

The Morningstar Rating™ for Funds

Investor Benefits

- ▶ Is sensitive to manager skill and fund quality and less sensitive to recent overall performance of the category
- ▶ Gives investors the ability to quickly and easily identify funds that are worthy of further research, those with superior risk-adjusted returns
- ▶ Separation of quantitative research (Morningstar Rating) from qualitative research (Morningstar Analyst Rating) reduces complexity and introduces greater transparency to fund assessment.

Background

The Morningstar Rating™ for funds, often called the “star rating”, debuted in 1985 and was quickly embraced by investors and advisors.

Using an easily-identifiable scale from one to five stars, Morningstar Ratings™ have helped investors and their advisors make more fully-informed decisions about fund managers and their funds, and build and manage better investment portfolios.

What It Means for Investors

The Morningstar Rating™ is a quantitative assessment of a fund’s past performance—both return and risk—as measured from one to five stars. It uses focused comparison groups to better measure fund manager skill. As always, the Morningstar Rating™ is intended for use as the first step in the fund evaluation process. A high rating alone is not a sufficient basis for investment decisions.

Morningstar Risk-Adjusted Return

The Morningstar Rating™ is based on a fund’s Morningstar Risk-Adjusted Return (‘MRAR’) measure, the foundation of our global quantitative research since 2002.

MRAR is motivated by ‘expected utility’ theory, whereby an investor ranks alternative portfolios using the mathematical expectation of a function (called the ‘utility’ function) of the end value of each portfolio. With this basis in expected utility theory, investors are firstly, more concerned about a possible poor outcome than an unexpectedly good outcome; and secondly, willing to give up some portion of their expected return in exchange for greater certainty of return. The rating accounts for all variations in a fund’s monthly performance, with more emphasis on downward variations. It rewards consistent performance and reduces the possibility of strong short-term performance masking the inherent risk of a fund.

Morningstar Categories

A fund’s Morningstar Rating™ is relative to the MRAR measures of other funds in the same peer group. This makes it even more important that peer groups are constructed appropriately.

Morningstar Categories are therefore built to create well-defined groups, in which constituent funds can be considered direct alternatives. These Morningstar Categories are based on our global Style Box model, which classifies funds according to the market-cap and investment style of the securities in which funds invest.

Multiple Share Classes

Although different share classes of a fund share the same portfolio, each share class is evaluated separately because their individual expense structures produce different returns. For the rating distribution scale, however, a single portfolio counts only once, regardless of the total number of share classes. This prevents a single portfolio from dominating any portion of the rating scale.

Qualitative Research

While Morningstar Ratings are solely quantitative measures, our commitment to forward-looking qualitative research remains, as we believe this is critical to helping investors and advisors make informed decisions about fund managers’ capabilities.

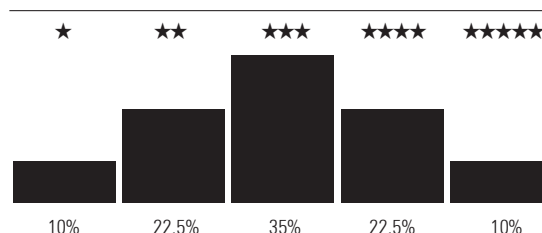
The separation of qualitative research – in the form of the Morningstar Analyst Rating – from quantitative research – the Morningstar Rating – reduces complexity, and introduces greater transparency into the intellectual property Morningstar provides for assessing past performance and future prospects.

The Morningstar Analyst Rating – from ‘Gold’ to ‘Negative’ – provides a clear and actionable distillation of our fund analysts’ views about an investment strategy.

The accompanying report and commentaries focus on key issues and risks, while extensive, regularly-updated holdings, valuation multiples, and performance data offer meaningful insights into current and future performance drivers and outcomes. Readers will understand how a fund manager’s philosophy and process translate into security selection, and whether or not the fund manager is staying true to label.

How Does It Work?

Funds are ranked by their Morningstar Risk-Adjusted Return scores and stars are assigned using the following scale:



These mixes reward consistent good performance over an extended timeframe, and are less subject to short-term variations in fund performance.

Funds are rated for up to three periods—the trailing three-, five-, and 10-years. For a fund that does not change categories during the evaluation period, the overall rating is calculated using the following weights:

Age of fund	Overall rating
At least three years, but less than five	100% three-year rating
At least five years, but less than 10	60% five-year rating 40% three-year rating
At least 10 years	50% 10-year rating 30% five-year rating 20% three-year rating

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Note:

The Morningstar Category™ classification system for funds is designed to help investors make meaningful comparisons between investment funds. Morningstar groups funds which can be reasonably considered to be close investment alternatives, and for which performance and other statistical measures, such as fees, are comparable. The Morningstar Categories for funds in the Europe/Asia/Africa universe were first established in the early years of the UCITS (Undertaking for Collective Investment in Transferable Securities) Directive to help investors make meaningful comparisons between funds domiciled in European markets, major cross-border Asian markets where material numbers of European UCITS funds are available (principally Hong Kong, Singapore and Taiwan), South Africa, and selected other Asian and African markets where Morningstar believes it is of benefit to investors for the funds to be included in the EAA classification system. The Morningstar Categories for funds in China were established to help investors make meaningful comparisons between funds domiciled in China. It should be noted that Morningstar has adopted the same calculation methodology for both category systems since 2010.

Morningstar® Analyst Rating™ for Funds

Investor Benefits

- ▶ **Investors First.** Morningstar always conducts its research with the end investor in mind.
- ▶ **Long History.** Morningstar has produced written, analyst-driven research on funds dating back to 1986.
- ▶ **Independence.** Morningstar does not charge fund companies to be rated, nor do fund companies commission research or ratings. Morningstar's decision to report on a fund is determined solely by the analyst team.
- ▶ **Relevant Coverage.** The analyst team bases coverage decisions on asset size, investment merit, and market demand.
- ▶ **Full Spectrum Scale.** The Morningstar Analyst Rating has been developed to identify not only good funds, but also mediocre and poor investments through Neutral and Negative ratings.
- ▶ **Local and Global Expertise.** Morningstar has a team of more than 100 fund analysts worldwide.

Background

For more than 25 years, Morningstar analysts have been providing independent, qualitative written research on mutual funds. The research has always aimed to provide insights into funds' sustainable advantages and forward-looking perspective into how they might behave in a variety of market environments, helping investors choose superior funds, maintain realistic performance expectations, and manage their portfolios more wisely. The Morningstar Analyst Rating™ for funds is the latest development in the evolution of Morningstar's global fund research capabilities. While Morningstar's fund analysts worldwide have long shared a common research philosophy, the Analyst Rating now brings the teams' research processes together into a single, harmonized global rating system.

Morningstar Analyst Rating for Funds

Unlike the backward-looking Morningstar Rating™ (often referred to as the "star rating"), which assigns 1 to 5 stars based on a fund's past risk- and load-adjusted returns versus category peers, the Analyst Rating is the summary expression of Morningstar's forward-looking analysis of a fund. Morningstar analysts assign the ratings on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating.

The Analyst Rating is based on the analyst's conviction in the fund's ability to outperform its peer group and/or relevant benchmark on a risk-adjusted basis over the long term. If a fund receives a positive rating of Gold, Silver, or Bronze, it means Morningstar analysts think highly of the fund and expect it to outperform over a full market cycle of at least five years. The Analyst Rating is not a market call, and it is not meant to replace investors' due-diligence process. It cannot assess whether a fund is the right fit for a particular portfolio and risk tolerance. It is intended to supplement investors'

and advisors' own work on funds and, along with written analysis, provide forward-looking perspective into a fund's abilities. It picks up where commonly watched measures of the past leave off.

Research Methodology: The Five Pillars

Morningstar evaluates funds based on five key pillars—Process, Performance, People, Parent, and Price—which its analysts believe lead to funds that are more likely to outperform over the long term on a risk-adjusted basis.

Process: What is the fund's strategy and does management have a competitive advantage enabling it to execute the process well and consistently over time?

Performance: Is the fund's performance pattern logical given its process? Has the fund earned its keep with strong risk-adjusted returns over relevant time periods?

People: What is Morningstar's assessment of the manager's talent, tenure, and resources?

Parent: What priorities prevail at the firm? Stewardship or salesmanship?

Price: Is the fund a good value proposition compared with similar funds sold through similar channels?

The approach notably puts only partial weight on past performance and backward-looking risk measures and does not dismiss funds that have underperformed or have limited track records. Analysts consider numeric and qualitative factors, but the ultimate view on the individual pillars and how they come together is driven by the analyst's overall assessment and overseen by an Analyst Ratings Committee. The approach serves not as a formula but as a robust analytical framework ensuring consistency across Morningstar's global coverage universe.

Morningstar Analyst Rating for Funds



Gold

Best-of-breed fund that distinguishes itself across the five pillars and has garnered the analysts' highest level of conviction.



Silver

Fund with notable advantages across several, but perhaps not all, of the five pillars—strengths that give the analysts a high level of conviction.



Bronze

Fund with advantages that outweigh the disadvantages across the five pillars and with sufficient level of analyst conviction to warrant a positive rating.

Neutral

Fund that isn't likely to deliver standout returns but also isn't likely to significantly underperform, according to the analysts.

Negative

Fund that has at least one flaw likely to significantly hamper future performance and that is considered by analysts an inferior offering to its peers.