Morningstar's Quantitative Equity Ratings

Questions and Answers
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What are the new quantitative equity ratings?

Morningstar's quantitative equity ratings are forward-looking, quantitatively derived ratings based on Morningstar's analyst-driven equity ratings, including Morningstar's Fair Value Estimate, Morningstar® Economic Moat™ Rating, and Uncertainty Rating as well as financial data points such as earnings yield, average daily volume, and total return volatility, among others. The quantitative ratings are relative to the universe of rated companies as well as a company's sector and country.

How are the quantitative ratings calculated?

The ratings are generated by a statistical model that is based on Morningstar's proprietary, analyst-driven equity ratings and financial data points. The quantitative ratings are calculated daily and derived from the analyst-driven ratings of a company's peers as determined by statistical algorithms.

What are the different quantitative ratings?

The new ratings are:

- Quantitative Fair Value Estimate: Comparable to Morningstar's Fair Value Estimate for stocks, which measures a company's intrinsic value based on a discounted cash flow model, and represents the per share value of a company's equity. The measure is expressed in the local currency.
- Quantitative Valuation: Defined as the ratio of a company's Quantitative Fair Value Estimate to its last market close price, and similar to the analyst-driven Fair Value Estimate to last market close price ratio.
- Quantitative Uncertainty: Describes the level of uncertainty around the Quantitative Fair Value Estimate, comparable to the Uncertainty Rating for the analyst Fair Value Estimate.
- Quantitative Economic Moat: Corresponds to Morningstar's Economic Moat rating, which measures a company's sustainable competitive advantages.
- Quantitative Financial Health: Based on Morningstar's proprietary measure of the likelihood of financial distress.

How many companies will have the quantitative ratings?

Morningstar has assigned quantitative ratings to 28,000 companies globally.

How many companies currently have analyst ratings?

Morningstar has 120 equity analysts who provide analyst ratings for about 1,700 companies globally.

Will the quantitative equity ratings replace the qualitative analyst ratings?

No. The quantitative equity ratings are generated using Morningstar's analyst ratings as inputs to the statistical model; analyst coverage is required for the model to work. The quantitative ratings complement Morningstar's existing analyst ratings and analysis, and serve as a second

opinion for investors to consider when evaluating a stock. We believe that having multiple perspectives will allow investors to make better, more informed decisions.

Why are the quantitative and qualitative ratings different for some companies?
Quantitative ratings may differ from analyst ratings because a company's analyst-driven ratings can significantly differ from other companies in its peer group. If a company is unique and has few comparable companies, the statistical model may generate quantitative ratings that differ from the analyst ratings, as analyst input would more easily recognize the true characteristics of a company. Alternatively, the statistical model may incorporate new financial data that hasn't yet been incorporated into the analyst rating.

What is the ratings scale for the new quantitative equity ratings?
Four of the ratings have their own numerical score range that maps to an attribute and is expressed as the following: Quantitative Valuation, expressed as Overvalued, Fairly Valued, or Undervalued; Quantitative Uncertainty, expressed as Low, Medium, High, Very High, or Extreme; Quantitative Economic Moat, expressed as None, Narrow, or Wide; and Quantitative Financial Health, expressed as Weak, Moderate, or Strong. The Quantitative Fair Value Estimate is expressed in the local currency.

Have you tracked the performance of the quantitative equity ratings?
Through back-testing we've conducted, we found that the quantitative equity ratings perform comparably to our analyst-driven ratings. The results of this back-testing showed that the cheapest stocks within our quantitative ratings universe outperformed the most expensive stocks, as measured on a rolling two-year basis from 2002 to 2012. Specifically, we measured the cheapest 10 percent of stocks on each day in this period and looked at the excess return, or alpha, these stocks generated in the two years after being in the cheapest decile. We then took the average of the alpha of all those stocks. We performed the same calculation on the most expensive 10 percent of stocks on each day of the 10-year period. We found that the cheapest decile of stocks, as determined by our quantitative ratings, generated 10 percent more actual excess return under the capital asset pricing model (CAPM) than the most expensive decile of stocks at a two-year time horizon over the 10-year time period we evaluated.

What does the new Quantitative Equity Research Report contain?
The new Quantitative Equity Research Report includes Morningstar's quantitative equity ratings, along with comparisons to aggregate scores for the entire universe of rated companies as well as a company's sector and country. The report also includes five years of historical financial data and a Competitive Advantage Trend chart, which displays the historical values of the Quantitative Economic Moat over the last seven years.

Which products will carry the quantitative equity ratings and reports and when?
The quantitative equity ratings and reports are available through Morningstar data feeds, and the ratings are available in Morningstar Direct℠, our global investment analysis platform for institutional investors. Morningstar plans to add the quantitative equity ratings and reports to

Morningstar Office℠, our investment planning and research platform for financial advisors, and Morningstar® Analyst Research Center℠ for stocks within Morningstar® Advisor Workstation℠ later this year. The quantitative ratings for companies for which Morningstar doesn't provide analyst coverage will be available later this year through the Premium Membership on individual investor website Morningstar.com®.

What is the pricing structure for the quantitative equity ratings?
The pricing varies for each of the products that carry the quantitative equity ratings and reports.

Morningstar's quantitative equity ratings are subjective in nature and should not be used as the sole basis for investment decisions. Ratings involve unknown risks and uncertainties that may cause Morningstar's expectations not to occur or to differ significantly from what was expected. Morningstar does not represent its ratings to be guarantees nor should they be viewed as an assessment of a stock's creditworthiness.