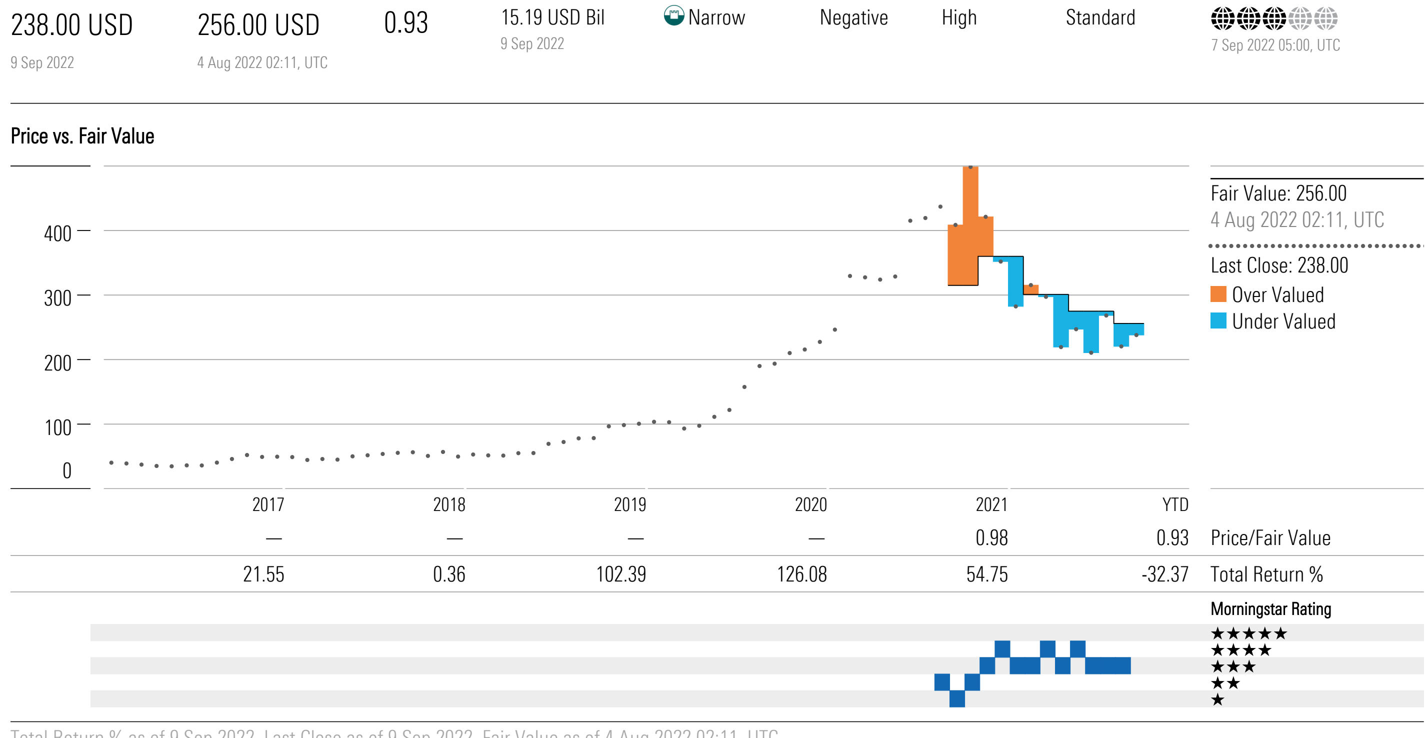
Generac Holdings Inc GNRC ★★★ 9 Sep 2022 21:21, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
238.00 USD 9 Sep 2022	256.00 USD 4 Aug 2022 02:11, UTC	0.93	15.19 USD Bil 9 Sep 2022	Narrow	Negative	High	Standard	7 Sep 2022 05:00, UTC



	2017	2018	2019	2020	2021	YTD	
	—	—	—	—	0.98	0.93	Price/Fair Value
	21.55	0.36	102.39	126.08	54.75	-32.37	Total Return %

Total Return % as of 9 Sep 2022. Last Close as of 9 Sep 2022. Fair Value as of 4 Aug 2022 02:11, UTC.

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

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

California Delays Decision on Rooftop Solar Regulatory Proposal Yet Again

Analyst Note Brett Castelli, Equity Analyst, 16 Aug 2022

On Aug. 15, a California administrative law judge extended the deadline for a decision on changes for rooftop solar customers in the state until Aug. 27, 2023. This is approximately one year later than we expected a revised proposed decision. We had expected a final decision before year-end 2022. We maintain our fair value estimates for rooftop solar-exposed stocks.

The regulatory proceeding regarding rooftop solar reform in California, commonly referred to as NEM 3.0, has been ongoing since 2020. A proposed decision in December 2021 was delayed following sharp pushback from the solar industry over proposed changes and subsequent regulatory staff turnover.

The crux of the issue is how California continues to ensure a healthy rooftop solar industry (given climate goals) while managing skyrocketing utility rates in the state. Proposed changes have focused on a couple of issues, including reducing compensation for excess electricity sold back to the grid (net metering) and a fixed charge or minimum bill to ensure customers pay for access to the grid.

We view reduced compensation for excess electricity as inevitable over time and not all bad for the solar industry. Reduced export rates are likely to spur adoption of home batteries to ensure self-consumption, providing an attractive upsell opportunity for solar companies. The adoption of fixed charges or minimum bills is more damaging to rooftop solar economics. The only way customers could

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Sector

Industrials

Industry

Specialty Industrial Machinery

Business Description

Generac Power Systems designs and manufactures power generation equipment serving residential, commercial, and industrial markets. It offers standby generators, portable generators, lighting, outdoor power equipment, and a suite of clean energy products. Sales generated in the United States account for the majority of total sales.

avoid these charges is by detaching from the grid, which we do not see as viable today.

We expect additional jurisdictions to grapple with modernizing rooftop solar compensation regimes as penetration rates rise. Over time, continued cost declines in solar should help to offset reduced state and local incentives, ensuring continued industry viability.

Business Strategy & Outlook Brett Castelli, Equity Analyst, 4 Aug 2022

Generac is in the midst of a transition to an energy technology solution company.

The company's legacy business is focused on home and commercial/industrial generators using internal combustion engine technology. Here, the company is most focused on continuing its leadership in home standby generators, leading with natural gas-fueled engines, and expanding the connectivity of its generators. We attribute its past success in home standbys to its substantial sales and marketing efforts, which have helped increase awareness for the niche category.

Increasingly, profits from its legacy generator business will be deployed into clean energy and digital capabilities. We think this strategy makes sense and aligns with our macro view for an increasingly decarbonized, decentralized, and digitized electric system. The company is rapidly expanding its residential solar and energy storage business within the United States following acquisitions in recent years.

While solar and storage represent a large and growing addressable market, success is not assured. Existing competitors serving the U.S. solar inverter market control approximately 90% of the market, which could make it difficult for a new entrant such as Generac to gain traction. As such, we view the company's efforts to become a leader in grid services and expand upon its ecobee acquisition as potentially more fruitful.

Management has largely used acquisitions to quicken its entrance into new markets in the past, and we expect the company to continue to be acquisitive. Historically, management has taken a "small bets" approach to M&A, typically completing multiple deals per year with an average deal size below $100 million. However, recent deals such as Deep Sea and ecobee highlight a willingess to pursue transactions up to the $500 million range.

Bulls Say Brett Castelli, Equity Analyst, 3 Aug 2022

- Generac is the undisputed leader in home standby generators, with over 70% market share.
- Generac is expanding into clean energy via acquisitions, representing a large and growing addressable market.
- Generac is well positioned to capitalize on an increasingly distributed electric grid.

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Competitors

	Generac Holdings Inc GNRC	Cummins Inc CMI	Enphase Energy Inc ENPH	SolarEdge Technologies Inc SEDG
	Fair Value 256.00 Uncertainty : High; Last Close 238.00	Fair Value 241.00 Uncertainty : Medium; Last Close 218.47	Last Close 305.70; Fair Value 150.00 Uncertainty : Very High	Last Close 313.00; Fair Value 290.00 Uncertainty : Very High
Economic Moat	Narrow	Narrow	None	None
Moat Trend	Negative	Stable	Stable	Stable
Currency	USD	USD	USD	USD
Fair Value	256.00 4 Aug 2022 02:11, UTC	241.00 3 Aug 2022 03:42, UTC	150.00 27 Jul 2022 15:26, UTC	290.00 3 Aug 2022 20:31, UTC
1-Star Price	396.80	325.35	262.50	507.50
5-Star Price	153.60	168.70	75.00	145.00
Assessment	Fairly Valued 10 Sep 2022	Fairly Valued 10 Sep 2022	Significantly Over Valued 10 Sep 2022	Fairly Valued 10 Sep 2022
Morningstar Rating	★★★9 Sep 2022 21:21, UTC	★★★9 Sep 2022 21:21, UTC	★9 Sep 2022 21:21, UTC	★★★9 Sep 2022 21:21, UTC
Analyst	Brett Castelli, Equity Analyst	Dawit Woldemariam, Equity Analyst	Brett Castelli, Equity Analyst	Brett Castelli, Equity Analyst
Capital Allocation	Standard	Standard	Exemplary	Standard
Price/Fair Value	0.93	0.91	2.04	1.08
Price/Sales	3.47	1.26	25.13	7.21
Price/Book	6.28	3.53	91.82	8.59
Price/Earning	30.75	15.27	212.29	122.27
Dividend Yield	—	2.71%	—	—
Market Cap	15.19 Bil	30.80 Bil	41.41 Bil	17.41 Bil
52-Week Range	197.94—524.31	184.28—247.48	113.40—324.84	200.86—389.71
Investment Style	Mid Growth	Mid Value	Large Growth	Mid Growth

Bears Say Brett Castelli, Equity Analyst, 3 Aug 2022

- Generac’s home standby generators face threats from home batteries to supply backup power needs.
- Generac’s success in the clean energy business is not guaranteed, given strong incumbents.
- Generac faces risks in integrating its numerous acquisitions into a cohesive product offering.

Economic Moat Brett Castelli, Equity Analyst, 3 Aug 2022

We assign Generac a narrow moat rating underpinned by a strong brand and cost advantages within its home standby generators business.

Generac's brand is synonymous with the home standby generator category—akin to Kleenex in facial tissues. The company's market share in the category is about 75% today and has been over 70% for the last decade, a testament to its moat. In contrast to adjacent markets (residential solar equipment providers, for example), we perceive there to be higher levels of end customer brand awareness with

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home generators.

As the largest player in a market with limited penetration, Generac views itself as responsible to drive market growth. Through its robust advertising, Generac generates customer leads, which it in turn supplies to its dealer network. In addition, the company has its own proprietary selling system, PowerPlay, which is used by the company's largest-volume dealers. Dealers use the system for quote generation, customer presentation, and relevant follow-up. We believe Generac's ability to supply customer leads and its PowerPlay selling system create loyalty from its dealer network, making them less likely to sell a competing brand.

We believe Generac's outsize share in the home generator category results in a maintainable cost advantage over competitors. In particular, we think the company benefits from scale in buying power, economies of scope (widest range of products/distribution), and in advertising and marketing.

With market share 4 times the size of the next largest competitor, we believe Generac benefits from scale in buying power. In comparing prices, Generac is on par with or slightly below competitor offerings. We think this is the result of management's desire to increase adoption in the category rather than an inability to extract higher pricing. Despite offering prices comparable to or below peers, the company claims to have the highest margins in the industry—supporting its cost advantage over peers.

Generac's scale give it economies of scope over competitors. The company offers residential standby generators ranging in capacity from 7.5 kilowatt to 150 kilowatt, which we believe is the widest range in the industry. Offering a wide product set allows its dealer base and customers to find the product that meets each home's needs. In addition, Generac's breadth and depth of its distribution network is unmatched in the industry. The company distributes its products via an omnichannel distribution network including factory direct to dealers (majority of sales), industrial distributors, national/regional retailers, and e-commerce. This breadth of distribution ensures customers looking for a home generator are bound to find a Generac. Additionally, the depth of the company's dealer network (over 7,000) is by far the largest in the industry.

Generac's scale within the industry allows it an unmatched advertising budget among peers. We believe the company's focus on advertising (and subsequent customer lead generation) is central to Generac's competitive advantage. Generac spent approximately 9% of its 2021 sales on selling and service ($320 million). We believe this amount of spending was nearly equivalent to the total home standby sales of its next largest competitor—highlighting the difficulty competitors have in matching Generac's advertising spend.

In addition to residential generators, Generac also sells portable generators and energy storage for residential applications and a broad array of commercial and industrial generator products. Given it does

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not enjoy the same size of market share in these markets, we do not believe it possesses a moat in these segments.

Fair Value and Profit Drivers Brett Castelli, Equity Analyst, 3 Aug 2022

Our fair value estimate for Generac is $256 per share. We model a five-year forecast with an implied terminal enterprise value/EBITDA multiple of 13.5 times.

In Generac's legacy generator businesses, we view its home standby segment as its most profitable and valuable. The company has seen a sharp increase in sales in recent years due to elevated power outages. We forecast sales momentum to plateau in 2023 before declining approximately 25% by 2026. We expect Generac's legacy commercial and industrial business to continue its rebound from COVID-19-related weakness in 2020 and clean energy acquisitions to support continued growth in the medium term.

We believe the company's growth in clean energy will increasingly be a profit and value driver in the years to come (8% of 2021 sales). We forecast rapid growth in this segment but don't expect it to unseat incumbents, such as Enphase or SolarEdge. We expect gross margins to expand to 30% in the next few years before plateauing.

While we do not explicitly forecast grid services revenue at this time, we think this represents a long-term opportunity for Generac. As the company provides more disclosure around the business model and potential revenue opportunities, we would look to incorporate this into our valuation.

Risk and Uncertainty Brett Castelli, Equity Analyst, 3 Aug 2022

We assign a high uncertainty rating to Generac. The company's legacy home standby business is difficult to forecast, as sales depend highly on weather-caused power outages. Additionally, the generator business faces the long-term threat of new technologies like batteries and fuel cells replacing today's internal combustion engine technology.

Generac's nascent clean energy business also supports our high uncertainty. The company has a short track record in this segment (entered in 2019). While early results have been encouraging, we believe there are a wide range of long-term outcomes for Generac's success in this segment.

Generac faces environmental, social, and governance risks associated with the emissions of its products, which typically use natural gas or diesel, and the risk of product defects resulting in elevated warranty costs or harming the company's reputation. Given the limited utilization of a natural gas-powered residential generator, we do not expect material environmental regulations restricting sales during our forecast period. We believe the risk of restrictive environmental regulations or product defects to be low and somewhat material to our fair value estimate.

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Capital Allocation Brett Castelli, Equity Analyst, 15 Sep 2021

Generac's capital allocation rating is Standard based on its balance sheet strength, investment track record, and shareholder distribution policy.

Generac possesses a strong balance sheet following robust business performance in recent years. Leverage has declined from 3 times in 2017 to about 1 today. We think the company is likely to operate with lower leverage moving forward, given its ongoing business mix changes.

We assess Generac's investment track record to be fair. Most of its investment dollars have been allocated to inorganic growth as the company has looked to expand beyond its legacy businesses. Management's acquisitions up until 2019 focused on expanding its commercial/industrial and international businesses. While we believe the company had limited success with this strategy, we also note the lack of impairments supporting our fair investment rating. Since 2019, management's acquisitions have focused on clean energy-related businesses. While this is a logical step directionally for the company, execution will ultimately be the determining factor in these acquisitions.

We find Generac's approach to equity distributions to be appropriate and has evolved over time. In 2012-13, the company issued special dividends following extreme weather events that boosted sales temporarily. Capital allocation pivoted toward share repurchases in 2015-18, which proved to be a good use of shareholder capital, given the subsequent share price appreciation. Since 2019, the company has taken a more conservative approach to equity distributions, favoring inorganic and organic growth initiatives instead. We think this is the right approach, given the threats and opportunities the company faces as new technologies are adopted and the electric system is modernized.

Analyst Notes Archive

Generac Margin Recovery on Track as Focus Remains on Top-Line Growth Trajectory; FVE Down to $256 Brett Castelli, Equity Analyst, 4 Aug 2022

We lower our Generac fair value estimate to $256 per share from $275 following the company's second-quarter results. The primary drivers behind our change include a slight increase in our discount rate and a slight cut in our medium-term growth assumptions. We view risk-reward as balanced at the current share price.

Generac's second-quarter results were relatively quiet with no changes to full-year guidance for 2022. Importantly, the company's margin recovery remains on track as second-quarter gross margins were 35.4%, but management indicated they plan to exit the year around 40% due to price/cost initiatives in home standby generators, or HSB.

Analysts continue to focus on the home standby sales trajectory for 2023, but management remains

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hesitant to be too specific. In-home consultations remain robust, with management highlighting a sequential increase and up 4 times from pre-COVID levels. We think this continues to justify a much higher baseline for HSB sales in future years, but the decline in backlog leads us to maintain our expectation for sales to moderate off 2022 levels in coming years.

Generac's equity value continues to hinge on two factors, in our view: HSB sales trajectory and scaling its upstart clean energy activities. We expect HSB sales to plateau in 2023 and decline 25%-30% by 2026 as demand normalizes off elevated levels and competition grows from battery storage offerings. At its residential clean energy business, management expects to reach over $500 million in sales (10% of total sales), in line with our forecast. We continue to take a wait-and-see approach with regards to its clean energy efforts given the presence of well-established competitors, such as Enphase and SolarEdge.

With regards to capital allocation, management has been fairly quiet with acquisitions following a flurry of deals in recent years. The company repurchased $124 million in common stock through June 30, completing the remaining balance under its prior authorization.

In a Surprise Move, Manchin Reverses Course and Throws Support Behind Clean Energy Incentives

Brett Castelli, Equity Analyst, 28 Jul 2022

Less than two weeks after seemingly ending prospects of a climate spending bill, Sen. Joe Manchin and Senate Democrats announced support for the Inflation Reduction Act of 2022. While not final, the chances of ultimate passage appear high based on industry reports.

The proposed deal would include $369 billion in energy security and climate change spending over a 10-year period. Clean energy stocks are up big on the news, and we do not view such a move as unwarranted given low expectations and the magnitude of support. We expect to increase the fair value estimates for our affected coverage approximately 10% or more.

While still working through full details of the package, we highlight three key takeaways at first glance. First, extension of solar and wind tax credits, which were set to phase down over the next few years. We view this as the area of largest ambiguity as to the credit level and timeline. Second, incentives for new technology previously not eligible for tax credits. This includes areas such as clean hydrogen and standalone energy storage—we view these as among the biggest beneficiaries. Third, first-of-a-kind incentives for domestic manufacturing. Historically, the U.S. has relied heavily on imports for solar equipment. This bill is about to change that with generous incentives for domestic solar panel and inverter manufacturing.

While we see our entire clean energy coverage benefiting should the bill ultimately pass, we view certain areas as benefiting the most. These include residential solar (SunPower, Sunrun), hydrogen

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(Plug Power), energy storage (Stem), and domestic manufacturing (First Solar). Relative to our fair value estimates, we view SunPower and Plug Power as most attractive.

Manchin Says No to Additional Clean Energy Incentives, but Impact Is Limited Brett Castelli, Equity Analyst, 18 Jul 2022

On July 14, U.S. Sen. Joe Manchin, Democrat from West Virginia, indicated that he would not support a reconciliation package with additional climate incentives, seemingly ending the uncertainty of much of the past year. The rumored clean energy package had recently been pegged at around $300 billion and included extensions of existing tax credits for wind and solar as well as potential credits for newer technologies, such as hydrogen, stand-alone energy storage, and support for existing nuclear plants. Incentives for domestic solar manufacturing and electric vehicles were also contemplated.

Broadly, we view these incentives as a "nice to have" for our clean energy coverage and see no changes to our forecasts. Some technologies, such as wind and solar power generation, have already reached cost parity with competing technologies, limiting the need for federal government support to drive demand. Conversely, the bigger impact of no deal is likely to be on more nascent technologies, such as (green) hydrogen and energy storage, where incentives could help drive early-stage adoption. In addition, we view investor expectations as relatively modest—although not zero—regarding the ultimate passage of clean energy incentives in recent weeks.

The political calendar may not be quiet for long with regard to clean energy tax credits. We see the potential for a short-term extension of wind and solar tax credits as part of a year-end "tax extenders" package, similar to past years. The wind production tax credit expired for projects beginning construction at year-end 2021 but continues until 2025 for projects already under construction. In addition, the solar investment tax credit for projects beginning construction continues at 26% in 2022 before stepping down to 22% in 2023 and 10% thereafter.

Solar Stocks Set to Jump as Biden Provides Tariff Reprieve Brett Castelli, Equity Analyst, 6 Jun 2022

Solar stocks are set to jump on June 6 after reports the Biden administration will announce actions to alleviate uncertainty associated with tariffs on imported solar panels. The Biden administration is expected to provide a two-year halt to new solar tariffs, allowing much-needed near-term certainty for developers. We note many industry participants have delayed projects as they awaited clarity on the tariffs. Additionally, Biden plans to use the Defense Production Act to provide support for U.S.-made solar panels. We view these actions as aimed at balancing continued buildout of solar projects in the near term to support decarbonization goals, while looking to increase U.S. solar manufacturing over time.

China’s dominance of solar panel manufacturing—and U.S. manufacturers' allegations of unfair trade

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practices—have driven a series of on-again, off-again trade disputes for much of the past decade. While this latest action does not solve the issue indefinitely (two-year reprieve), we expect the issue to dissipate over time. A combination of increased domestic panel manufacturing, such as First Solar's large expansion, and growing geographic diversification of upstream solar panel raw materials, such as polysilicon wafer production, are likely to lead to a much more diversified supply base. This trend is a driver behind our positive moat trend on First Solar.

Despite the positive news, we view most solar-related stocks to be fairly valued across our coverage list. We did not make fair value changes when the original tariff inquiry was announced, thus, we do not anticipate making material revisions with this action. While policy questions remain in certain corners of the solar market, such as residential net metering, we expect focus to shift to the macro environment and potential positive implications of the high energy price environment.

Generac Raises 2022 Sales Guidance; All Eyes Are on Home Standby Sales in 2023 and Beyond Brett Castelli, Equity Analyst, 4 May 2022

We lower our Generac fair value estimate to $275 from $301 per share following the company's first-quarter results. While we raise our near-term sales estimates, we lower our long-term home standby (HSB) generator forecast, which drives the reduction in our fair value. Our narrow moat and negative moat trend ratings remain intact. We view shares as fairly valued at our revised valuation.

Generac raised its 2022 outlook for sales growth to 36%-40% from prior guidance of 32%-36%, while moderating its prior adjusted EBITDA margin expectations. Management cited a quicker production ramp and price increases (particularly for home standby generators) as the driver behind the guidance raise. Our focus remains less on 2022 results and more on the multi-year outlook, particularly for its crown jewel HSB business.

We have expressed concern Generac's home standby generator sales were at risk of plateauing since our initiation in September 2021. At the time, we believed this was out of consensus (many expected continued growth), but market sentiment has quickly shifted to concern regarding a plateau (and a decline) in home standby sales in 2023 and beyond. We have updated our HSB sales forecast, which now expects a decline in home standby sales of approximately 25% in 2026 from 2023 levels. We note this level of sales would still be approximately double the level of HSB sales in 2018-20, consistent with management's view of reaching a new baseline of HSB sales.

While HSB sales trajectory is likely to dominate near-term investor focus, investors should closely monitor Generac's clean energy business progress. We take a wait-and-see approach with its PWRCell and PWRMicro long-term success given entrenched competition but could envision green shoots from the ecobee and grid services acquisitions.

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We continue to see Generac as at a potentially pivotal moment in its history as HSB sales peak and the company seeks to scale recent clean energy acquisitions.

Solar Panel Trade Uncertainty Freezes the U.S. Solar Market Brett Castelli, Equity Analyst, 22 Apr 2022

Shares in solar-related companies were under pressure on April 21 (Invesco Solar ETF down 6.9%) following recent comments by industry leaders NextEra and Tesla relating to trade uncertainty with solar panel imports. We maintain our price targets as we await further clarity, but we expect to see heightened volatility in the coming months given uncertainty.

At the end of March, the U.S. Commerce Department undertook an investigation pertaining to anti-circumvention activities relating to solar panel imports from Southeast Asian countries. We note the vast majority (over 80%) of U.S. solar imports come from Southeast Asian countries in recent years given tariffs in effect for direct Chinese imports. For context, U.S. domestic manufacturing only supplies approximately 10%-20% of the current U.S. solar panel supply. NextEra mentioned a preliminary decision could come as late as August—leaving the market potentially in limbo for the next few months.

NextEra indicated on its first-quarter call that over 50% of its scheduled 2022 solar installations are at risk of being delayed into 2023, and Tesla indicated an approximate 50% drop in its solar installations in the first quarter, citing import delays. At the very least, in the near term, we expect projects to be delayed into 2023 from 2022 as developers seek further clarity on the trade case (and pricing of panels). We would not expect simple timing delays to have material impacts on our fair value estimates given limited long-term impacts.

A positive finding of anti-circumvention activity would be damaging to U.S. solar installation activity to the point of risking much of the Biden administration’s goals of advancing clean energy development. As such, we question whether the case ultimately moves forward.

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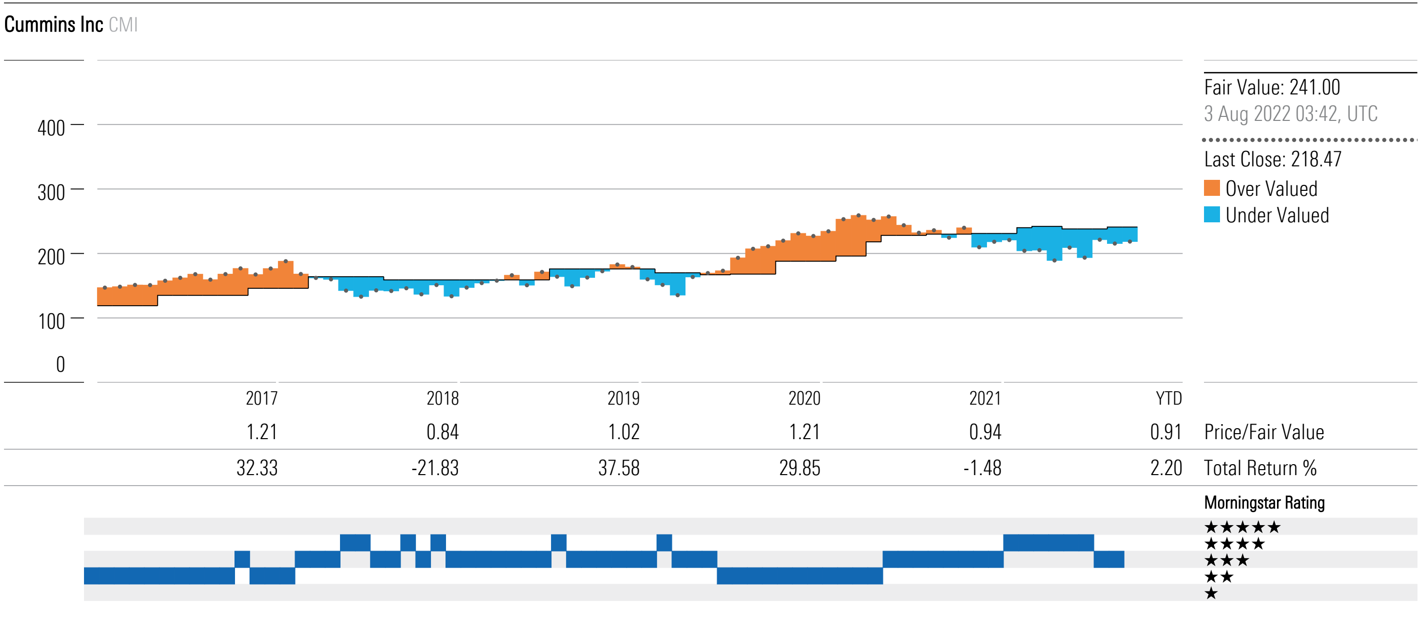
Generac Holdings Inc GNRC ★★★ 9 Sep 2022 21:21, UTC

Competitors Price vs. Fair Value

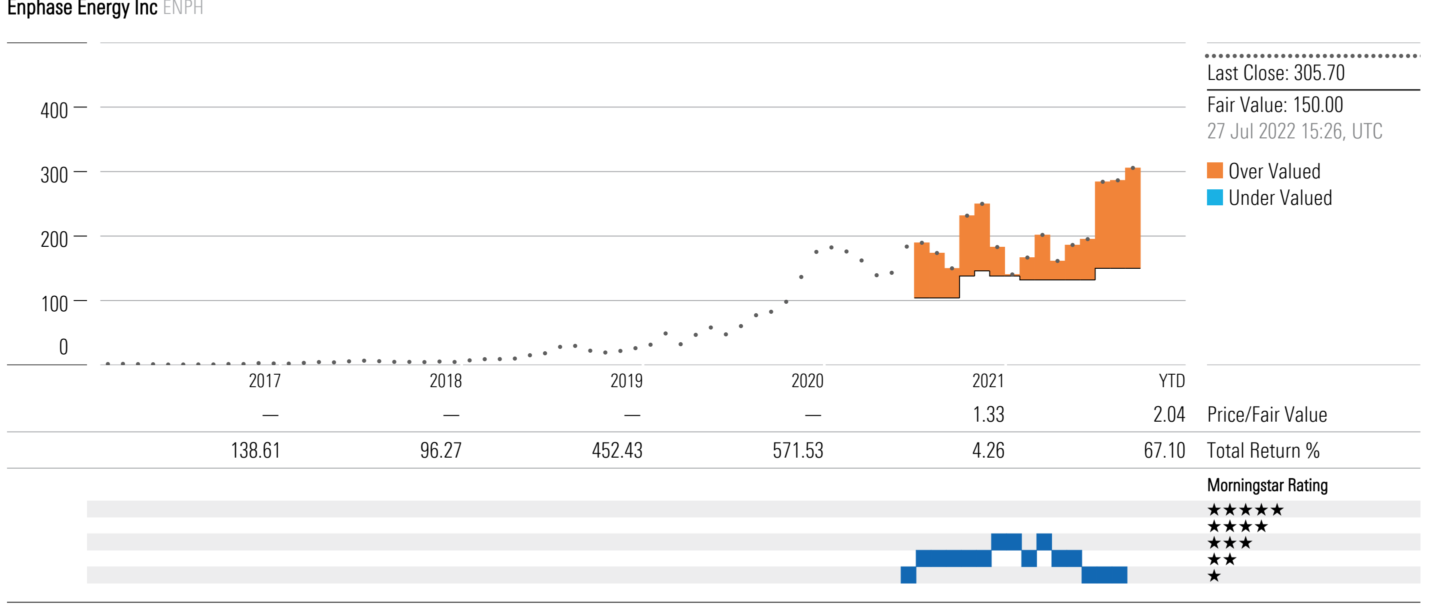
Cummins Inc CMI



2017	2018	2019	2020	2021	YTD	
1.21	0.84	1.02	1.21	0.94	0.91	Price/Fair Value
32.33	-21.83	37.58	29.85	-1.48	2.20	Total Return %

Total Return % as of 9 Sep 2022. Last Close as of 9 Sep 2022. Fair Value as of 3 Aug 2022 03:42, UTC.

Enphase Energy Inc ENPH



2017	2018	2019	2020	2021	YTD	
—	—	—	—	1.33	2.04	Price/Fair Value
138.61	96.27	452.43	571.53	4.26	67.10	Total Return %

Total Return % as of 9 Sep 2022. Last Close as of 9 Sep 2022. Fair Value as of 27 Jul 2022 15:26, UTC.

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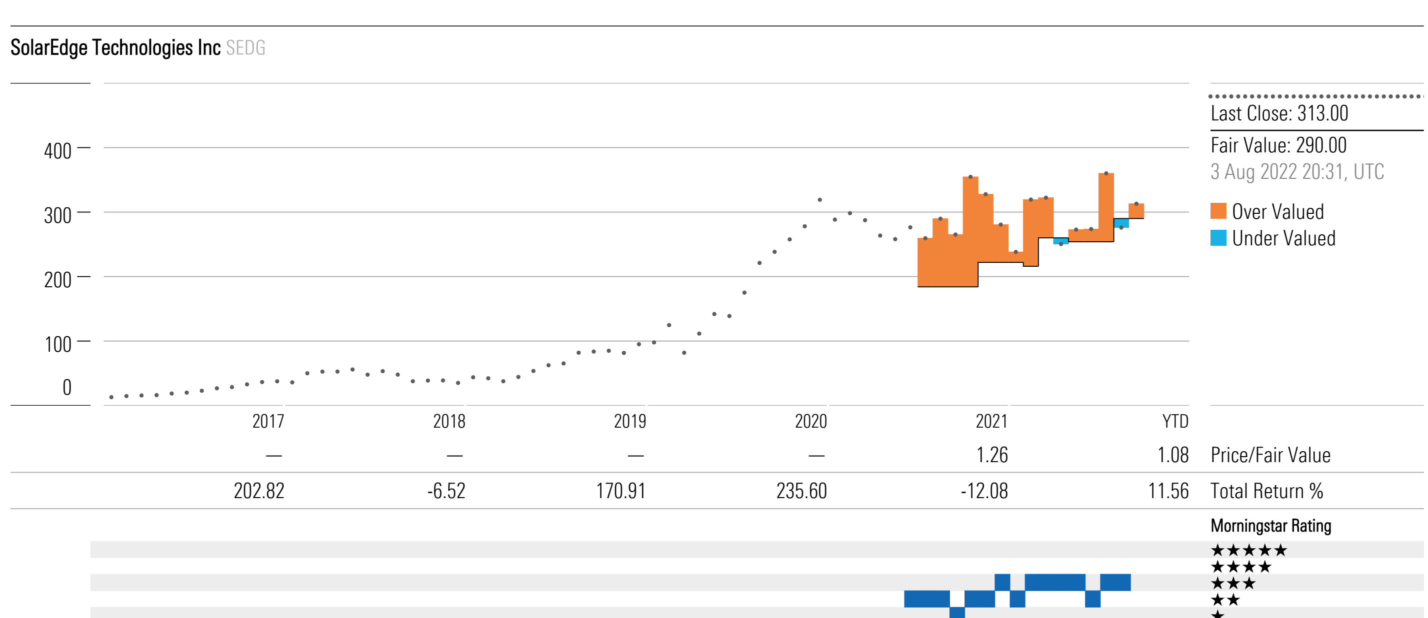
Generac Holdings Inc GNRC ★★★ 9 Sep 2022 21:21, UTC

SolarEdge Technologies Inc SEDG



	2017	2018	2019	2020	2021	YTD	
	—	—	—	—	1.26	1.08	Price/Fair Value
	202.82	-6.52	170.91	235.60	-12.08	11.56	Total Return %

Total Return % as of 9 Sep 2022. Last Close as of 9 Sep 2022. Fair Value as of 3 Aug 2022 20:31, UTC.

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Generac Holdings Inc GNRC ★★★ 9 Sep 2022 21:21, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
238.00 USD 9 Sep 2022	256.00 USD 4 Aug 2022 02:11, UTC	0.93	15.19 USD Bil 9 Sep 2022	Narrow	Negative	High	Standard	7 Sep 2022 05:00, UTC

Morningstar Historical Summary

Financials as of 30 Jun 2022

Fiscal Year, ends 31 Dec	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	TTM
Revenue (USD Mil)	1,176	1,486	1,461	1,317	1,448	1,679	2,023	2,204	2,485	3,737	2,427	4,437
Revenue Growth %	48.5	26.3	-1.7	-9.8	9.9	16.0	20.5	8.9	12.7	50.4	40.5	39.1
EBITDA (USD Mil)	260	370	340	206	253	298	399	422	548	817	446	848
EBITDA Margin %	22.1	24.9	23.3	15.7	17.5	17.8	19.7	19.2	22.1	21.9	18.4	19.1
Operating Income (USD Mil)	224	351	288	220	203	251	357	374	481	743	372	742
Operating Margin %	19.0	23.7	19.8	16.7	14.0	14.9	17.7	17.0	19.3	19.9	15.3	16.7
Net Income (USD Mil)	93	175	175	78	96	159	220	253	349	533	245	500
Net Margin %	7.9	11.8	12.0	5.9	6.7	9.5	10.9	11.5	14.1	14.3	10.1	11.3
Diluted Shares Outstanding (Mil)	69	70	70	69	65	63	62	63	64	64	65	65
Diluted Earnings Per Share (USD)	1.35	2.51	2.49	1.12	1.47	2.53	3.54	4.03	5.48	8.30	3.78	7.74
Dividends Per Share (USD)	—	—	—	—	—	—	—	—	—	—	—	—

Valuation as of 31 Aug 2022

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Recent Qtr	TTM
Price/Sales	2.0	2.7	2.3	1.5	2.0	1.9	1.6	2.9	6.3	6.6	3.3	3.2
Price/Earnings	25.4	25.5	18.8	17.7	40.3	26.2	13.6	24.4	49.3	42.7	27.9	28.5
Price/Cash Flow	10.1	15.1	13.2	11.1	11.2	12.6	11.1	26.0	32.7	39.8	54.6	95.2
Dividend Yield %	—	—	—	—	—	—	—	—	—	—	—	—
Price/Book	5.1	15.1	7.2	4.0	6.2	6.5	4.4	6.7	11.6	12.6	5.8	5.8
EV/EBITDA	12.0	13.5	12.2	14.4	14.4	13.4	9.7	17.0	27.1	28.3	0.0	0.0

Operating Performance / Profitability as of 30 Jun 2022

Fiscal Year, ends 31 Dec	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD	TTM
ROA %	5.9	10.3	9.5	4.3	5.3	8.2	9.9	10.0	11.8	13.2	4.7	10.9
ROE %	15.1	44.7	43.3	16.3	22.2	33.2	33.5	28.2	28.8	29.6	10.6	24.6
ROIC %	9.0	14.5	13.4	6.8	8.4	13.1	15.9	15.2	16.6	18.7	6.8	15.5
Asset Turnover	0.7	0.9	0.8	0.7	0.8	0.9	0.9	0.9	0.8	0.9	0.5	1.0

Financial Leverage

Fiscal Year, ends 31 Dec	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Recent Qtr	TTM
Debt/Capital %	63.3	78.8	68.8	69.0	71.5	62.1	53.5	48.7	42.4	36.0	40.5	—
Equity/Assets %	28.9	17.6	26.0	26.2	21.5	27.3	31.3	38.7	43.0	45.4	44.2	—
Total Debt/EBITDA	3.4	3.2	3.2	5.1	4.2	3.1	2.3	2.5	1.9	1.6	3.9	—
EBITDA/Interest Expense	5.3	6.8	7.2	4.8	5.7	7.0	9.8	10.2	16.6	24.8	22.6	22.7

Morningstar Analyst Historical/Forecast Summary as of 03 Aug 2022

Financials

Fiscal Year, ends 31 Dec	2020	2021	Estimates 2022	2023	2024
Revenue (USD Mil)	2,485	3,737	5,189	5,693	5,987
Revenue Growth %	12.7	50.4	38.8	9.7	5.2
EBITDA (USD Mil)	582	861	1,138	1,427	1,560
EBITDA Margin %	23.4	23.1	21.9	25.1	26.1
Operating Income (USD Mil)	479	743	947	1,241	1,358
Operating Margin %	19.3	19.9	18.3	21.8	22.7
Net Income (USD Mil)	347	575	690	886	961
Net Margin %	14.0	15.4	13.3	15.6	16.1
Diluted Shares Outstanding (Mil)	64	64	64	65	64
Diluted Earnings Per Share(USD)	5.45	8.94	10.75	13.74	15.01
Dividends Per Share(USD)	0.00	0.00	0.00	0.00	0.00

Forward Valuation

	2020	2021	Estimates 2022	2023	2024
Price/Sales	5.8	6.0	2.9	2.7	2.5
Price/Earnings	41.7	39.4	22.1	17.3	15.9
Price/Cash Flow	33.7	75.4	38.8	17.7	15.3
Dividend Yield %	—	—	—	—	—
Price/Book	—	—	—	—	—
EV/EBITDA	25.5	26.9	14.5	11.5	10.5

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Research Methodology for Valuing Companies

Overview

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

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

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

1. Economic Moat

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

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

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

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 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

Morningstar Equity Research Star Rating Methodology

Economic Moat Capital Allocation Financial Health Moat Trend	Morningstar Fair Value	Price / Fair Value Uncertainty	Morningstar Rating™ For Stocks ★★★★★
Fundamental Analysis	*Valuation*	*Margin of Safety*	

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Research Methodology for Valuing Companies

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, exposure to material ESG risks, 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. In cases where there is less than a 25% probability of an event, but where the event could result in a material decline in value, analysts may adjust the uncertainty rating to reflect the increased risk. Analysts may also make a fair value adjustment to reflect the impact of this event.

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.

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

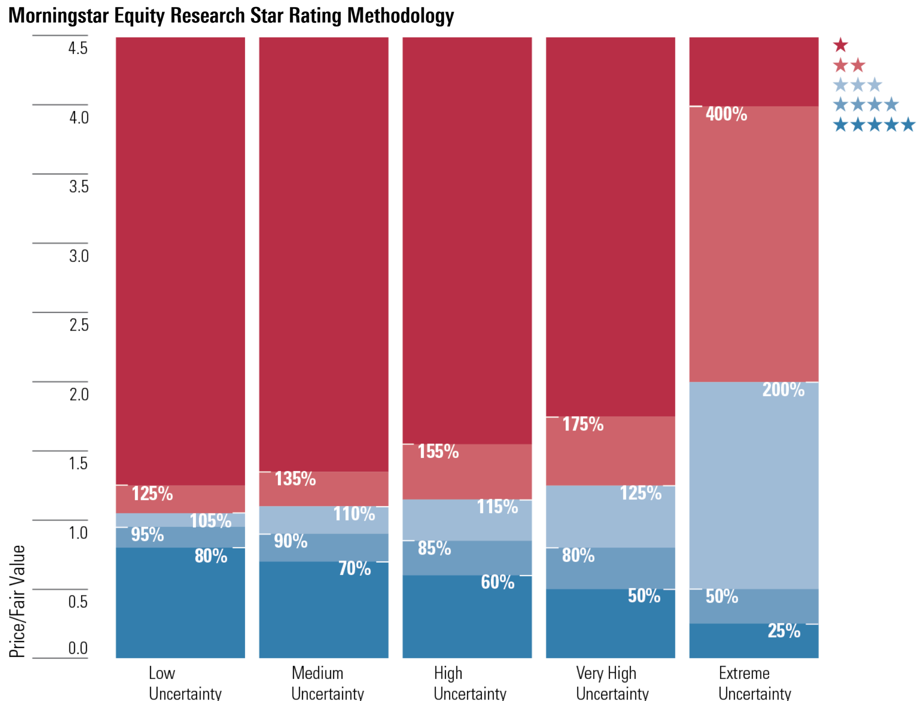
4. Market Price

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

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

Morningstar Star Rating for Stocks

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



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

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

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

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

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

Other Definitions

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

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

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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.

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