swings if agricultural commodity prices move quickly. The availability and pricing of agricultural products are subject to unpredictable factors such as weather, planting, disease, and government programs. Maximizing capacity utilization is important in ADM's high-fixed-cost operations, and droughts and other supply disruptions can negatively affect operating rates, although this is partially offset by improved arbitrage opportunities on the trading desk. Conversely, in multiyear periods of large harvests, volatility is reduced, which limits the trading desk's ability to make a profit.


Government regulations can have a material impact on ADM's business. For example, modifications to the renewable fuel standard in the U.S. could harm the company's ability to generate ethanol profits.

As a producer of soy-based meal and oil products, ADM is exposed to soy crush margins. If the soy crush spread remains compressed for a prolonged period, ADM's oilseeds processing profits would probably be impaired.

ADM also faces several key ESG risks. The biggest risk we see comes from concerns about ADM's

Archer-Daniels Midland Co ADM ★★★

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supply chain. Growing consumer concerns about deforestation could result in ADM's customers requiring stricter certification from the company, resulting in higher costs to ADM that it may not be able to pass along. Similarly, growing consumer concerns about human rights abuses in some countries where ADM sources crops could result in stricter certification requirements that result in higher costs. We see a moderate probability that these occur and a moderate impact to ADM.

Another ESG risk comes from the carbon emissions in ADM's operation resulting in higher costs. However, we think this would equally affect ADM and its peers, resulting in cost increases being passed along to customers and little impact to ADM.

Capital Allocation Seth Goldstein, CFA, Strategist, 26 Jan 2023

We assign an Exemplary capital allocation rating to ADM based on our framework that assesses the balance sheet, investment decisions, and shareholder distributions.

We rate the balance sheet as sound. ADM's revenue is subject to low cyclicalities, but the company has high operating leverage, resulting in medium unleveraged business risk. However, with a healthy balance sheet and few near-term debt maturities over the next few years, ADM should be able to meet its financial obligations.


We view management's investments as exceptional. We are in favor of the decision to invest in the nutrition business as we view this business as having both the highest profit margins and the most traces of an economic moat across all of ADM's portfolio. We expect ADM to continue looking for avenues to increase the nutrition business. Management's 2025 target of \$1.25 billion to \$1.5 billion in operating profit for the nutrition business likely will require some more smaller acquisitions to meet the midpoint of the range. Management's acquisitions in the nutrition business have been made at reasonable prices, which have created shareholder value, in our view. The company's continued investments in the nutrition business should generate solid returns.

We credit management for being willing to walk away from past investments that have not generated high returns, such as the goal to divest the corn ethanol business. Along these lines, we are also in favor of management's investments in the gradual transformation of its sweeteners and starches capacity away from high-fructose corn syrup into more specialty ingredients. Further, ADM has divested itself of a number of noncore assets, such as cocoa and fertilizer, which should allow management to focus on its core businesses.

Finally, we credit management for executing well in the volatile, low-margin ag services and oilseeds business. In recent years, ADM has outmaneuvered rivals such as Bunge, leading to relatively more stable profits.

Archer-Daniels Midland Co ADM ★★★

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We see shareholder distributions as appropriate. Dividends have averaged just over 40% of net income of the past decade. At this level, ADM should be able to continue to grow its dividend each year.

Juan R. Luciano became CEO in 2015. Luciano joined Archer Daniels Midland in 2011 as COO following a 25-year tenure at Dow Chemical. We think Luciano's operational experience has served ADM well as the company looks to expand the nutrition business and improve profitability and returns on invested capital in relatively mature industries.

Management is compensated based on return on invested capital, total shareholder return, and nutrition segment profit growth. We are in favor of the ROIC metric, as it encourages management to invest in value-added areas of the business.

Analyst Notes Archive

Maintaining \$70 FVE as ADM Reports Solid Fourth-Quarter Results; Shares Slightly Overvalued Seth Goldstein, CFA, Strategist, 26 Jan 2023

We maintain our \$70 per share fair value estimate for Archer-Daniels Midland after updating our model to incorporate the company's fourth-quarter results. Our no-moat rating is also unchanged.

Our base case outlook for ADM is largely unchanged. We forecast 2022 will ultimately represent the cyclical peak for ADM's profits due to volatile crop prices that resulted from the Russia-Ukraine conflict. This uncertainty, which arose in addition to normal weather-related crop production volatility, created favorable grain merchandising conditions that ADM's ag services business took advantage of to drive a nearly 80% profit growth in 2022.

For ADM and its grain merchandising peers, increased crop price volatility creates the opportunity for higher profits due to more dislocations between farmers, who sell crops to ADM, and ADM's customers who buy the grains. While this benefitted ADM in 2022, we expect grain merchandising conditions will begin to normalize in 2023 and ultimately revert back to midcycle conditions, resulting in lower profits over the next few years.

At current prices, we view ADM's stock as slightly overvalued, with shares trading in 2-star territory, at a little more than 20% above our fair value estimate. As such, we recommend investors wait for a pullback before considering the stock. Shares trade roughly in between our base case fair value estimate of \$70 per share and our upside case of \$100 per share. Our upside scenario assumes favorable grain merchandising conditions persist in the future, leading ADM to continue to generate strong profits in line with 2022.

Archer-Daniels Midland Overvalued as We See Long-Term Grain Merchandising Conditions Moderating Seth Goldstein, CFA, Strategist, 25 Oct 2022

Archer-Daniels Midland Co ADM ★★★

24 Apr 2023 21:16, UTC

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After updating our model to incorporate Archer-Daniels Midland's third-quarter results, we raise our fair value estimate to \$70 per share from \$67. Our no-moat rating is unchanged. The primary driver of our fair value estimate increase is our improved near-term outlook as we expect grain merchandising conditions will remain favorable for the rest of 2022 and into 2023. Accordingly, we have raised our near-term outlook for its ag services and oil seeds business, which generates the majority of companywide profits.

Despite our improved near-term outlook, we view ADM shares as overvalued, with the stock trading in 2-star territory and a little less than 30% above our updated fair value estimate. We think the market is still pricing in grain merchandising conditions to remain more favorable for longer. However, we point to the resumption of grain exports from both Russia and the Ukraine alleviating the supply shock that caused crop prices to spike earlier this year. Crop prices have already begun to moderate, returning to pre-Russia-Ukraine conflict levels.

While bad weather in any of the major crop producing regions could affect prices, we expect crop prices will fall over the next couple of years. For ADM, this would likely lead to more farmers holding out for the highest price possible, which reduces the number of crop price dislocations that generate excess profits in the grain merchandising business and weighs on profit margins.

If we were to assume favorable grain merchandising conditions remain in place for longer, our fair value estimate would rise to \$100 per share, which is a little more than 10% above the current price. As a result, we see more downside risk to the current share price.

Raising ADM FVE to \$67 on Improved Near-Term Outlook; Shares Slightly Overvalued Seth Goldstein, CFA, Strategist, 26 Jul 2022

Archer-Daniels Midland reported strong second-quarter results as adjusted segment operating profit was up nearly 60% year over year. While profits increased across all segments versus the prior year's quarter, the majority of growth was driven by the ag services and oilseeds business. During the quarter, this business benefitted from favorable grain merchandising conditions and higher soy crush margins. As a result of the strong quarter, we have raised our forecast for the year to incorporate higher profits that we had previously forecast.

Having updated our model to reflect our higher near-term outlook, we raise our ADM fair value estimate to \$67 per share from \$65. Our no-moat rating is unchanged. At current prices, we view ADM shares as slightly overvalued, with the stock trading nearly 15% above our updated fair value estimate, but in 3-star territory. As such, we recommend investors wait for the stock to offer a margin of safety before considering an entry point.

We continue to view 2022 as a cyclical peak for ADM's ag services and oilseeds business. Soy crush

Archer-Daniels Midland Co ADM ★★★

24 Apr 2023 21:16, UTC

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margins have already begun to moderate versus second-quarter levels, which should lower crushing profits. Additionally, ADM's grain merchandising business, likely benefitted from the temporary grain export halt from Russia and Ukraine during the quarter. As customers who would normally import grain from those countries scrambled to secure other supplies, we think there were likely more grain price dislocations, which resulted in more profit opportunities. However, as grain exports from Russia and Ukraine increase over the second half of the year, we expect grain merchandising conditions will moderate accordingly.

Fertilizer and Grain Merchandiser Stocks Fall on News of UN Facilitating Russia and Ukraine Exports

Seth Goldstein, CFA, Strategist, 18 May 2022

On May 18, fertilizer and grain merchandiser stocks under our coverage generally fell more than the broader market decline on the news of the United Nations' plan to facilitate grain and fertilizer exports from Russia, Ukraine, and Belarus. Since the Russia-Ukraine conflict began, Russia and Belarus have exported limited fertilizer, while Russia and Ukraine have stopped grain exports. With the U.S. backing the UN's plan, we think the exports will likely resume later this year for both grains and fertilizers. In turn, this will reduce the impact of the supply shocks that have led to multiyear high grain prices and record high fertilizer prices.

While we did not anticipate the UN would step in and help ease the supply shock, we forecast the sharply reduced grain and fertilizer exports from the region would be temporary. As such, we continue to forecast 2022 will represent a cyclically high watermark for grain merchandising and fertilizer producer profits.

Despite the selloff, grain merchandiser stocks continue to look overvalued with Archer-Daniels Midland and Bunge both trading in 2-star territory. We think grain exports will increase from Russia and Ukraine over time, leading to lower crop prices and fewer global price dislocations, which will weigh on grain merchandiser profits. Similarly, Nutrien, Mosaic, and CF Industries remain overvalued, with all three companies also trading in 2-star territory. We think Russia and Belarus will ramp up their fertilizer exports, leading to trade flow shifts and restoring market balance, which will weigh on fertilizer prices over the next several years. As a result, we recommend investors wait for valuations to decline before considering an entry point.

Raising Archer-Daniels Midland's FVE on Improved Near-Term Outlook; Shares Significantly Overvalued

Seth Goldstein, CFA, Strategist, 26 Apr 2022

Archer-Daniels Midland reported strong first-quarter earnings as segment operating profit was up 28% versus the prior-year quarter. The growth was driven by higher results in all segments. We have increased our near-term outlook for the firm in all three segments, as we now forecast stronger revenue growth and higher profitability. Our long-term outlook remains intact. Having updated our model to

Archer-Daniels Midland Co ADM ★★★

24 Apr 2023 21:16, UTC

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reflect these changes, we raise our fair value estimate to \$65 per share from \$55. Our no-moat rating is unchanged.

At current prices, we view the firm's shares as materially overvalued. The stock trades around our bull-case fair value estimate of \$95 per share. Our bull case assumes favorable grain merchandising conditions persist over the long term, leading to higher ag services and oil seeds profits, which generates the majority of profits. Our bull case also assumes faster long-term revenue growth and profit margin expansion in the carbohydrate solutions and nutrition segments. Accordingly, we think nearly all the upside is already reflected in the current share price.

In ag service and oilseeds, we expect 2022 will represent a cyclical peak as high crop prices and a crop supply shock from the Russia-Ukraine conflict will lead to significant price dislocations, creating a profitable grain merchandising environment. However, as crop prices moderate toward midcycle levels in the coming years, we think segment profits will fall accordingly.

In the carbohydrate solutions business, the firm benefited from starches and sweeteners demand recovery toward prepandemic levels. As consumers resume dining at restaurants, we expect a full demand recovery for products such as high fructose corn syrup used in soft drinks. Combined with improved results in the ethanol business, we forecast the segment will exceed management's 2025 target of \$800 million to \$1.1 billion in operating profit.

Raising Archer-Daniels Midland's FVE to \$55 on Higher Near-Term Outlook; Shares Overvalued Seth Goldstein, CFA, Strategist, 25 Jan 2022

Archer-Daniels Midland reported strong fourth-quarter results as adjusted segment operating profit was up 23% year on year. The results were consistent with our outlook that it would continue to benefit from higher crop prices, leading to strong farmer selling, particularly in the U.S. Given continued weather challenges in South America, we think crop prices are likely to remain elevated in 2022. Accordingly, we have updated our model for near-term ag services and oilseeds profits. Our long-term outlook is unchanged. Having updated our model for higher near-term results and our revised U.S. corporate tax rate assumptions, we raise our fair value estimate to \$55 per share from \$53. Our no-moat rating is unchanged.

At current prices, we view shares as overvalued with the stock trading in 2-star territory. Current prices imply the strong grain merchandising and oilseed crushing environment will persist into the future. However, a more balanced supply and demand environment will result in lower long-term crop prices. For grain merchandisers, this leads to a greater proportion of farmers not selling and holding out for a higher price, which leads to lower profit margins from fewer price dislocations and lower capacity utilization.

Archer-Daniels Midland Co ADM ★★★

24 Apr 2023 21:16, UTC

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24 Apr 2023	25 Oct 2022 17:52, UTC		24 Apr 2023					5 Apr 2023 05:00, UTC

Longer term, we see lower crop prices being driven by increased crop production in North and South America, combined with more normalized demand for grains in China. As such, we think the strong ag services and oilseeds profits in 2021 will represent a cyclical peak.

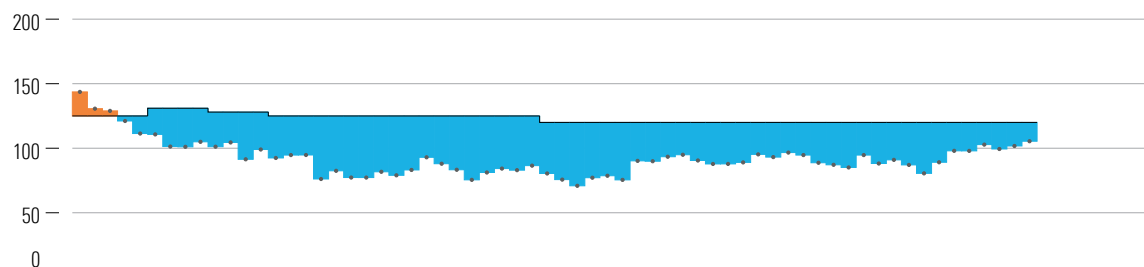
The nutrition business generated 20% year-on-year profit growth during 2021, which is slightly above our long-term forecast for mid-teens annual growth. As the firm grows its specialty ingredient portfolio, nutrition segment margins should expand. However, even with strong growth, we only forecast the nutrition segment will generate 30% of total profits. As such, we think the ag services and oilseeds business will continue to be a larger driver of the stock. ■■■

Archer-Daniels Midland Co ADM ★★★ 24 Apr 2023 21:16, UTC

Competitors Price vs. Fair Value

Ingredion Inc INGR

Fair Value: 120.00
4 Aug 2020 20:18, UTC
Last Close: 105.42
Over Valued
Under Valued



	2018	2019	2020	2021	2022	YTD
Price/Fair Value	0.71	0.74	0.66	0.81	0.82	0.88
Total Return %	-32.87	4.44	-12.63	26.12	4.15	8.37

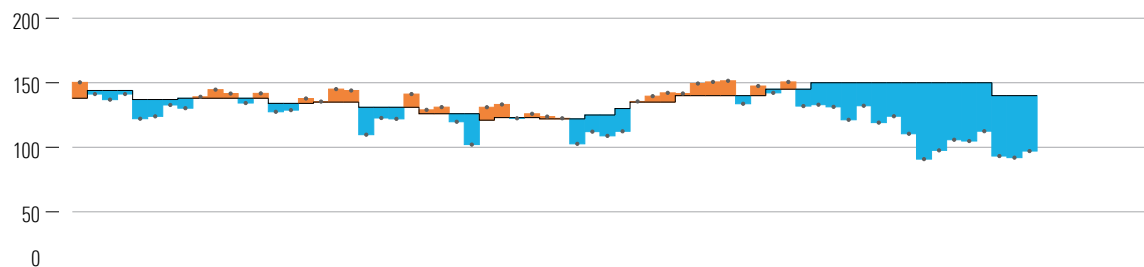
Morningstar Rating

★★★★★
★★★★★
★★★★★
★★★★★
★★★★★
★★★★★

Total Return % as of 24 Apr 2023. Last Close as of 24 Apr 2023. Fair Value as of 4 Aug 2020 20:18, UTC.

International Flavors & Fragrances Inc IFF

Fair Value: 140.00
9 Feb 2023 17:21, UTC
Last Close: 97.06
Over Valued
Under Valued



	2018	2019	2020	2021	2022	YTD
Price/Fair Value	0.97	1.02	0.87	1.04	0.70	0.69
Total Return %	-10.16	-1.71	-13.28	41.28	-28.28	-6.65

Morningstar Rating

★★★★★
★★★★★
★★★★★
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★★★★★

Total Return % as of 24 Apr 2023. Last Close as of 24 Apr 2023. Fair Value as of 9 Feb 2023 17:21, UTC.

Archer-Daniels Midland Co

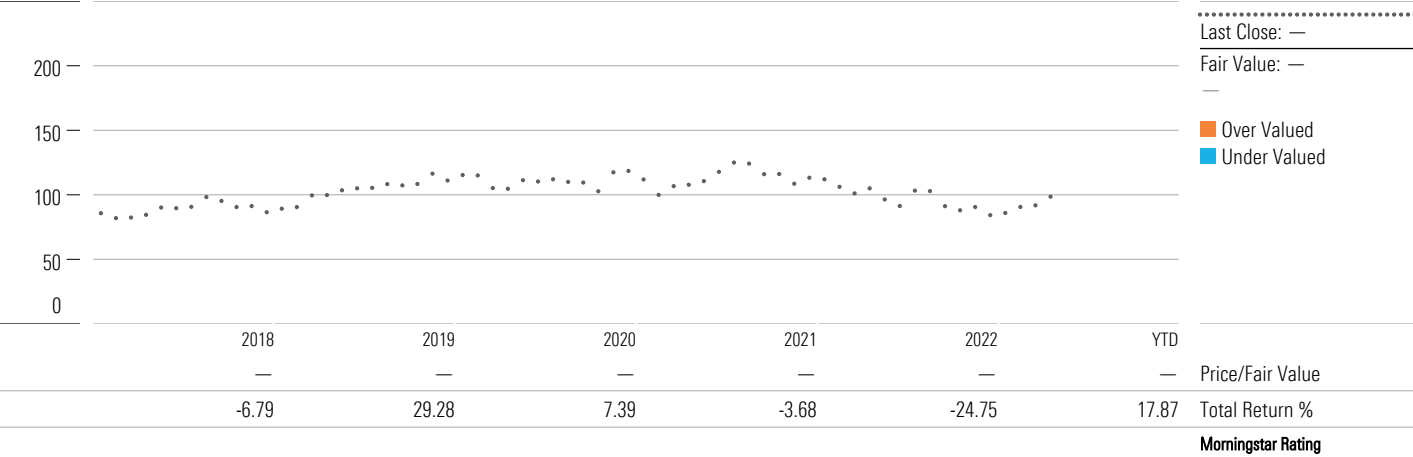
ADM

★★★

24 Apr 2023 21:16, UTC

Kerry Group PLC Class A



KRZ



No data available

Total Return % as of 24 Apr 2023. Last Close as of —. Fair Value as of —.

Archer-Daniels Midland Co 24 Apr 2023 21:16, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment¹
80.80 USD	70.00 USD	1.15	44.15 USD Bil	 None	Stable	High	Exemplary	
24 Apr 2023	25 Oct 2022 17:52, UTC		24 Apr 2023					5 Apr 2023 05:00, UTC

Morningstar Historical Summary

Financials as of 31 Dec 2022

Fiscal Year, ends 31 Dec	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	TTM
Revenue (USD Bil)	90	81	68	62	61	64	65	64	85	102	102	102
Revenue Growth %	0.6	-9.6	-16.6	-7.9	-2.4	5.8	0.5	-0.5	32.5	19.1	19.1	19.1
EBITDA (USD Mil)	3,346	4,361	3,474	3,015	2,863	3,365	2,983	3,198	4,574	6,657	6,657	6,657
EBITDA Margin %	3.7	5.4	5.1	4.8	4.7	5.2	4.6	5.0	5.4	6.6	6.6	6.6
Operating Income (USD Mil)	2,130	2,835	1,981	1,637	1,540	2,016	1,654	1,766	2,993	4,212	4,212	4,212
Operating Margin %	2.4	3.5	2.9	2.6	2.5	3.1	2.6	2.7	3.5	4.2	4.2	4.2
Net Income (USD Mil)	1,342	2,248	1,849	1,279	1,595	1,810	1,379	1,772	2,709	4,340	4,340	4,340
Net Margin %	1.5	2.8	2.7	2.1	2.6	2.8	2.1	2.8	3.2	4.3	4.3	4.3
Diluted Shares Outstanding (Mil)	663	656	621	591	572	567	565	565	566	563	563	563
Diluted Earnings Per Share (USD)	2.02	3.43	2.98	2.16	2.79	3.19	2.44	3.15	4.79	7.71	7.71	7.71
Dividends Per Share (USD)	0.76	0.96	1.12	1.20	1.28	1.34	1.40	1.44	1.48	1.60	1.60	1.60

Valuation as of 31 Mar 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Recent Qtr	TTM
Price/Sales	0.3	0.4	0.3	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.4	0.4
Price/Earnings	30.1	17.9	12.7	17.4	18.8	10.2	22.1	17.9	14.6	12.8	10.3	10.3
Price/Cash Flow	22.2	7.2	14.2	10.7	9.9	13.0	-5.5	-8.5	7.7	12.9	12.9	12.9
Dividend Yield %	1.75	1.85	3.05	2.63	3.19	3.27	3.02	2.86	2.19	1.72	2.07	2.07
Price/Book	1.5	1.6	1.2	1.5	1.3	1.2	1.4	1.5	1.7	2.1	1.8	1.8
EV/EBITDA	9.6	7.7	7.9	10.7	10.1	8.9	11.4	11.1	10.2	9.0	0.0	0.0

Operating Performance / Profitability as of 31 Dec 2022

Fiscal Year, ends 31 Dec	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	TTM
ROA %	3.0	5.1	4.4	3.2	4.0	4.5	3.3	3.8	5.1	7.5	7.5	7.5
ROE %	6.9	11.3	9.9	7.3	9.0	9.7	7.2	9.0	12.8	18.6	18.6	18.6
ROIC %	5.6	9.3	8.3	5.9	7.3	7.5	6.1	6.6	8.9	13.1	13.1	13.1
Asset Turnover	2.0	1.9	1.6	1.6	1.5	1.6	1.5	1.4	1.6	1.8	1.8	1.8

Financial Leverage

Fiscal Year, ends 31 Dec	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Recent Qtr	TTM
Debt/Capital %	21.0	22.0	24.4	27.5	26.6	28.8	30.6	30.4	28.1	26.0	26.0	—
Equity/Assets %	46.1	44.5	44.6	43.2	45.8	46.5	43.7	40.2	40.0	40.6	40.6	—
Total Debt/EBITDA	2.1	1.3	1.7	2.3	2.6	2.5	3.3	3.5	2.3	1.5	1.5	—
EBITDA/Interest Expense	8.1	12.9	11.3	10.3	8.7	9.2	7.4	9.4	17.3	16.8	16.8	16.8

Morningstar Analyst Historical/Forecast Summary as of 25 Apr 2023

Financials						Forward Valuation					
Fiscal Year, ends 12-31-2022	2021	2022	Estimates			2021	2022	Estimates			
			2023	2024	2025			2023	2024	2025	
Revenue (USD Mil)	85,249	101,556	98,577	95,656	92,902	Price/Sales	0.4	0.5	0.4	0.5	0.5
Revenue Growth %	32.5	19.1	-2.9	-3.0	-2.9	Price/Earnings	13.0	11.8	12.7	14.9	15.8
EBITDA (USD Mil)	4,907	6,830	5,359	4,699	4,443	Price/Cash Flow	7.0	23.6	14.5	14.5	15.7
EBITDA Margin %	5.8	6.7	5.4	4.9	4.8	Dividend Yield %	2.2	1.7	2.2	2.3	2.5
Operating Income (USD Mil)	3,646	5,402	4,373	3,742	3,514	Price/Book	1.7	2.2	1.7	1.6	1.5
Operating Margin %	4.3	5.3	4.4	3.9	3.8	EV/EBITDA	9.5	8.7	10.0	11.4	12.0
Net Income (USD Mil)	2,935	4,421	3,487	2,970	2,783						
Net Margin %	3.4	4.4	3.5	3.1	3.0						
Diluted Shares Outstanding (Mil)	566	563	550	546	543						
Diluted Earnings Per Share(USD)	5.19	7.85	6.35	5.44	5.12						
Dividends Per Share(USD)	1.48	1.60	1.80	1.89	1.98						

Appendix

Historical Morningstar Rating

Archer-Daniels Midland Co ADM 24 Apr 2023 21:16, UTC

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
★★★	★★★	★★★	★★★	★★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★
Dec 2018	Nov 2018	Oct 2018	Sep 2018	Aug 2018	Jul 2018	Jun 2018	May 2018	Apr 2018	Mar 2018	Feb 2018	Jan 2018
★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★	★★★

Ingredion Inc INGR 24 Apr 2023 21:16, UTC

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
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Dec 2018	Nov 2018	Oct 2018	Sep 2018	Aug 2018	Jul 2018	Jun 2018	May 2018	Apr 2018	Mar 2018	Feb 2018	Jan 2018
★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★★	★★

International Flavors & Fragrances Inc IFF 24 Apr 2023 21:16, UTC

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
★★★	★★	★★★★	★★★★	★★★★	★★	★★	★★★	★★★	★★★★	★★★	★★★
Dec 2018	Nov 2018	Oct 2018	Sep 2018	Aug 2018	Jul 2018	Jun 2018	May 2018	Apr 2018	Mar 2018	Feb 2018	Jan 2018
★★★★	★★★	★★★	★★★	★★★★	★★★★	★★★★	★★★★	★★★	★★★	★★★	★★

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 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 es-

timate 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.

To assess the sustainability of excess profits, analysts perform ongoing assessments of the moat trend. A firm's moat trend is positive in cases where we think its sources of competitive advantage are growing stronger; stable where we don't anticipate changes to competitive advantages over the next several years; or negative when we see signs of deterioration.

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

Morningstar Equity Research Star Rating Methodology



Research Methodology for Valuing Companies

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

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

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

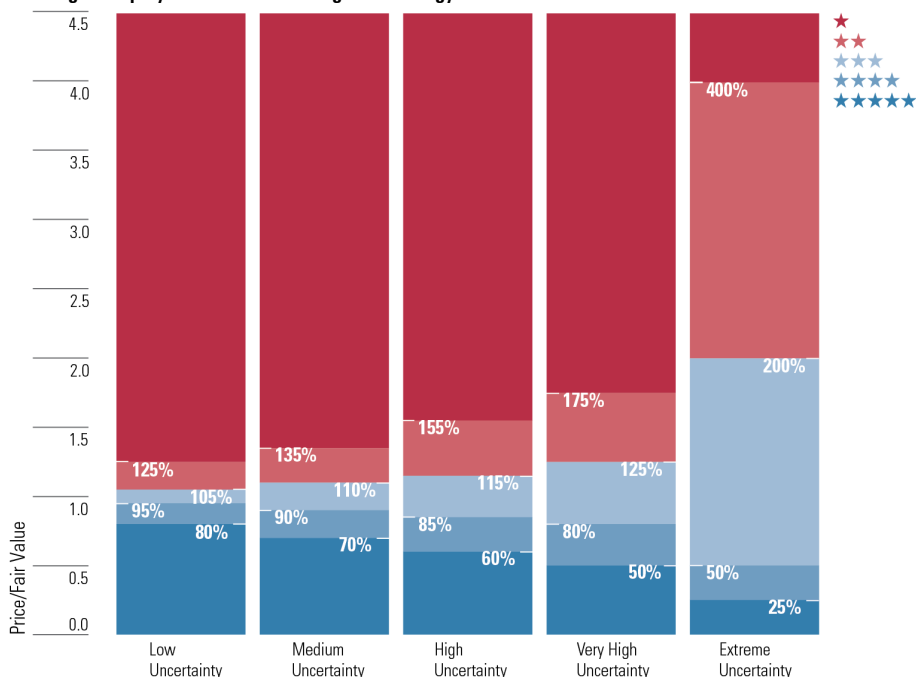
Margin of Safety		
Qualitative Analysis	★★★★★ Rating	★ Rating
Uncertainty Ratings		
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

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

4. Market Price

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

Morningstar Equity Research Star Rating Methodology



For more details about our methodology, please go to

<https://shareholders.morningstar.com>

Morningstar Star Rating for Stocks

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

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

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

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

factors.

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

★ Indicates a high probability of undesirable risk-adjusted returns from the current market price over a 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.

Research Methodology for Valuing Companies

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

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

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

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

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

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

Sustainalytics analyzes over 1,300 data points to assess a company's exposure to and management of ESG risks. In other words, ESG Risk Ratings measures a company's unmanaged ESG Risks represented as a quantitative score. Unmanaged Risk is measured on an open-ended scale starting at zero (no risk) with lower scores representing less unmanaged risk and, for 95% of cases, the unmanaged ESG Risk score is below 50.

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

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

Ratings should not be used as the sole basis in evaluating a company or security. Ratings involve unknown risks and uncertainties which may cause our expectations not to occur or to differ significantly from what was expected and should not be considered an offer or solicitation to buy or sell a security.

Risk Warning

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

General Disclosure

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