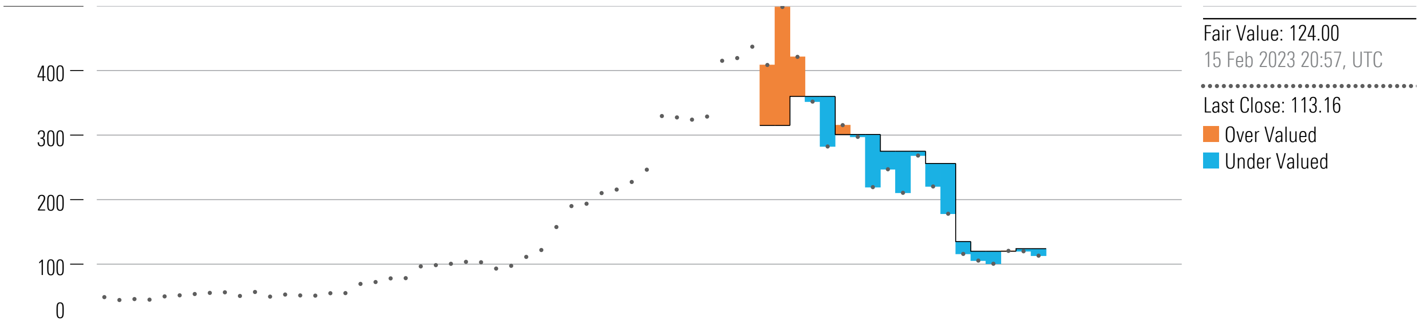
Morningstar Equity Analyst Report | Report as of 12 Mar 2023 21:00, UTC | Reporting Currency: USD | Trading Currency: USD | Exchange: NEW YORK STOCK EXCHANGE, INC. Page 1 of 19

Generac Holdings Inc GNRC ★★★ 10 Mar 2023 22:17, UTC

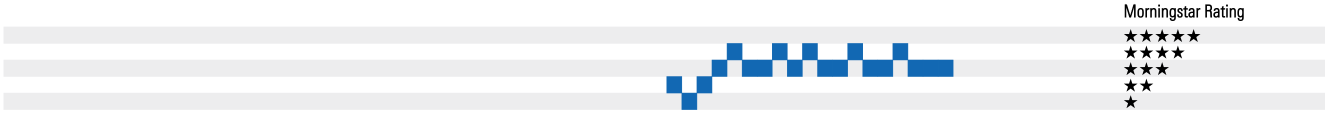
Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
113.16 USD 10 Mar 2023	124.00 USD 15 Feb 2023 20:57, UTC	0.91	7.00 USD Bil 10 Mar 2023	Narrow	Negative	High	Standard	1 Mar 2023 06:00, UTC

Price vs. Fair Value



	2018	2019	2020	2021	2022	YTD	
	—	—	—	0.98	0.84	0.91	Price/Fair Value
	0.36	102.39	126.08	54.75	-71.40	12.42	Total Return %

Morningstar Rating



Total Return % as of 10 Mar 2023. Last Close as of 10 Mar 2023. Fair Value as of 15 Feb 2023 20:57, 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.

Generac Unveils 2023 Guidance; Focus Remains on Recovery in Home Generator Orders

Analyst Note Brett Castelli, Equity Analyst, 15 Feb 2023

We raise our Generac fair value estimate to $124 per share from $120 following the company's fourth-quarter results and 2023 guidance. The main driver of our fair value estimate increase is a higher home standby sales forecast, partially offset by higher operating expenses. We view upside as limited for shares going forward following their recent rebound.

Generac's 2023 guidance implies full-year net sales decline 6%-10% year on year and adjusted EBITDA falls approximately 17%-18%. This was slightly worse than our estimates for a 5% sales decline and 20% adjusted EBITDA margin. However, management's commentary regarding sales and margin activity during the course of the year leaves us incrementally more positive on 2024.

Even though Generac is due to report a weak first half of 2023 as home standby orders remain low due to elevated inventories, management expects the second half to show solid year-on-year growth for the company's most important product line. This leads us to raise our home standby sales forecast in 2024 by 10%, while reiterating our view that sales are likely to plateau long-term given competition from new technologies, such as home batteries.

We expect 2023 to be a reset year for the company's clean energy business. The company expects to focus on expanded distribution capabilities this year following the bankruptcy of a key customer, and

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Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
113.16 USD 10 Mar 2023	124.00 USD 15 Feb 2023 20:57, UTC	0.91	7.00 USD Bil 10 Mar 2023	Narrow	Negative	High	Standard	1 Mar 2023 06:00, UTC

Sector	Industry
Industrials	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.

product reliability setbacks. Management noted the time to scale the clean energy business and the level of investment required has surpassed their initial expectations. However, they remain committed to this business long term. We continue to take a cautious view on Generac's potential for long-term success in this market given the head start of incumbents.

Business Strategy & Outlook Brett Castelli, Equity Analyst, 15 Feb 2023

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. In addition, recent execution hiccups within this business segment have delayed reaching management's targets.

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.

Bulls Say Brett Castelli, Equity Analyst, 15 Feb 2023

- 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.

Bears Say Brett Castelli, Equity Analyst, 15 Feb 2023

- Generac's home standby generator orders are highly reliant on power outage activity.
- 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.

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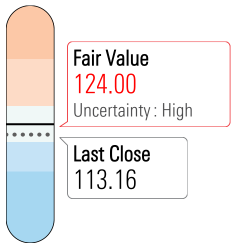
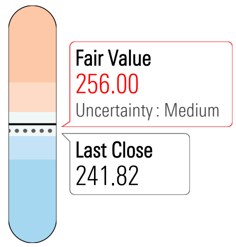
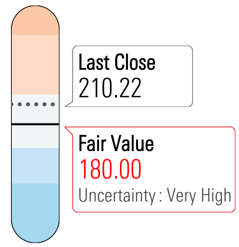
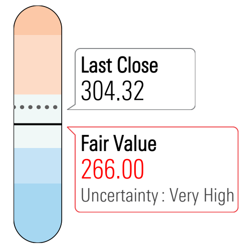
Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
113.16 USD 10 Mar 2023	124.00 USD 15 Feb 2023 20:57, UTC	0.91	7.00 USD Bil 10 Mar 2023	Narrow	Negative	High	Standard	1 Mar 2023 06:00, UTC

Competitors

	Generac Holdings Inc GNRC	Cummins Inc CMI	Enphase Energy Inc ENPH	SolarEdge Technologies Inc SEDG
				
Economic Moat	Narrow	Narrow	None	None
Moat Trend	Negative	Stable	Stable	Stable
Currency	USD	USD	USD	USD
Fair Value	124.00 15 Feb 2023 20:57, UTC	256.00 7 Feb 2023 01:23, UTC	180.00 8 Feb 2023 18:39, UTC	266.00 8 Nov 2022 15:46, UTC
1-Star Price	192.20	345.60	315.00	465.50
5-Star Price	74.40	179.20	90.00	133.00
Assessment	Fairly Valued 12 Mar 2023	Fairly Valued 12 Mar 2023	Fairly Valued 12 Mar 2023	Fairly Valued 12 Mar 2023
Morningstar Rating	★★★10 Mar 2023 22:17, UTC	★★★10 Mar 2023 22:17, UTC	★★★10 Mar 2023 22:17, UTC	★★★10 Mar 2023 22:17, 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	0.91	0.94	1.17	1.14
Price/Sales	1.60	1.23	13.02	5.68
Price/Book	3.10	3.81	34.76	7.85
Price/Earning	20.88	15.99	75.89	184.44
Dividend Yield	—	2.55%	—	—
Market Cap	7.00 Bil	34.19 Bil	28.69 Bil	17.09 Bil
52-Week Range	86.29—328.60	184.28—261.91	128.67—339.92	190.15—375.90
Investment Style	Mid Core	Mid Core	Mid Growth	Mid Growth

Economic Moat Brett Castelli, Equity Analyst, 15 Feb 2023

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 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 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, 15 Feb 2023

Our fair value estimate for Generac is $124 per share. We model a five-year forecast with an implied terminal enterprise value/EBITDA multiple of 9.5 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 peaked in 2022 followed by a plateau long-term. 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, although clean energy was less than 10% of 2022 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 for this product segment to remain below its home standby generator margins.

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, 15 Feb 2023

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.

Capital Allocation Brett Castelli, Equity Analyst, 15 Feb 2023

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 less than 2 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 acquisitions as the company looked to expand beyond its legacy businesses. Since 2019, management's acquisitions have focused on clean energy-related businesses. Execution thus far has been mixed, with setbacks related to its solar and storage product offerings.

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

Adjusting Our Rooftop Solar Coverage FVEs After Refreshing Our Long-Term Outlook Brett Castelli, Equity Analyst, 12 Feb 2023

We are adjusting fair value estimates for some of our rooftop solar coverage after refreshing our long-term industry outlook. The fair value estimate changes range from a reduction of 26% for SunPower to no change for Generac and SolarEdge. We reduce Sunrun's and Enphase's fair value estimates by 16% and 5%, respectively.

The primary driver of our fair value reduction is a more conservative installation forecast in the outer years of our modeling. We generally view rooftop solar stocks as fairly valued or slightly overvalued following these changes.

Rooftop solar installations have grown at an impressive 24% CAGR over the last four years. However, growth is poised to slow in 2023 as the impact of state policy changes—namely California's Net Energy Metering (NEM) 3.0—come into effect in April. We expect market growth of 5% in 2023 before declining to 2% in 2024 as California installations decline.

Longer-term, we expect the residential solar market to grow in the high single-digits per year as rising utility rates and falling solar costs provide tailwinds. However, we reduce the outer years of our 10-year installation forecast approximately 10%, on average, as we account for further potential state policy shifts. We expect additional states to modify net metering policies as rooftop solar penetration rates increase. Such changes should spur adoption of solar plus storage systems, which we expect to be a secular growth driver for our rooftop solar coverage.

We see the largest impacts to installers, such as SunPower and Sunrun, given both are entirely U.S.-

focused. In contrast, solar inverter companies, such as SolarEdge and Enphase, benefit from international operations. This is particularly true for SolarEdge, where we maintain our fair value estimate. We are reducing Enphase's fair value estimate 5% given higher U.S. exposure. We also maintain our fair value estimate for Generac due to the relatively small contribution of clean energy to its overall business.

What Are Generac Shares Pricing In? We See Shares as Fairly Valued Brett Castelli, Equity Analyst, 12 Jan 2023

Generac shares had a forgettable 2022, ending the year down 71%, far outpacing declines seen in the broad equity indexes. While investor expectations are clearly low, we see this balanced by fundamental headwinds. We maintain our $120 fair value estimate and find shares fairly valued. Our narrow moat and negative moat trend ratings are also unchanged.

Generac's poor equity performance last year was a function of investors resetting growth expectations going forward. In an effort to understand what Generac shares are pricing in, we focus on the company's crown jewel product, home standby, or HSB, generators. We view HSB sales as the single largest variable in determining Generac's value given it accounts for nearly half of total sales and generates above company average margins. Our current forecast assumes home standby sales fall to a level of $1.4 billion in 2026—down from over $2 billion in 2022, but above the less than $1 billion prior to 2020. HSB sales have historically been event-driven and experienced a meteoric rise in recent years, following numerous high-profile power outage events. While a high-profile power outage would represent upside to our forecast, we expect sales to moderate longer term as competition from new technologies—such as battery storage—compete in the backup power market. We note our financial forecast is consistent with management's commentary for a higher baseline of HSB sales moving forward.

Our forecast results in a five-year revenue CAGR of 6.9%, but an operating income CAGR of 3.6% given a higher mix of lower margin product segments. Combined with our stage 2 growth rate (years 6-15) of 2% growth, we believe Generac shares are currently pricing in growth of low to midsingle digits. While far below recent history, we view this as realistic given the potential for 2022 to represent a sales peak for the company's HSB sales category.

California Finalizes Rollback of Rooftop Solar Incentives. What's Next? Brett Castelli, Equity Analyst, 16 Dec 2022

On Dec. 15, California regulators finalized new rules that roll back incentives for rooftop solar customers. The final ruling appears largely consistent with the proposed decision last month, and we maintain our fair value estimates for the rooftop solar equities we cover, which we view as largely fairly valued.

We expect the final ruling to result in a sharp pullback in industry growth in California but also result in cross-selling opportunities for rooftop solar companies. With regard to industry growth, we anticipate California could see rooftop solar installations drop by half in the years to come, similar to what Hawaii witnessed following its net metering revisions. Given that California represents one third of U.S. rooftop solar installations, industry growth is poised to slow beginning in the second half of 2023.

While growth will moderate in California, rooftop solar companies should see cross-selling opportunities as home storage adoption is poised to skyrocket. We expect solar and storage to become the default option for new California customers as export rates are sharply reduced.

Stepping back, we view the decision by California regulators as indicative of the next phase of rooftop solar's maturation. As states reach higher levels of penetration, we expect net metering policies to be reduced, encouraging adoption of home storage. This maturation will require continued industry cost declines to keep customer economics compelling, which could lead to a more competitive environment. As such, we do not see compelling opportunities in our rooftop solar coverage at present.

SunPower and Sunrun have the highest exposure to California in our coverage at approximately 50% and 30%, respectively. Enphase is slightly less exposed, since 25% of its revenue is tied to international markets. We view SolarEdge as the most immune from California changes, given that Europe has overtaken North America as its largest-revenue market in recent quarters.

Is Competition Poised to Heat Up in Solar Inverters? Brett Castelli, Equity Analyst, 7 Dec 2022
In the last 18 months there have been numerous competitive announcements within the rooftop solar inverter space. These range from Generac's microinverter acquisition in July 2021, to Sunrun funding an upstart provider (Lunar Energy) earlier this year, to Tigo announcing it plans to come public this week. In addition, we flag the expiration of Enphase's exclusivity with SunPower in first-quarter 2024. Germany's SMA also plans to launch a new residential solar inverter product for the U.S. market in second half 2023. These announcements highlight the fact that capital is flowing to the highly desirable rooftop solar inverter space, which possesses industry-leading margins.

While competition is increasing, we don't think Enphase and SolarEdge are at risk of new entrants stealing market share. We view the scale and brand equity achieved by Enphase and SolarEdge as difficult for competitors mentioned above to replicate.

However, we flag two additional competitive threats that keep us at no-moat ratings for both companies: Tesla and international competition. With regards to Tesla, the company's history in solar is spotty, at best, and current market share hovers below 10%. However, Tesla now makes its own solar inverter, eliminating its past relationship with SolarEdge. Additionally, Tesla's balance sheet makes it a force too big to ignore should it choose to make large investments in solar in an effort to grow market share. As it relates to international competition, we flag Chinese microinverter upstart Hoymiles, which came public in December 2021, as an additional entrant into the microinverter space. While the company's 2021 revenue was a modest $130 million (less than 10% of Enphase / SolarEdge), analyst estimates per Pitchbook expect it to grow at an above market CAGR of 61% through 2024.

California's Revised Rooftop Solar Proposal Appears To Be a Win for Solar Industry Brett Castelli, Equity Analyst, 10 Nov 2022

On Nov. 10, California's utility regulator released a new proposed decision related to the closely watched net energy metering, or NEM, 3.0 debate. The new proposal appears to be a win for the rooftop solar industry relative to the original proposal in December 2021. We maintain our fair value estimates as we digest the details and await a final decision, which could come as soon as next month. We view much of our rooftop solar coverage as fairly valued following sharp upward share price moves.

California is the largest rooftop solar market in the U.S., accounting for roughly one third of rooftop solar installations in 2021. The state has been seeking to revise its rules for rooftop solar customers in an effort to balance continued growth in rooftop solar with the need to pay for the electric grid.

The December 2021 proposal was met with sharp pushback by the solar industry over two issues: the implementation of fixed charges and using well below-market costs to calculate payback periods. The revised proposal appears to eliminate the fixed charges and uses a cost per watt more in line with current market costs ($3.30 per watt versus $2.34 previously).

The revised proposal maintains a sharp reduction in the export rate, which all parties acknowledged was appropriate. The resulting payback period lengthens to approximately nine years for most solar-only customers versus less than five years currently. We still expect a decline in California rooftop solar installations beginning in 2024 but not as draconian as under the prior proposal.

As proposed, we expect the changes to drive increased adoption of solar-and-storage paired systems as opposed to solar-only. Given reduced compensation for exporting energy back to the grid and time-of-use rates, homeowners will be incentivized to self-consume their solar generation via battery storage. Rising storage adoption remains a secular growth driver for companies with rooftop solar exposure.

Generac Searches for a New Normal in Home Generator Orders; Lower FVE to $120, Shares Fairly Valued Brett Castelli, Equity Analyst, 2 Nov 2022

We lower our Generac fair value estimate to $120 per share from $135 following the company's third-quarter results. The drivers behind our decrease in fair value are a combination of higher operating expenses and lower revenue assumptions for the company's clean energy segment. Despite shares being down 70% year to date, we view risk-reward as balanced given fundamental headwinds.

Generac pre-announced third-quarter results and lowered its 2022 sales guidance a few weeks ago, so we were more focused on management's commentary as opposed to reported results.

Regarding the weakness in home generator orders that led to the guidance cut, management explained a combination of ramping production capacity coupled with installation volumes by its dealers failing to keep pace has led to bloated field inventory. Current field inventory is double normal levels, and management expects weak orders to persist through first-half 2023 as its dealers work down excess inventory. We tweak our home generator sales to a decline of 25% in 2023, which results in total company sales 4% lower year on year. Management provided an early outlook for 2023 but stopped short of providing specifics. Commentary included expectations of a "moderate" decline in home generator sales, resulting in a "modest" decline in total company sales. Longer term, we reiterate our view that home generators will see increased competition from new technologies, such as home batteries.

Management also elaborated on recent hiccups in its clean energy business. The bankruptcy of a key customer coupled with product quality issues resulted in revised sales guidance for this segment nearly 40% below original guidance. We view this as a material setback in Generac's clean energy endeavors and believe establishing a diversified customer base and manufacturing a reliable product will take longer than management's earlier expectations. Despite the setbacks, management reiterated its commitment to this business long term.

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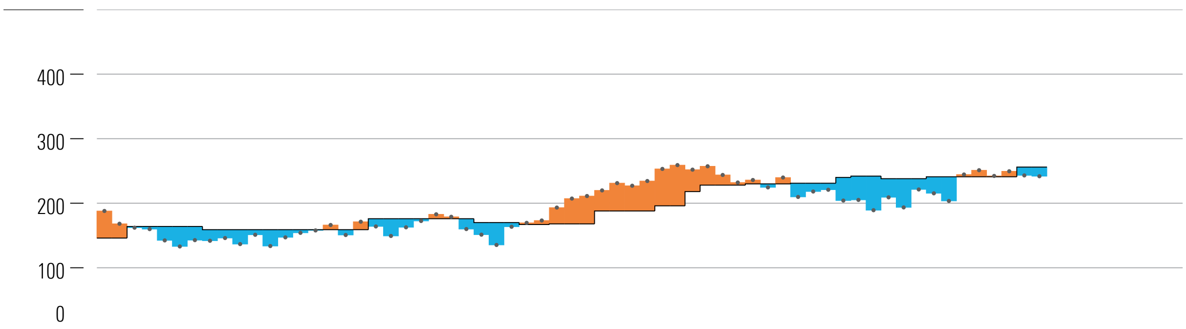
Competitors Price vs. Fair Value

Cummins Inc CMI



Fair Value: 256.00
7 Feb 2023 01:23, UTC

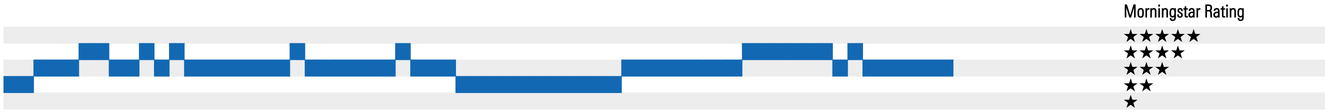
Last Close: 241.82

Over Valued

Under Valued

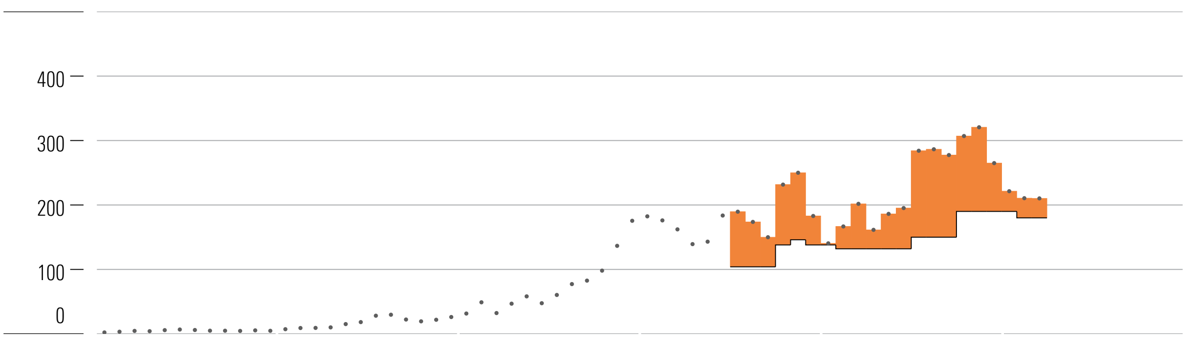
	2018	2019	2020	2021	2022	YTD
Price/Fair Value	0.84	1.02	1.21	0.94	1.01	0.94
Total Return %	-21.83	37.58	29.85	-1.48	13.84	0.45

Morningstar Rating



Total Return % as of 10 Mar 2023. Last Close as of 10 Mar 2023. Fair Value as of 7 Feb 2023 01:23, UTC.

Enphase Energy Inc ENPH



Last Close: 210.22

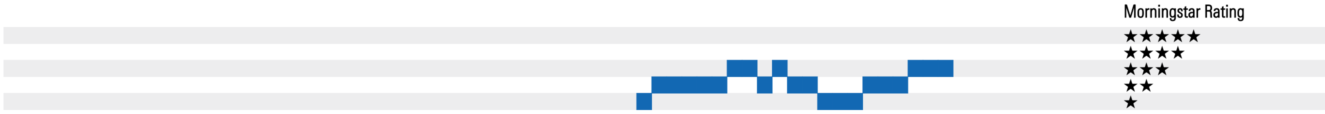
Fair Value: 180.00
8 Feb 2023 18:39, UTC

Over Valued

Under Valued

	2018	2019	2020	2021	2022	YTD
Price/Fair Value	—	—	—	1.33	1.39	1.17
Total Return %	96.27	452.43	571.53	4.26	44.83	-20.66

Morningstar Rating



Total Return % as of 10 Mar 2023. Last Close as of 10 Mar 2023. Fair Value as of 8 Feb 2023 18:39, UTC.

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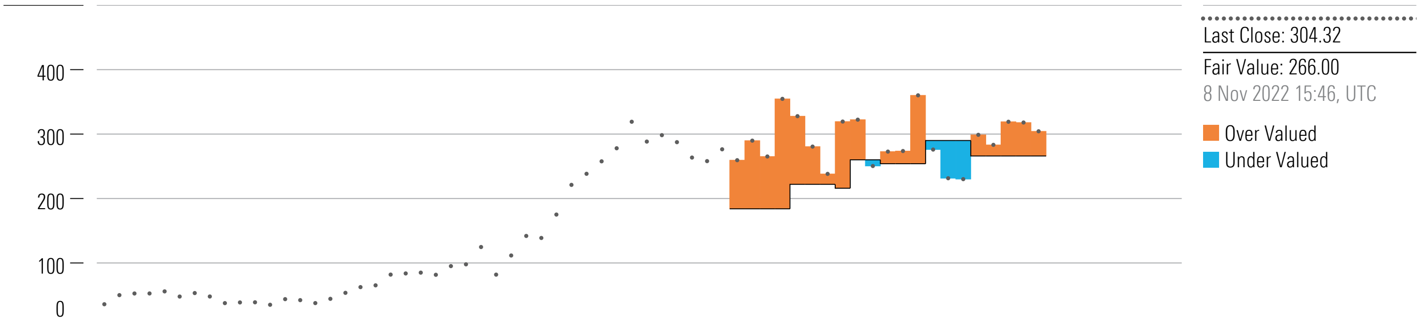
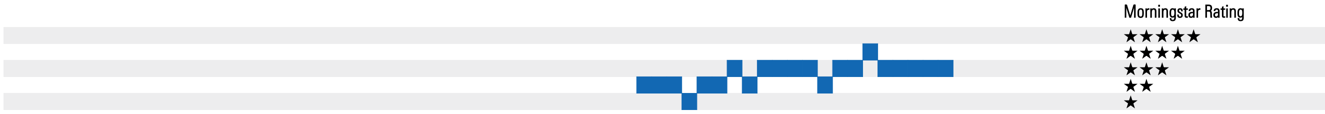
SolarEdge Technologies Inc SEDG



	2018	2019	2020	2021	2022	YTD	
	—	—	—	1.26	1.06	1.14	Price/Fair Value
	-6.52	170.91	235.60	-12.08	0.96	7.43	Total Return %



Total Return % as of 10 Mar 2023. Last Close as of 10 Mar 2023. Fair Value as of 8 Nov 2022 15:46, UTC.

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Generac Holdings Inc GNRC ★★★ 10 Mar 2023 22:17, UTC

Last Price	Fair Value Estimate	Price/FVE	Market Cap	Economic Moat™	Moat Trend™	Uncertainty	Capital Allocation	ESG Risk Rating Assessment[1]
113.16 USD 10 Mar 2023	124.00 USD 15 Feb 2023 20:57, UTC	0.91	7.00 USD Bil 10 Mar 2023	Narrow	Negative	High	Standard	1 Mar 2023 06:00, UTC

Morningstar Historical Summary

Financials as of 31 Dec 2022

Fiscal Year, ends 31 Dec	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	TTM
Revenue (USD Mil)	1,486	1,461	1,317	1,448	1,679	2,023	2,204	2,485	3,737	4,565	4,565	4,565
Revenue Growth %	26.3	-1.7	-9.8	9.9	16.0	20.5	8.9	12.7	50.4	22.1	22.1	22.1
EBITDA (USD Mil)	370	340	206	253	298	399	422	548	817	719	719	719
EBITDA Margin %	24.9	23.3	15.7	17.5	17.8	19.7	19.2	22.1	21.9	15.8	15.8	15.8
Operating Income (USD Mil)	351	288	220	203	251	357	374	481	743	568	568	568
Operating Margin %	23.7	19.8	16.7	14.0	14.9	17.7	17.0	19.3	19.9	12.4	12.4	12.4
Net Income (USD Mil)	175	175	78	96	159	220	253	349	533	350	350	350
Net Margin %	11.8	12.0	5.9	6.7	9.5	10.9	11.5	14.1	14.3	7.7	7.7	7.7
Diluted Shares Outstanding (Mil)	70	70	69	65	63	62	63	64	64	65	65	65
Diluted Earnings Per Share (USD)	2.51	2.49	1.12	1.47	2.53	3.54	4.03	5.48	8.30	5.42	5.42	5.42
Dividends Per Share (USD)	—	—	—	—	—	—	—	—	—	—	—	—

Valuation as of 28 Feb 2023

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Recent Qtr	TTM
Price/Sales	2.7	2.3	1.5	2.0	1.9	1.6	2.9	6.3	6.6	1.4	1.4	1.7
Price/Earnings	25.5	18.8	17.7	40.3	26.2	13.6	24.4	49.3	42.7	15.2	15.2	22.1
Price/Cash Flow	15.1	13.2	11.1	11.2	12.6	11.1	26.0	32.7	39.8	333.3	333.3	133.3
Dividend Yield %	—	—	—	—	—	—	—	—	—	—	—	—
Price/Book	15.1	7.2	4.0	6.2	6.5	4.4	6.7	11.6	12.6	2.7	2.7	3.3
EV/EBITDA	13.5	12.2	14.4	14.4	13.4	9.7	17.0	27.1	28.3	10.9	0.0	0.0

Operating Performance / Profitability as of 31 Dec 2022

Fiscal Year, ends 31 Dec	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	TTM
ROA %	10.3	9.5	4.3	5.3	8.2	9.9	10.0	11.8	13.2	7.0	7.0	7.0
ROE %	44.7	43.3	16.3	22.2	33.2	33.5	28.2	28.8	29.6	15.7	15.7	15.7
ROIC %	14.5	13.4	6.8	8.4	13.1	15.9	15.2	16.6	18.7	10.5	10.5	10.5
Asset Turnover	0.9	0.8	0.7	0.8	0.9	0.9	0.9	0.8	0.9	0.9	0.9	0.9

Financial Leverage

Fiscal Year, ends 31 Dec	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Recent Qtr	TTM
Debt/Capital %	78.8	68.8	69.0	71.5	62.1	53.5	48.7	42.4	36.0	42.7	42.7	—
Equity/Assets %	17.6	26.0	26.2	21.5	27.3	31.3	38.7	43.0	45.4	43.7	43.7	—
Total Debt/EBITDA	3.2	3.2	5.1	4.2	3.1	2.3	2.5	1.9	1.6	2.4	2.4	—
EBITDA/Interest Expense	6.8	7.2	4.8	5.7	7.0	9.8	10.2	16.6	24.8	13.1	13.1	13.1

Morningstar Analyst Historical/Forecast Summary as of 15 Feb 2023

Financials

Fiscal Year, ends 12-31-2022	2021	2022	Estimates 2023	2024	2025
Revenue (USD Mil)	3,737	4,561	4,163	4,584	4,867
Revenue Growth %	50.4	22.1	-8.7	10.1	6.2
EBITDA (USD Mil)	861	825	749	907	1,018
EBITDA Margin %	23.1	18.1	18.0	19.8	20.9
Operating Income (USD Mil)	743	565	553	702	799
Operating Margin %	19.9	12.4	13.3	15.3	16.4
Net Income (USD Mil)	619	539	353	460	533
Net Margin %	16.6	11.8	8.5	10.0	11.0
Diluted Shares Outstanding (Mil)	64	65	63	63	63
Diluted Earnings Per Share(USD)	9.63	8.33	5.60	7.30	8.46
Dividends Per Share(USD)	0.00	0.00	0.00	0.00	0.00

Forward Valuation

	2021	2022	Estimates 2023	2024	2025
Price/Sales	6.0	1.4	1.7	1.5	1.4
Price/Earnings	36.5	12.1	20.2	15.5	13.4
Price/Cash Flow	75.4	-149.7	9.3	14.4	11.7
Dividend Yield %	—	—	—	—	—
Price/Book	10.2	2.9	2.7	2.3	2.0
EV/EBITDA	26.9	9.5	11.5	9.5	8.5

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Appendix
Historical Morningstar Rating

Generac Holdings Inc GNRC 10 Mar 2023 22:17, UTC

Dec 2023 —	Nov 2023 —	Oct 2023 —	Sep 2023 —	Aug 2023 —	Jul 2023 —	Jun 2023 —	May 2023 —	Apr 2023 —	Mar 2023 ★★★	Feb 2023 ★★★	Jan 2023 ★★★
Dec 2022 ★★★★	Nov 2022 ★★★	Oct 2022 ★★★	Sep 2022 ★★★★	Aug 2022 ★★★	Jul 2022 ★★★	Jun 2022 ★★★★	May 2022 ★★★	Apr 2022 ★★★★	Mar 2022 ★★★	Feb 2022 ★★★	Jan 2022 ★★★★
Dec 2021 ★★★	Nov 2021 ★★	Oct 2021 ★	Sep 2021 ★★	Aug 2021 —	Jul 2021 —	Jun 2021 —	May 2021 —	Apr 2021 —	Mar 2021 —	Feb 2021 —	Jan 2021 —
Dec 2020 —	Nov 2020 —	Oct 2020 —	Sep 2020 —	Aug 2020 —	Jul 2020 —	Jun 2020 —	May 2020 —	Apr 2020 —	Mar 2020 —	Feb 2020 —	Jan 2020 —
Dec 2019 —	Nov 2019 —	Oct 2019 —	Sep 2019 —	Aug 2019 —	Jul 2019 —	Jun 2019 —	May 2019 —	Apr 2019 —	Mar 2019 —	Feb 2019 —	Jan 2019 —
Dec 2018 —	Nov 2018 —	Oct 2018 —	Sep 2018 —	Aug 2018 —	Jul 2018 —	Jun 2018 —	May 2018 —	Apr 2018 —	Mar 2018 —	Feb 2018 —	Jan 2018 —

Cummins Inc CMI 10 Mar 2023 22:17, UTC

Dec 2023 —	Nov 2023 —	Oct 2023 —	Sep 2023 —	Aug 2023 —	Jul 2023 —	Jun 2023 —	May 2023 —	Apr 2023 —	Mar 2023 ★★★	Feb 2023 ★★★	Jan 2023 ★★★
Dec 2022 ★★★	Nov 2022 ★★★	Oct 2022 ★★★	Sep 2022 ★★★★	Aug 2022 ★★★	Jul 2022 ★★★★	Jun 2022 ★★★★	May 2022 ★★★★	Apr 2022 ★★★★	Mar 2022 ★★★★	Feb 2022 ★★★★	Jan 2022 ★★★
Dec 2021 ★★★	Nov 2021 ★★★	Oct 2021 ★★★	Sep 2021 ★★★	Aug 2021 ★★★	Jul 2021 ★★★	Jun 2021 ★★★	May 2021 ★★	Apr 2021 ★★	Mar 2021 ★★	Feb 2021 ★★	Jan 2021 ★★
Dec 2020 ★★	Nov 2020 ★★	Oct 2020 ★★	Sep 2020 ★★	Aug 2020 ★★	Jul 2020 ★★	Jun 2020 ★★★	May 2020 ★★★	Apr 2020 ★★★	Mar 2020 ★★★★	Feb 2020 ★★★	Jan 2020 ★★★
Dec 2019 ★★★	Nov 2019 ★★★	Oct 2019 ★★★	Sep 2019 ★★★	Aug 2019 ★★★★	Jul 2019 ★★★	Jun 2019 ★★★	May 2019 ★★★	Apr 2019 ★★★	Mar 2019 ★★★	Feb 2019 ★★★	Jan 2019 ★★★
Dec 2018 ★★★★	Nov 2018 ★★★	Oct 2018 ★★★★	Sep 2018 ★★★	Aug 2018 ★★★	Jul 2018 ★★★★	Jun 2018 ★★★★	May 2018 ★★★	Apr 2018 ★★★	Mar 2018 ★★★	Feb 2018 ★★	Jan 2018 ★★

Enphase Energy Inc ENPH 10 Mar 2023 22:17, UTC

Dec 2023 —	Nov 2023 —	Oct 2023 —	Sep 2023 —	Aug 2023 —	Jul 2023 —	Jun 2023 —	May 2023 —	Apr 2023 —	Mar 2023 ★★★	Feb 2023 ★★★	Jan 2023 ★★★
Dec 2022 ★★	Nov 2022 ★★	Oct 2022 ★★	Sep 2022 ★	Aug 2022 ★	Jul 2022 ★	Jun 2022 ★★	May 2022 ★★	Apr 2022 ★★★	Mar 2022 ★★	Feb 2022 ★★★	Jan 2022 ★★★
Dec 2021 ★★	Nov 2021 ★★	Oct 2021 ★★	Sep 2021 ★★	Aug 2021 ★★	Jul 2021 ★	Jun 2021 —	May 2021 —	Apr 2021 —	Mar 2021 —	Feb 2021 —	Jan 2021 —
Dec 2020 —	Nov 2020 —	Oct 2020 —	Sep 2020 —	Aug 2020 —	Jul 2020 —	Jun 2020 —	May 2020 —	Apr 2020 —	Mar 2020 —	Feb 2020 —	Jan 2020 —
Dec 2019 —	Nov 2019 —	Oct 2019 —	Sep 2019 —	Aug 2019 —	Jul 2019 —	Jun 2019 —	May 2019 —	Apr 2019 —	Mar 2019 —	Feb 2019 —	Jan 2019 —
Dec 2018 —	Nov 2018 —	Oct 2018 —	Sep 2018 —	Aug 2018 —	Jul 2018 —	Jun 2018 —	May 2018 —	Apr 2018 —	Mar 2018 —	Feb 2018 —	Jan 2018 —

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Dec 2023 —	Nov 2023 —	Oct 2023 —	Sep 2023 —	Aug 2023 —	Jul 2023 —	Jun 2023 —	May 2023 —	Apr 2023 —	Mar 2023 ★★★	Feb 2023 ★★★	Jan 2023 ★★★
Dec 2022 ★★★	Nov 2022 ★★★	Oct 2022 ★★★★	Sep 2022 ★★★	Aug 2022 ★★★	Jul 2022 ★★	Jun 2022 ★★★	May 2022 ★★★	Apr 2022 ★★★	Mar 2022 ★★★	Feb 2022 ★★	Jan 2022 ★★★
Dec 2021 ★★	Nov 2021 ★★	Oct 2021 ★	Sep 2021 ★★	Aug 2021 ★★	Jul 2021 ★★	Jun 2021 —	May 2021 —	Apr 2021 —	Mar 2021 —	Feb 2021 —	Jan 2021 —
Dec 2020 —	Nov 2020 —	Oct 2020 —	Sep 2020 —	Aug 2020 —	Jul 2020 —	Jun 2020 —	May 2020 —	Apr 2020 —	Mar 2020 —	Feb 2020 —	Jan 2020 —
Dec 2019 —	Nov 2019 —	Oct 2019 —	Sep 2019 —	Aug 2019 —	Jul 2019 —	Jun 2019 —	May 2019 —	Apr 2019 —	Mar 2019 —	Feb 2019 —	Jan 2019 —
Dec 2018 —	Nov 2018 —	Oct 2018 —	Sep 2018 —	Aug 2018 —	Jul 2018 —	Jun 2018 —	May 2018 —	Apr 2018 —	Mar 2018 —	Feb 2018 —	Jan 2018 —

Research Methodology for Valuing Companies

Overview

At the heart of our valuation system is a detailed projection of a company's future cash flows, resulting from our analysts' research. Analysts create custom industry and company assumptions to feed income statement, balance sheet, and capital investment assumptions into our globally standardized, proprietary discounted cash flow, or DCF, modeling templates. We use scenario analysis, 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

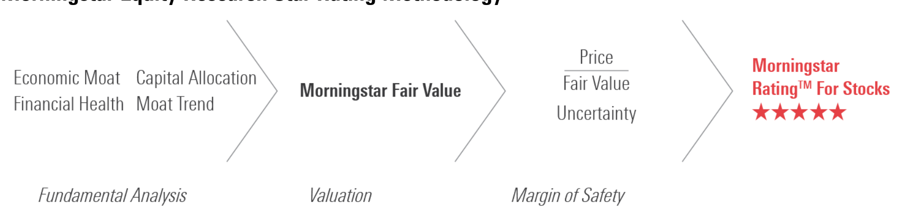
Once a company's marginal ROIC hits its cost of capital, we calculate a continuing value, using a standard perpetuity formula. At perpetuity, we assume that any growth or decline or investment in the business neither creates nor destroys value and that any new investment provides a return in line with 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 is designed to capture the range of potential outcomes for a company's intrinsic value. This rating is used to assign the margin of safety required before investing, which in turn explicitly drives our stock star rating system. The Uncertainty Rating is

Morningstar Equity Research Star Rating Methodology



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Research Methodology for Valuing Companies

aimed at identifying the confidence we should have in assigning a fair value estimate for a given stock.

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

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

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

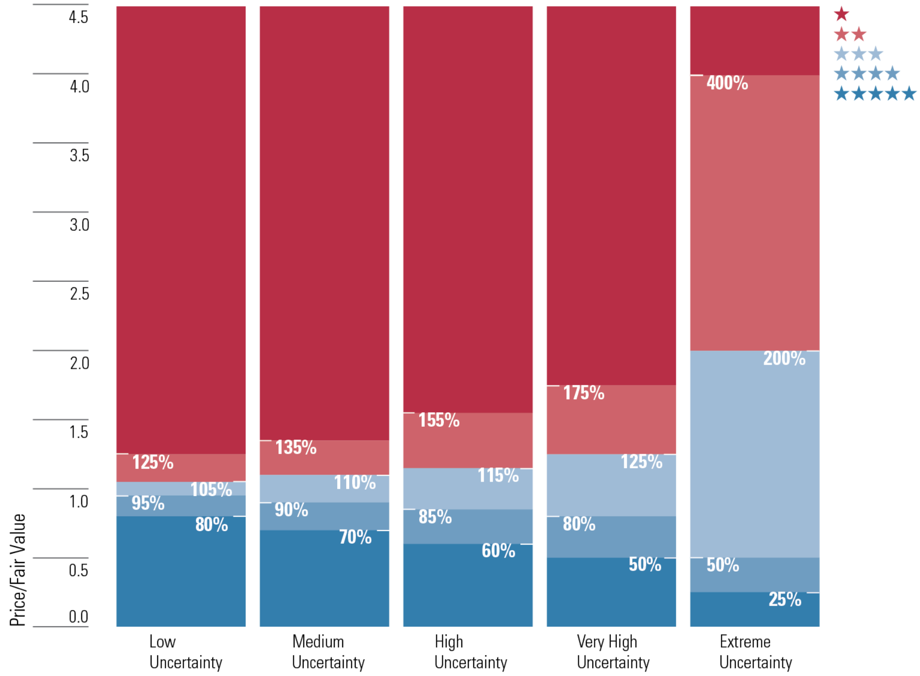
	Margin of Safety	
Qualitative Analysis Uncertainty Ratings	★★★★★Rating	★Rating
Low	20% Discount	25% Premium
Medium	30% Discount	35% Premium
High	40% Discount	55% Premium
Very High	50% Discount	75% Premium
Extreme	75% Discount	300% Premium

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

4. Market Price

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

Morningstar Equity Research Star Rating Methodology



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

Morningstar Star Rating for Stocks

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

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

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

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

The Morningstar Star Ratings for stocks are defined below:

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

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

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

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

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

Other Definitions

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

Research Methodology for Valuing Companies

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

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

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

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

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

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

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

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

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

Risk Warning

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

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