# Ford Motor Co F (XNYS)

| Morningstar Rating | Last Price | Fair Value Estimate | Price/Fair Value | Trailing Dividend Yield % | Forward Dividend Yield % | Market Cap (Bil) | Industry | Stewardship |
|---|---|---|---|---|---|---|---|---|
| ★★★★ 29 Oct 2020 05:08, UTC | 7.70 USD 29 Oct 2020 | 13.00 USD 29 Oct 2020 05:06, UTC | 0.59 | 3.90 28 Oct 2020 | 0.00 28 Oct 2020 | 30.63 28 Oct 2020 | Auto Manufacturers | Standard |

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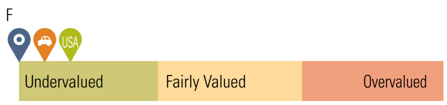
## Ford Rebounds from Pandemic With Strong Q3 but Q4 Won't Be as Strong

### Morningstar Pillars

| | Analyst | Quantitative |
|---|---|---|
| Economic Moat | None | None |
| Valuation | ★★★★ | Undervalued |
| Uncertainty | Very High | Very High |
| Financial Health | — | Moderate |

Source: Morningstar Equity Research

### Quantitative Valuation




| | Current | 5-Yr Avg | Sector | Country |
|---|---|---|---|---|
| Price/Quant Fair Value | 0.71 | 0.76 | 0.80 | 0.83 |
| Price/Earnings | — | 10.9 | 16.2 | 20.1 |
| Forward P/E | 8.2 | — | 12.3 | 13.9 |
| Price/Cash Flow | 1.9 | 2.8 | 10.2 | 13.1 |
| Price/Free Cash Flow | 3.3 | 5.2 | 17.7 | 19.5 |
| Trailing Dividend Yield% | 3.90 | 5.66 | 2.46 | 2.35 |

Source: Morningstar

### Bulls Say

- Ford's stock looks undervalued to us, but a turnaround will take lots of time due to many restructuring projects around the world.
- Ford is focusing its investments where it gets the best return, which is why mostly exiting North American car segments is the right move, in our opinion.
- Ford has tried to remove some administrative layers, and Jim Farley becoming CEO brings the opportunity for the stock to rebound.

### Bears Say

- The auto industry is very cyclical, and until recently, Detroit automakers had been losing significant U.S. market share to foreign automakers for years.
- Long-term profitability could be hindered by unions, which traditionally have wanted their share of the pie. The nonunionized import automakers in the U.S. do not have this problem.
- Ford's stock can sell off heavily on macroeconomic fears, even if the company itself is doing well. Furthermore, it takes significant investment to fund growth in the auto industry, which limits potential margin expansion. Debt is also high.

### Business Strategy and Outlook

David Whiston, CFA, CPA, CFE, Analyst, 29 October 2020

We think Ford will eventually turn itself around, but the coronavirus adds uncertainty to the timing. Ford now focuses on light-truck models in the U.S., which we think is the right move given light trucks are over 75% of U.S. industry new light-vehicle sales. Ford's challenge is to increase share profitably while also elevating Lincoln into a global luxury brand. The mostly no-moat nature of the auto industry will make these tasks difficult, and we see headwinds from areas such as restructuring, commodities, exchange, investments in mobility and electrification, and a slowing U.S. and China market hurting results for some time.

Management by its own words needs to get the company more physically fit so it can better offset headwinds it cannot control, such as currency and commodities. Based on our talks with management, many costs in areas such as marketing, product development, and testing need revamping, and these changes will take time. Ford is also more focused on spending on the most profitable businesses. Restructuring in foreign markets is underway and as of June 2020, Ford projects another $7.1 billion of EBIT charges over time for its Global Redesign. $5.6 billion of this will be cash, but hardly any timing on cadence after 2020 is being given, which we believe frustrates the market.

Ford is building more models on common platforms, which should improve economies of scale. In 2007, Ford had 27 platforms but is moving to five flexible architectures across unibody, body on frame, and battery electric vehicles. This move allows Ford to switch production faster to meet changing demand while cutting costs via better economies of scale. In the past, Ford had a different platform in each segment for each part of the world, which wasted billions. We'd like to see more frequent product launches as they've been too clustered together, but Ford's light truck models have recently received new generation offerings, and a new F-150 in late 2020 plus three Bronco models in 2020-21 as Ford re-enters the off-road segment give us optimism. Lincoln also entered China in fall 2014 and the Mustang Mach-E should bring new customers in U.S. coastal markets.

### Analyst Note

David Whiston, CFA, CPA, CFE, Analyst, 29 October 2020

Ford had a strong third quarter with adjusted diluted EPS of $0.65 up 91% year over year and far ahead of the $0.19 Refinitiv consensus. We are raising our fair value estimate to $13 from $8. Our $8 figure was developed in light of the firm's debt laden balance sheet and the massive uncertainty in place following the onset of the pandemic. We are glad to see Ford in September finished repaying the entire $15 billion of credit line draw it borrowed in the spring, yet still finished the quarter with $29.5 billion of automotive cash and $45.5 billion of total liquidity excluding Ford Credit. Management only said of the dividend that it would update in the spring, but we think the cash-heavy balance sheet means it is coming back in 2021 as long as the pandemic does not cause massive disruption like a multimonth shutdown of North American plants like this past spring.

Our new fair value takes into account a stronger 2020 than previously modeled, less debt, a 20 basis point reduction in our weighted average cost of capital due to a change in our model's cost of debt, the time value of money, and an increase in our midcycle automotive EBIT margin excluding equity income to 4.5% from 4%. The latter change is due to our optimism around new CEO Jim Farley longer term being able to execute on cutting warranty costs and reducing vehicle design complexity to bring more scale.

As long as COVID-19 does not shutdown the U.S. economy for a long time like in the spring, we think Ford can have a strong 2021 even with parts of the U.S. economy not in great shape. Key to 2021 will be continued cost reduction measures and good volume growth from key launches. The new generation F-150 is already in production in Michigan and will start soon in Kansas City, the all-electric Mustang Mach-E is guided to be profitable, and three Bronco models are coming with the first, the Bronco Sport, in 2020's fourth quarter. The F-150, Mach-E, and Bronco Sport all have October 2020 production starts.

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| Close Competitors | Currency (Mil) | Market Cap | TTM Sales | Operating Margin | TTM/PE |
|---|---|---|---|---|---|
| Toyota Motor Corp 7203 | JPY | 19,278,161 | 0 | 6.40 | 12.09 |
| Honda Motor Co Ltd 7267 | JPY | 4,282,856 | 0 | 2.05 | 21.51 |
| Nissan Motor Co Ltd 7201 | JPY | 1,463,447 | 0 | -2.26 | 0.00 |
| Tesla Inc TSLA | USD | 384,867 | 28,176 | 6.27 | 0.00 |

## Economic Moat

David Whiston, Analyst, 29 October 2020

Ford does not have a moat, and we do not expect that to change. Vehicle manufacturing is a very capital-intensive business, but barriers to entry are not as high as in the past. The industry is already full of strong competition, so it is nearly impossible for one firm to gain a sustainable advantage over another. Foreign automakers from China and India may soon enter developed markets such as the United States, and South Korea's Hyundai as well as Tesla have become formidable competitors. Furthermore, the auto industry is so cyclical that in bad times even the best automakers cannot avoid large declines in return on invested capital and profit. Cost-cutting helps ease the pain, but it does not restore all lost profit.

## Fair Value & Profit Drivers

David Whiston, Analyst, 29 October 2020

We are raising our fair value estimate to $13 per share from $8. Our new fair value takes into account a stronger 2020 than previously modeled, less debt, a 20 basis point reduction in our weighted average cost of capital due to a change in our model's cost of debt, the time value of money, and an increase in our midcycle automotive EBIT margin excluding equity income to 4.5% from 4%. The latter change is due to our optimism around new CEO Jim Farley longer term able to execute on cutting warranty costs and reducing vehicle design complexity to bring more scale. Leadership has often said that the company needs to be more physically fit. Ford expects to incur $7.1 billion of restructuring charges over the next few years, with $5.6 billion of this cash charges. We model the restructuring through 2023. We expect a lot of it to occur in Europe and South America as well as North America with the company exiting most car models.

Headwinds include rising competition in China, management's inability to execute at a strong profit level, foreign exchange pressures around the world, and a COVID-19 recession. Our midcycle total company operating margin including equity income and Ford Credit in 2024 is nearly 6.5%, but Ford targets 8% on an adjusted and sustainable basis. We model a more conservative number due to fierce, high-quality competition, threats of excess capacity, and the risk of cyclical downturns or other macroeconomic downturns negatively affecting profits in a capital-intensive industry, creating an inherent risk of management not meeting its target. Our number is also meant to be a midcycle number.

Our compound annual automotive revenue growth rate is less than 1%, and we model North American market share declining to 13.1% in 2024, about flat from 2019 levels due to continued strong competitive threats. We model capital expenditure at slightly more than 5% of automotive revenue on average. We value Ford Credit at its most recent year-end book value.

Our fair value estimate could change dramatically, given the extreme sensitivity of our discounted cash flow model to inputs such as North American light-vehicle sales, midcycle margins, and a WACC of 10%. We see uncertainty as to when improvement occurs. Our fair value uncertainty recently increased to very high to account for the wide possibilities in Ford's fair value estimate, given its high degree of operating leverage, debt level, and many factors beyond management's control.

## Risk & Uncertainty

David Whiston, Analyst, 29 October 2020

The full impact of the coronavirus on consumer demand for autos is unknown. Barriers to entry are declining as a growing global market reduces fixed costs as a percentage of sales for new entrants. The company operates in a very cyclical industry and there is massive uncertainty as to the timing and magnitude of demand recovery following COVID-19. Debt has increased significantly in 2020 due to COVID-19 and led us to raise our fair value uncertainty in April 2020 to very high from high, but some of this debt has been repaid in summer and fall 2020. Macroeconomic conditions and trade agreement changes in key markets, such as the U.S., Europe, and China, can quickly derail management's own plans and guidance, while significant disruption is on the horizon as vehicles become more high-tech and autonomous. Work stoppages are an inherent risk in contract years, but Ford's union relationships historically have been better than GM's. Brexit could cause problems for Ford in 2020 and beyond if a so called soft Brexit plan cannot be reached with the European Union. Jim Farley's success or failure as a CEO will only be known with time but we are not worried.

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In February 2019, Ford disclosed an investigation it initiated regarding possible violations of U.S. emission and fuel economy testing protocol. We have no reason to believe defeat devices were used, and the problem to us sounds like it is around Ford's methodology. We have placed a $500 million reserve in our model for possible fines, but this amount is likely going to prove to be conservative on our part. A precise amount cannot be estimated at this time.

## Stewardship

David Whiston, Analyst, 29 October 2020

Ford's capital allocation has dramatically improved over the past few years. Automotive return on invested capital had easily exceeded cost of capital for several years, but has not since 2016 as profit fell. In the first quarter of 2012, Ford resumed its dividend and raised it in early 2015 to $0.15 per quarter where it stayed until the coronavirus forced its suspension in March 2020. Management had long said the dividend was safe even if U.S. sales returned to 2009 levels, but the complete shutdown of plants in North America and Europe in March 2020, plus uncertainty on how long the virus disruption will last, proved too much to bear. We can't fault management for taking steps to ensure Ford makes it through the pandemic. Given Ford's huge cash position at Sept. 30 we think that, barring a second virus shutdown, the dividend will return in 2021.

We eventually want to see Ford start a meaningful share-repurchase program but debt reduction is key now, in our view. The shares usually trade below our fair value estimate, and a buyback would offset dilution from multiple share issuances in 2009. We suspect the Ford family prefers dividends to buybacks, which is why special dividends will be common once a year, though not necessarily every year. In the past, now retired CFO Bob Shanks equated Ford's special dividend philosophy to be similar to that of truck-maker Paccar, which tends to pay a special dividend frequently. Still, we do not expect a special dividend to always be paid in a recession. We'd like to see Ford aggressively reduce its debt load once the firm can move on from COVID-19. After debt is reduced, we'd welcome buybacks when the stock is trading well below our fair value estimate.

Ford made a bold move in September 2006 by hiring Alan Mulally as president and CEO. Mulally united the company under his One Ford mantra and brought better economies of scale by using more global platforms. Jim Hackett, 65, was on Ford's board until 2016 (when he became head of Ford Smart Mobility). He rejoined the board and became CEO in May 2017 and stepped into an advisory role in October 2020 and will retire in March 2021. Hackett moved to reduce bureaucracy at Ford by roughly halving the number of direct reports. In October 2017, Ford also announced Team Edison to explore pure electric-vehicle development, and in August 2017, the firm announced a memorandum with Chinese automaker Zotye to explore a joint venture to develop a line of low-cost battery electric vehicles. Ford has previously sought to develop these technologies alone, but under Hackett seems more willing to partner. The 2019 announcements with VW on pickups, vans, and autonomous vehicles is another example, as is the 2019 $500 million investment in Rivian.

Jim Farley, 58, a longtime Toyota sales and marketing executive whom Mulally lured away from that firm in 2007, became president and CEO on Oct. 1 and joined the board at that time. Farley has led Ford Europe, South America, and Lincoln, and was president of new tech and strategy. At Toyota, he was a Lexus executive and helped launch the now-defunct Scion brand. We think his marketing and executive experience will help him do well as Ford's CEO and we expect a much more blunt communication style than Hackett's more drawn out academic one. We don't expect radical strategic changes and expect restructuring to remain in place for a while under Farley. Farley receives a 21% salary increase to $1.7 million and a $4 million stock option grant, but we feel he also has high intrinsic motivation to see Ford succeed because of the well-documented bond with his grandfather, an early Ford employee. The stock options vest over three years but are not exercisable until the stock closes at $9.24 or higher for 20 straight trading days. Ford's stock closed at $6.69 on Aug. 3, 2020, the day before the firm announced Farley replacing Hackett. The stock was just under $11 when Hackett replaced Mark Fields in 2017.

On his first day as CEO, Farley announced several staffing changes, most notably the promotion of 30-year Ford vet John Lawler, 54, to CFO. Lawler was most recently CEO of Ford Autonomous Vehicles and vice president of mobility partnerships, but he also spent about four years as president of Ford China and had been Ford's controller and head of strategy. We see him returning the CFO role to the more traditional role it is at Ford, where the CFO also functions as a COO, and we think the market will

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appreciate a Ford veteran in the role.

Like many family companies that trade publicly, Ford has two share classes. Class A shares are available for any investor to purchase, and each share equals one vote. The Ford family always has 40% voting power through ownership of Class B shares. We prefer to see one share class so outside shareholders can have some influence in running the company. Still, the Ford family's high ownership aligns its interests with those of outside shareholders.

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## Analyst Notes Archive

### Ford's Retail Channel Sales Fare Better Than Fleet Business in Q2; Coronavirus Threat Looms

David Whiston, Analyst, 02 July 2020

Ford's second-quarter U.S. sales fell 33.3% year over year, in line with the industry. Wards states June's seasonally adjusted annualized selling rate at 13.05 million, up from 12.34 million in May but down from 17.18 million in June 2019. Demand improved throughout the quarter, with U.S. industry sales down year over year 46% in April, 29% in May, and 27% in June. We expect a poor July, given low inventory and possible virus shutdowns in Southern states.

Two key things for the next few months are inventory replenishment and the coronavirus. We are concerned that the three largest sales states, constituting about 28% of 2019 new-vehicle registrations (California, Texas, and Florida), are seeing a coronavirus surge. Stay-at-home orders in these states this summer would cause 2020 auto sales to fall well below our optimistic forecast from April of about 14.5 million. At the end of June per Wards, U.S. industry inventory was down 33.1% from the end of June 2019 while Ford is down 29.7% and its F-Series pickups are down 32%. The industry's shortage suggests a surge in sales later this year but likely not until at least August, assuming no new virus closures.

For the quarter, Ford's retail channel sales (nonfleet) fared much better than the industry's 33% decline, down 14.3%. Ford's rental fleet sales fell 94% and commercial fleet sales declined 78%. F-Series retail sales declined only 2% while total F-Series sales fell 22.7%. Americans love and need their pickups, and Ford should be well positioned later this year when the new-generation F-150 reaches dealerships in the fall. The Explorer crossover is doing well with total sales up 12.4%; Ford estimates the vehicle's retail share gained nearly 6 percentage points within its segment. Lincoln also outperformed the industry with total sales down 18%, thanks to the Lincoln Aviator crossover, which was not on sale in the second quarter of 2019. We calculate Lincoln fell 33.4% excluding the Aviator.

### Ford's Second Quarter Better Than Guided, Product Rollouts Suggest Good Improvement in 2021

David Whiston, Analyst, 30 July 2020

Ford reported second-quarter results ravaged by the coronavirus that forced shutdowns, including six weeks of idle time in North America. Still, the adjusted EBIT loss, including mobility and Ford Credit, of $1.9 billion came in far below the over $5 billion loss guided to in April. Management was vague as to why but did credit execution by its people and we think it is possible the over $5 billion figure assumed the worse for second quarter and instead U.S. industry volumes improved for May and June from April levels. A $1.8 billion favorable fixed cost variance year over year and $2.4 billion in pricing and cost tailwinds, mostly from North America and Europe, partially offset a $5.7 billion headwind from volume and mix. In first quarter, North America only had operating profit of $346 million, so we feared a multibillion loss in second quarter, but the segment lost $974 million. Adjusted diluted EPS of a loss of $0.35 beat the Refinitiv consensus of a $1.17 loss and we calculate the company excluding Ford Credit burned about $5.5 billion of free cash compared with a $715 million burn in the prior year's quarter.

We see no reason to change our fair value estimate and we remain optimistic about new product driving improved results in 2021. We think the new generation F-150, due late this year sufficiently upgraded the interior and added other functions such as an onboard generator to remain competitive against GM and Ram. Ford's move to bring three new Broncos (Bronco Sport late this year and 2-door and 4-door models next spring) to the off-road segment will likely prove to be a huge success and COO Jim Farley said the vehicle already has over 100,000 reservations, far above initial expectations. Guidance is vague given COVID-19 but management did say the third quarter will have total company adjusted EBIT between $0.5-$1.5 billion but fourth quarter and the full year will be a loss. Launch costs for the F-150 and Mach-E will be a fourth-quarter headwind.

### Jim Farley Becoming Ford CEO Is Not a Surprise

David Whiston, Analyst, 04 August 2020

Ford announced on Aug. 4 that CEO and President Jim Hackett, 65, will retire on Oct. 1 and be succeeded by Jim Farley, 58. Farley is currently COO, and it is not a surprise that he is succeeding Hackett, as that seemed obvious once he became COO in February. We have said in our report that we expected Hackett to retire by the end of 2021, and we've heard frustration on earnings calls with Hackett's vision and communication.

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Ford’s stock was just under $11 when Hackett took over in May 2017, so we think the move may lead to share price appreciation in the short term. For now, we are leaving our fair value in place due to Ford’s high debt load, and we want to see Farley produce meaningful improvement, which may take until next year due to launches of the new-generation F-150 late this year and three Broncos coming in 2020-21. Hackett will be a special advisor through March 2021 and Farley joins the board in October. Farley receives a 21% salary increase to $1.7 million and a $4 million stock option grant, but we feel he also has high intrinsic motivation to see Ford succeed because of his bond with his grandfather, an early Ford employee.

We look forward to seeing what Farley brings as a CEO, and we expect a more direct communication style than Hackett’s. Farley is a passionate car person and brings a lifetime of auto experience both from Ford in the U.S., Europe, South America, and Lincoln (he led the latter three at one point) since he joined in 2007, but also from a long Toyota career, including time at Lexus and the launch of the Scion brand. He has extensive marketing and executive leadership experience. On a call, Farley reiterated a 10% North American margin goal, recognized competition from beyond legacy automakers from firms like Tesla, Apple, and Baidu, and said mobility and software bring growth opportunities for Ford. We don’t expect radical strategic changes and expect restructuring to remain in place for a while under Farley.

### Ford's Third-Quarter Sales Show Strong Growth in Light Trucks

David Whiston, Analyst, 02 October 2020

September U.S. auto sales increased 6.1% year over year, per Wards, but fell 2.4% after adjusting for two extra selling days in September 2020. The timing of the Labor Day holiday also helped September sales, because in 2019 that holiday weekend was in August totals but tallied in September this year. The September seasonally adjusted annualized rate of sales was 16.34 million, which is below September 2019’s 17.08 million but far better than the April coronavirus-induced low of 8.73 million; it's the highest monthly SAAR since the pandemic began. Provided no more COVID-19 mass shutdowns, we expect fourth-quarter sales improvement versus the third quarter, and a full-year total in the low to mid-14 million-unit range is possible. Unemployment remains high, but lack of inventory is a problem. We expect continued inventory improvement throughout the quarter.

Ford’s third-quarter U.S. sales declined 4.9% year over year, but the company said that excluding discontinued car models, its retail channel sales (nonfleet) rose 1.3%. Combined F-Series and Ranger pickup sales had their best third quarter in 15 years. The midsize Ranger increased its retail sales by 5.9% and its retail market share of the segment by 200 basis points. Total F-Series sales grew 3.5% and retail sales rose 10.1%. The F-Series appears to have had, at best, modest growth in the Midwest, but Ford called out high teens percentage growth for the truck in "the country’s hottest housing markets," citing strong numbers in the Northeast, West, and Southeast. The Explorer released last year grew 74%, and Ford cited a 500-basis-point retail market share increase year over year to 15% of the midsize crossover segment. Lincoln sales fell 1.4% but retail sales grew 3.5%, helped by a 10.2% increase in crossover and SUV sales. Aviator sales rose 222% and high-end trim packages made up 15% of the vehicle’s retail mix, with its largest customer age group only 35-44 years old making up 22% of sales.

### Ford Rebounds from Pandemic With Strong Q3 but Q4 Won't Be as Strong

David Whiston, Analyst, 29 October 2020

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Quantitative Equity Report | Release: 29 Oct 2020, 00:10 UTC | Reporting Currency: USD | Trading Currency: USD | Exchange:XNYS Page 8 of 15

# Ford Motor Co F ★★★Q 29 Oct 2020 02:00 UTC

| Last Close | Fair ValueQ | Market Cap | Sector | Industry | Country of Domicile |
|---|---|---|---|---|---|
| 28 Oct 2020 | 29 Oct 2020 02:00 UTC | 28 Oct 2020 | | | |
| 7.70 | 10.83 | 30,633.6 Mil | Consumer Cyclical | Auto Manufacturers | USA United States |

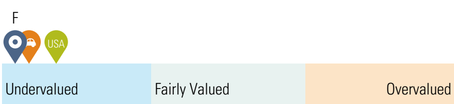
There is no one analyst in which a Quantitative Fair Value Estimate and Quantitative Star Rating are attributed to; however, Mr. Lee Davidson, Head of Quantitative Research for Morningstar, Inc., is responsible for overseeing the methodology that supports the quantitative fair value. As an employee of Morningstar, Inc., Mr. Davidson is guided by Morningstar, Inc.'s Code of Ethics and Personal Securities Trading Policy in carrying out his responsibilities. For information regarding Conflicts of Interests, visit http://global.morningstar.com/equitydisclosures

### Company Profile

Ford Motor Co. manufactures automobiles under its Ford and Lincoln brands. The company has about 14.1% market share in the United States and about 7% share in Europe. Sales in North America and Europe made up 68% and 20% of 2019 auto revenue, respectively. Ford has about 190,000 employees, including about 56,000 UAW employees, and is based in Dearborn, Michigan.

### Quantitative Scores

| | | Scores All | Rel Sector | Rel Country |
|---|---|---|---|---|
| Quantitative Moat | None | 6 | 8 | 4 |
| Valuation | Undervalued | 72 | 73 | 58 |
| Quantitative Uncertainty | Very High | 71 | 72 | 81 |
| Financial Health | Moderate | 36 | 15 | 36 |




Source: Morningstar Equity Research

### Valuation

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| Trailing Dividend Yield % | 3.90 | 5.66 | 2.46 | 2.35 |
| Price/Book | 1.0 | 1.5 | 1.6 | 2.4 |
| Price/Sales | 0.2 | 0.3 | 0.9 | 2.4 |

### Profitability

| | Current | 5-Yr Avg | Sector Median | Country Median |
|---|---|---|---|---|
| Return on Equity % | -6.3 | 15.6 | 12.2 | 12.9 |
| Return on Assets % | -0.8 | 2.0 | 5.4 | 5.2 |
| Revenue/Employee (K) | 686.3 | 781.8 | 566.3 | 325.9 |

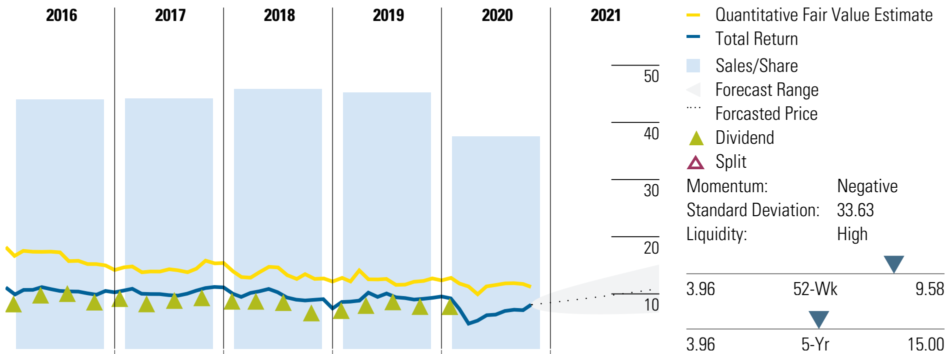
### Financial Health

| | Current | 5-Yr Avg | Sector Median | Country Median |
|---|---|---|---|---|
| Distance to Default | 0.3 | 0.5 | 0.6 | 0.5 |
| Solvency Score | 756.8 | — | 486.0 | 552.4 |
| Assets/Equity | 7.8 | 7.7 | 1.8 | 1.7 |
| Long-Term Debt/Equity | 3.1 | 3.0 | 0.2 | 0.4 |

### Growth Per Share

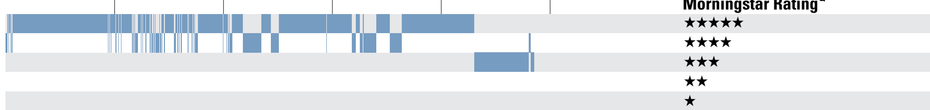
| | 1-Year | 3-Year | 5-Year | 10-Year |
|---|---|---|---|---|
| Revenue % | -2.8 | 0.9 | 1.6 | 3.0 |
| Operating Income % | -82.1 | -53.7 | 11.6 | -18.4 |
| Earnings % | -98.9 | -79.4 | -49.7 | -36.0 |
| Dividends % | 0.0 | 0.0 | 3.7 | — |
| Book Value % | -5.2 | 5.1 | 6.6 | — |
| Stock Total Return % | -8.8 | -8.7 | -6.5 | -1.4 |

### Price vs. Quantitative Fair Value




| 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | |
|---|---|---|---|---|---|---|
| -7.9 | 8.3 | -32.9 | 29.4 | -15.6 | | Total Return % |
| -20.3 | -13.1 | -27.9 | -1.8 | -19.3 | | +/– Market (Morningstar US Index) |
| 4.95 | 4.80 | 7.84 | 6.45 | 3.90 | | Trailing Dividend Yield % |
| 4.95 | 4.80 | 7.84 | 6.45 | — | | Forward Dividend Yield % |
| 6.7 | 11.4 | 4.9 | 23.3 | -14.3 | | Price/Earnings |
| 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | | Price/Revenue |

**Morningstar RatingQ**



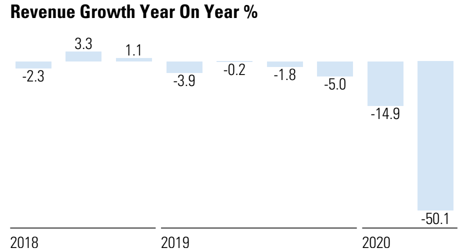

| 2015 | 2016 | 2017 | 2018 | 2019 | TTM | **Financials** (Fiscal Year in Mil) |
|---|---|---|---|---|---|---|
| 149,558 | 151,800 | 156,776 | 160,338 | 155,900 | 130,396 | Revenue |
| 3.8 | 1.5 | 3.3 | 2.3 | -2.8 | -16.4 | % Change |
| 7,647 | 4,116 | 4,813 | 3,203 | 574 | -5,035 | Operating Income |
| 122.3 | -46.2 | 16.9 | -33.5 | -82.1 | -977.2 | % Change |
| 7,373 | 4,596 | 7,602 | 3,677 | 47 | -2,123 | Net Income |
| 16,170 | 19,792 | 18,096 | 15,022 | 17,639 | 16,274 | Operating Cash Flow |
| -7,196 | -6,992 | -7,049 | -7,785 | -7,632 | -7,034 | Capital Spending |
| 8,974 | 12,800 | 11,047 | 7,237 | 10,007 | 9,240 | Free Cash Flow |
| 6.0 | 8.4 | 7.0 | 4.5 | 6.4 | 7.1 | % Sales |
| 1.84 | 1.15 | 1.90 | 0.92 | 0.01 | -0.54 | EPS |
| 130.0 | -37.5 | 65.2 | -51.6 | -98.9 | -5,500.0 | % Change |
| 2.18 | 3.10 | 2.67 | 2.26 | 2.15 | 2.32 | Free Cash Flow/Share |
| 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.45 | Dividends/Share |
| 6.81 | 7.78 | 8.19 | 8.99 | 8.92 | 7.75 | Book Value/Share |
| 4,031 | 4,047 | 4,058 | 4,071 | 3,965 | 3,978 | Shares Outstanding (Mil) |

| 2015 | 2016 | 2017 | 2018 | 2019 | TTM | **Profitability** |
|---|---|---|---|---|---|---|
| 27.6 | 15.9 | 23.7 | 10.4 | 0.1 | -6.3 | Return on Equity % |
| 3.4 | 2.0 | 3.1 | 1.4 | 0.0 | -0.8 | Return on Assets % |
| 4.9 | 3.0 | 4.9 | 2.3 | 0.0 | -1.6 | Net Margin % |
| 0.69 | 0.66 | 0.63 | 0.62 | 0.61 | 0.49 | Asset Turnover |
| 7.9 | 8.2 | 7.4 | 7.1 | 7.8 | 8.7 | Financial Leverage |
| 15.4 | 16.6 | 16.2 | 15.0 | 13.6 | 11.4 | Gross Margin % |
| 5.1 | 2.7 | 3.1 | 2.0 | 0.4 | -3.9 | Operating Margin % |
| 89,856 | 93,301 | 102,666 | 100,720 | 101,361 | 119,886 | Long-Term Debt |
| 28,642 | 29,170 | 34,890 | 35,932 | 33,185 | 30,824 | Total Equity |
| 5.0 | 4.9 | 4.7 | 4.5 | 4.3 | 3.6 | Fixed Asset Turns |

### Quarterly Revenue & EPS

| Revenue (Bil) | Mar | Jun | Sep | Dec | Total |
|---|---|---|---|---|---|
| 2020 | 34.3 | 19.4 | — | — | — |
| 2019 | 40.3 | 38.9 | 37.0 | 39.7 | 155.9 |
| 2018 | 42.0 | 38.9 | 37.7 | 41.8 | 160.3 |
| 2017 | 39.1 | 39.9 | 36.5 | 41.3 | 156.8 |
| **Earnings Per Share ()** | | | | | |
| 2020 | -0.50 | 0.28 | — | — | — |
| 2019 | 0.29 | 0.04 | 0.11 | -0.42 | 0.01 |
| 2018 | 0.43 | 0.27 | 0.25 | -0.03 | 0.92 |
| 2017 | 0.40 | 0.51 | 0.39 | 0.60 | 1.90 |

### Revenue Growth Year On Year %



# Research Methodology for Valuing Companies

**Qualitative Equity Research 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. We believe this bottom-up, long-term, fundamentally based approach allows our analysts to focus on long-term business drivers, which have the greatest valuation impact, rather than short-term market noise.

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 an uncertainty-adjusted 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 excess economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

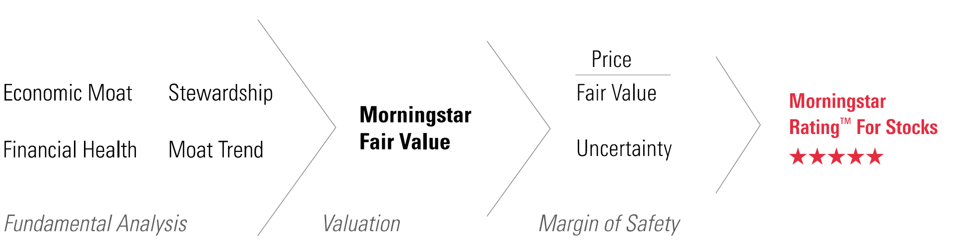
Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to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

To assess the direction of the underlying competitive advantages, 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.

All the moat and moat trend ratings undergo periodic review and any changes must be approved by the Morningstar Economic Moat Committee, comprised of senior members of Morningstar's equity research department.

**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.

**Morningstar Research Methodology for Valuing Companies**




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, or EBI, and the net new investment, or 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, or RONIC, and the number of years until perpetuity, when excess returns cease. The investment rate and return on new invested capital decline until the perpetuity stage is reached. 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.

# Research Methodology for Valuing Companies

### 3. Uncertainty Around That Fair Value Estimate

Morningstar's Uncertainty Rating captures a range of likely potential intrinsic values for a company and uses it to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating represents the analysts' ability to bound the estimated value of the shares in a company around the fair value estimate, based on the characteristics of the business underlying the stock, including operating and financial leverage, sales sensitivity to the overall economy, product concentration, pricing power, and other company-specific factors.

Analysts consider at least two scenarios in addition to their base case: a bull case and a bear case. Assumptions are chosen such that the analyst believes there is a 25% probability that the company will perform better than the bull case, and a 25% probability that the company will perform worse than the bear case. The distance between the bull and bear cases is an important indicator of the uncertainty underlying the fair value estimate.

Our recommended margin of safety widens as our uncertainty of the estimated value of the equity increases. The more uncertain we are about the estimated value of the equity, 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 for our qualitative analysis are low, medium, high, very high, and extreme.

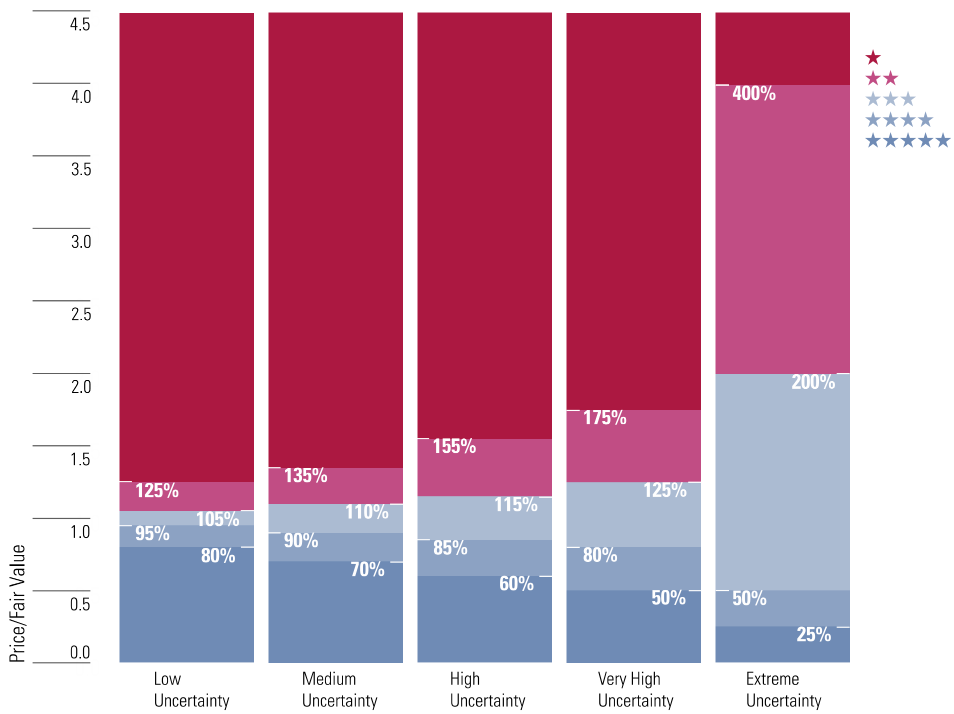
- Low–margin of safety for 5-star rating is a 20% discount and for 1-star rating is 25% premium.
- Medium–margin of safety for 5-star rating is a 30% discount and for 1-star rating is 35% premium.
- High–margin of safety for 5-star rating is a 40% discount and for 1-star rating is 55% premium.
- Very High–margin of safety for 5-star rating is a 50% discount and for 1-star rating is 75% premium.
- Extreme–margin of safety for 5-star rating is a 75% discount and for 1-star rating is 300% premium.

### 4. Market Price

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

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

**Morningstar Equity Research Star Rating Methodology**




### Morningstar Star Rating for Stocks

Once we determine the fair value estimate of a stock, we compare it with the stock's current market price on a daily basis, and the star rating is automatically re-calculated at the market close on every day the market on which the stock is listed is open.

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. 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. The market is pricing in an excessively optimistic outlook, limiting upside potential and leaving the investor exposed to Capital loss.

# Research Methodology for Valuing Companies

### 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.

**Stewardship Rating**: Represents our assessment of management's stewardship of shareholder capital, with particular emphasis on capital allocation decisions. Analysts consider companies' investment strategy and valuation, financial leverage, dividend and share buyback policies, execution, compensation, related party transactions, and accounting practices. Corporate governance practices are only considered if they've had a demonstrated impact on shareholder value. Analysts assign one of three ratings: "Exemplary," "Standard," and "Poor." Analysts judge stewardship from an equity holder's perspective. Ratings are determined on an absolute basis. Most companies will receive a Standard rating, and this is the default rating in the absence of evidence that managers have made exceptionally strong or poor capital allocation decisions.

**Quantitative Valuation**: Using the below terms, intended to denote the relationship between the security's Last Price and Morningstar's quantitative fair value estimate for that security.

- Undervalued: Last Price is below Morningstar's quantitative fair value estimate.
- Fairly Valued: Last Price is in line with Morningstar's quantitative fair value estimate.
- Overvalued: Last Price is above Morningstar's quantitative fair value estimate.

### 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.

### Quantitative Equity Reports Overview

The quantitative report on equities consists of data, statistics and quantitative equity ratings on equity securities. Morningstar, Inc.'s quantitative equity ratings are forward looking and are generated by a statistical model that is based on Morningstar Inc.'s analyst-driven equity ratings and quantitative statistics. Given the nature of the quantitative report and the quantitative ratings, there is no one analyst in which a given report is attributed to; however, Mr. Lee Davidson, Head of Quantitative Research for Morningstar, Inc., is responsible for overseeing the methodology that supports the quantitative equity ratings used in this report. As an employee of Morningstar, Inc., Mr. Davidson is guided by Morningstar, Inc.'s Code of Ethics and Personal Securities Trading Policy in carrying out his responsibilities.

### Quantitative Equity Ratings

Morningstar's quantitative equity ratings consist of:

(i) Quantitative Fair Value Estimate
(ii) Quantitative Star Rating
(iii) Quantitative Uncertainty
(iv) Quantitative Economic Moat
(v) Quantitative Financial Health
(collectively the "Quantitative Ratings").

The Quantitative Ratings are calculated daily and derived from the analyst-driven ratings of a company's peers as determined by statistical algorithms. Morningstar, Inc. (""Morningstar," "we," "our") calculates Quantitative Ratings for companies whether it already provides analyst ratings and qualitative coverage. In some cases, the Quantitative Ratings may differ from the analyst ratings because a company's analyst-driven ratings can significantly differ from other companies in its peer group.

**Quantitative Fair Value Estimate:** Intended to represent Morningstar's estimate of the per share dollar amount that a company's equity is worth today. Morningstar calculates the quantitative fair value estimate using a statistical model derived from the fair value estimate Morningstar's equity analysts assign to companies. Please go to https://shareholders.morningstar.com for information about fair value estimates Morningstar's equity analysts assign to companies.

**Quantitative Economic Moat:** Intended to describe the strength of a firm's competitive position. It is calculated using an algorithm designed to predict the Economic Moat rating a Morningstar analyst would assign to the stock. The rating is expressed as Narrow, Wide, or None.

- Narrow: assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 70% but less than 99%.
- Wide: assigned when the probability of a stock receiving a "Wide Moat" rating by an analyst is greater than 99%.
- None: assigned when the probability of an analyst receiving a "Wide Moat" rating by an analyst is less than 70%.

**Quantitative Star Rating:** Intended to be the summary rating based on the combination of our Quantitative Fair Value Estimate, current market price, and the Quantitative Uncertainty Rating. The rating is expressed as 1-Star, 2-Star, 3-Star, 4-Star, and 5-Star.

★: the stock is overvalued with a reasonable margin of safety.
Log (Quant FVE/Price)<–1*Quantitative Uncertainty

★★: the stock is somewhat overvalued.
Log (Quant FVE/Price) between (–1*Quantitative Uncertainty, –0.5*Quantitative Uncertainty)

★★★: the stock is approximately fairly valued.
Log (Quant FVE/Price) between (–0.5*Quantitative Uncertainty, 0.5*Quantitative Uncertainty)

★★★★: the stock is somewhat undervalued.
Log (Quant FVE/Price) between (0.5*Quantitative Uncertainty, 1*Quantitative Uncertainty)

★★★★★: the stock is undervalued with a reasonable margin of safety. Log (Quant FVE/Price) >1*Quantitative Uncertainty

**Quantitative Uncertainty:** Intended to represent Morningstar's level of uncertainty about the accuracy of the quantitative fair value estimate. Generally, the lower the quantitative Uncertainty, the narrower the potential range of outcomes for that particular company. The rating is expressed as Low, Medium, High, Very High, and Extreme.

- Low: the interquartile range for possible fair values is less than 10%.
- Medium: the interquartile range for possible fair values is less than 15% but greater than 10%.
- High: the interquartile range for possible fair values is less than 35% but greater than 15%.
- Very High: the interquartile range for possible fair values is less than 80% but greater than 35%.
- Extreme: the interquartile range for possible fair values is greater than 80%.

**Quantitative Financial Health:** Intended to reflect the probability that a firm will face financial distress in the near future. The calculation uses a predictive model designed to anticipate when a company may default on its financial obligations. The rating is expressed as Weak, Moderate, and Strong.

- Weak: assigned when Quantitative Financial Health <0.2
- Moderate: assigned when Quantitative Financial Health is between 0.2 and 0.7
- Strong: assigned when Quantitative Financial Health >0.7

# Research Methodology for Valuing Companies

### Other Definitions

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

**Quantitative Valuation:** Using the below terms, intended to denote the relationship between the security's Last Price and Morningstar's quantitative fair value estimate for that security.

- Undervalued: Last Price is below Morningstar's quantitative fair value estimate.
- Fairly Valued: Last Price is in line with Morningstar's quantitative fair value estimate.
- Overvalued: Last Price is above Morningstar's quantitative fair value estimate.

This Report has not been made available to the issuer of the security prior to publication.

### 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.

The quantitative equity ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative equity ratings. In addition, there is the risk that the price target will not be met due to such things as unforeseen changes in demand for the company's products, changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions.

A change in the fundamental factors underlying the quantitative equity ratings can mean that the valuation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit http://global.morningstar.com/equitydisclosures.

# Ford Motor Co F (XNYS)

| Morningstar Rating | Last Price | Fair Value Estimate | Price/Fair Value | Trailing Dividend Yield % | Forward Dividend Yield % | Market Cap (Bil) | Industry | Stewardship |
|---|---|---|---|---|---|---|---|---|
| ★★★★ | 7.70 USD | 13.00 USD | 0.59 | 3.90 | 0.00 | 30.63 | Auto Manufacturers | Standard |
| 29 Oct 2020 05:08, UTC | 29 Oct 2020 | 29 Oct 2020 05:06, UTC | | 28 Oct 2020 | 28 Oct 2020 | 28 Oct 2020 | | |

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## General Quantitative Disclosure

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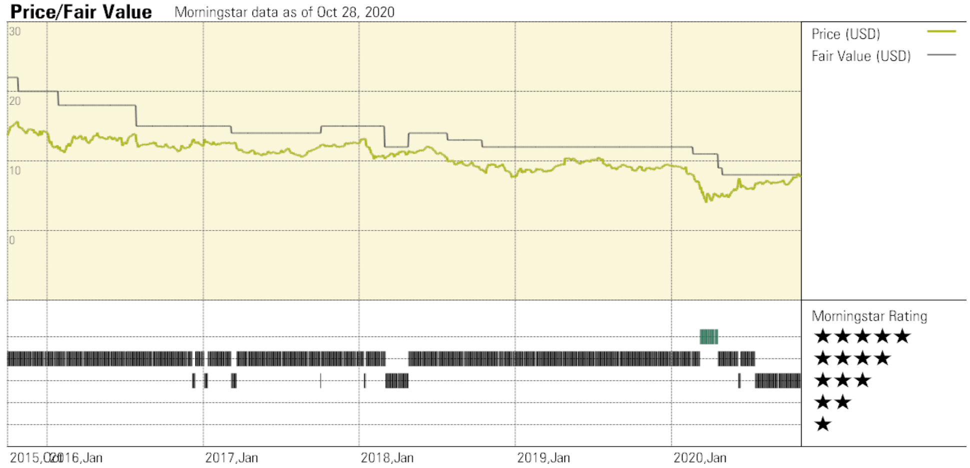
**Price/Fair Value** Morningstar data as of Oct 28, 2020




The quantitative equity ratings are not a market call, and do not replace the User or User's clients from conducting their own due-diligence on the security. The quantitative equity rating is not a suitability assessment; such assessments take into account may factors including a person's investment objective, personal and financial situation, and risk tolerance all of which are factors the quantitative equity rating statistical model does not and did not consider.

Prices noted with the Report are the closing prices on the last stock-market trading day before the publication date stated, unless another point in time is explicitly stated.

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# Ford Motor Co F (XNYS)

| Morningstar Rating | Last Price | Fair Value Estimate | Price/Fair Value | Trailing Dividend Yield % | Forward Dividend Yield % | Market Cap (Bil) | Industry | Stewardship |
|---|---|---|---|---|---|---|---|---|
| ★★★★ | 7.70 USD | 13.00 USD | 0.59 | 3.90 | 0.00 | 30.63 | Auto Manufacturers | Standard |
| 29 Oct 2020 05:08, UTC | 29 Oct 2020 | 29 Oct 2020 05:06, UTC | | 28 Oct 2020 | 28 Oct 2020 | 28 Oct 2020 | | |

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|---|---|---|---|---|---|---|---|---|
| ★★★★ | 7.70 USD | 13.00 USD | 0.59 | 3.90 | 0.00 | 30.63 | Auto Manufacturers | Standard |
| 29 Oct 2020 05:08, UTC | 29 Oct 2020 | 29 Oct 2020 05:06, UTC | | 28 Oct 2020 | 28 Oct 2020 | 28 Oct 2020 | | |

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