

Morningstar Analyst Rating™ for Funds Methodology Document

Fund Research Group
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MORNINGSTAR®

Overview

Morningstar has conducted qualitative, analyst-driven research on mutual funds since 1986. An essential complement to our database of investment information and our suite of quantitative research tools, such as the Morningstar Rating™ and the Morningstar Style Box™, Morningstar fund analysis has always had a focus on helping the user make better investment decisions. The purpose of Morningstar's qualitative, analyst-driven research is to:

- ▶ Identify those funds which we believe should be able to outperform a relevant benchmark and/or peer group, within the context of the level of risk taken, over the longer term.
- ▶ Help investors and fund selectors understand the suitability of funds for an intended purpose and give them clear expectations for the likely behaviour of funds in different market environments.
- ▶ Place a fund in comparative and historical context in terms of criteria such as expenses, manager tenure, investment style, and asset size.
- ▶ Monitor funds for changes that could materially affect the suitability and investment opinion.

Business Model

Morningstar is committed to the principle of independence. Morningstar does not charge fund companies to be rated, nor do fund companies commission ratings. Morningstar commercialises its fund research by including ratings and reports in various products and services and through licensing its intellectual property.

Fund analysts produce their analysis for the benefit of investors, advisers, and institutions, not fund companies. Morningstar separates its analyst team from commercial activities in order to avoid any real or perceived conflicts of interest. Analysts are focused on providing in-depth, accurate, and useful analysis. This means that Morningstar analysts will deliver their genuine opinion of a fund, even when it is negative.

Coverage Decision

Morningstar's goal is to ensure that investors and fund selectors have access to its qualitative analysts' opinions on a broad spectrum of funds that are important to them and meet their needs for portfolio construction. Hence, coverage is not determined by quantitative screens on performance or limited only to a "best of breed" universe.

Analyst teams have ample discretion in determining their coverage universe. In determining coverage, analysts evaluate fund net assets under management and average daily trading volume as a gauge of investor interest, but they also cover new and/or small funds if they believe investor interest merits doing so or if they believe investors would otherwise benefit from learning more about a fund. In addition, Morningstar frequently canvases its analyst team, internal consulting units, and external users of our research in an effort to identify offerings that might merit coverage.

The Morningstar Analyst Rating™ for Funds

The Morningstar Analyst Rating™ for funds is the summary expression of our forward-looking analysis of a fund. Morningstar Analyst Ratings are assigned globally on a five-tier scale running from Gold to Negative. The top three ratings, Gold, Silver, and Bronze, all indicate that our analysts think highly of a fund; the difference between them corresponds to differences in the level of analyst conviction in a fund's ability to outperform its benchmark and peers through time, within the context of the level of risk taken. The Analyst Rating does not express a view on a given asset class or peer group; rather, it seeks to evaluate each fund within the context of its objective, an appropriate benchmark, and peer group.

The ratings should be interpreted as follows:

Gold These funds are our highest-conviction recommendations and stand out as best of breed for their investment mandate. By giving a fund a Gold rating, we are expressing an expectation that it will outperform its relevant performance benchmark and/or peer group within the context of the level of risk taken over the long term (defined as a full market cycle or at least five years). To earn a Gold rating, a fund must distinguish itself across the five pillars that are the basis for our analysis. That is, a Gold-rated fund should have a seasoned, talented, and successful manager or management team; a sound, thoughtful process that has been executed skilfully and consistently; a portfolio that's in harmony with the stated process and that's capable of delivering a reward that compensates investors for the risks it takes; reasonable expenses; and a strong parent organisation that is focused on responsible stewardship of investor assets.

Silver Funds that fall in this category are high-conviction recommendations. They have notable advantages across several, but perhaps not all, of the five pillars. With those fundamental strengths, we expect these funds will outperform their relevant performance benchmark and/or

peer group within the context of the level of risk taken over the long term (defined as a full market cycle or at least five years). While these are worthy funds with many positive features, they don't necessarily rise to the standard of best in breed. Funds rated Silver may be working their way up our list of recommended picks as we gain more familiarity and conviction in key pillars or working their way down based on degradation within specific pillars.

Bronze These funds have advantages that clearly outweigh any disadvantages across the pillars, giving us the conviction to award them a positive rating. As is the case with any fund receiving a positive rating, we expect these funds to beat their relevant performance benchmark and/or peer group within the context of the level of risk taken over a full market cycle (or at least five years). Funds rated Bronze may be working their way up the ratings scale as we gain more familiarity and conviction in key pillars or working their way down based on degradation within specific pillars.

Neutral These are funds in which we don't have a strong positive or negative conviction. In our judgment, they aren't likely to deliver standout returns, but they aren't likely to seriously underperform their relevant performance benchmark and/or peer group either. A fund that is overly benchmark-conscious could receive this rating as long as its fees are reasonable enough to give it a chance of keeping up with the average fund in the category or a competing index fund. A promising but unproven fund may also receive this rating until we see further evidence that it has the potential to outperform.

Negative These funds possess at least one flaw that we believe is likely to significantly hamper future performance, such as high fees or an unstable management team. Because of these faults, we believe these funds are inferior to most competitors and will likely underperform their relevant performance benchmark and/or peer group, within the context of the level of risk taken, over a full market cycle. For example, a fund that combines an overly benchmark-conscious strategy with high fees could receive this rating because its strategy lends itself to underperformance.

Morningstar may also use two other designations in place of a rating:

Under Review This designation means that a change at a rated fund requires further review to determine the impact on the rating.

Not Ratable This designation means either that a fund has failed to provide sufficient transparency to determine a rating, or that we are providing information on a new strategy where investors require guidance as to suitability, but there is not yet sufficient information to rate the fund.

Methodology

In more than two decades of fund research, Morningstar's global analyst team has identified five key areas that we believe are crucial to predicting the future success of funds: People, Parent, Process, Performance, and Fees. These five pillars form the spine of our research approach and we evaluate each of them when assessing a fund. In so doing, we not only evaluate each pillar, but also the interaction between them, which we believe is crucial to understanding a fund's overall merit.

People

The overall quality of a fund's investment team is a significant key to a fund's ability to deliver superior performance relative to its benchmark and/or peers. Evaluating a fund's investment team requires that analysts assess several relevant items.

It's extremely important to establish which individuals make the key decisions on the fund; if there is more than one person in charge, how conflicts are resolved; which resources directly support their work on the strategy; and which resources they access that are not part of the team.

The relevant unit(s) are then judged along several axes:

- ▶ experience & ability
- ▶ stability
- ▶ fit & structure
- ▶ manager workload
- ▶ communication/information flow
- ▶ alignment of interests

Process

Morningstar analysts are agnostic to a manager's overall style, meaning that for equity managers, we do not prefer value to growth or momentum, or vice versa. For fixed-income managers both high-quality and credit-sensitive styles are viable. For multi-asset class funds, a wide range of approaches to asset allocation can succeed. We look

Analyst Rating Spectrum Morningstar's Analyst Ratings are qualitative, forward-looking visual representations of the analyst team's view of a fund's potential to succeed.

 Gold	 Silver	 Bronze	Neutral	Negative
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for funds with a performance objective and investment process (for both security selection and portfolio construction) that is sensible, clearly defined, and repeatable. It must also be implemented effectively. In addition, the portfolio should be constructed in a manner that is consistent with the investment process and performance objective. We seek to understand the context in which managers think about risk and how this is expressed when constructing the portfolio. Our analysts make extensive use of Morningstar's global database and holdings-based analytical capabilities to evaluate the portfolio. We look for funds with a process distinctive enough to generate standout results in the future.

More specifically, we seek to understand:

- ▶ the investment philosophy that underpins the fund;
- ▶ the key "edge" of the process as executed by the manager;
- ▶ the fit of the process with the resources backing the fund and with the size of the asset base tied to the strategy (including the fund under review and any other vehicles);
- ▶ the risks entailed in the process, from a portfolio-bias point of view and from an ability-to-execute point of view;
- ▶ our expectations for performance in different market environments assuming the process is adhered to;
- ▶ whether or not we believe the process is capable of adding value across the cycle versus the relevant benchmark and/or peer group on a risk-adjusted basis;
- ▶ the suitability of the fund for different types of investors given the risks we would expect to see in its portfolio.

Parent

We believe the parent organisation is of utmost importance in evaluating funds. Although other factors may have more immediate impact, they would not be sustainable without backing from the fund firm. Further, the fund firm and its management set the tone for key elements of our evaluation, including capacity management, risk management, recruitment and retention of talent, and incentive pay. Beyond these operational areas, we prefer firms that have a culture of stewardship and put investors first to those that are too heavily weighted to salesmanship. The former tend to operate within their circle of competence, do a good job of aligning manager interests with those of funds owners, charge reasonable fees, communi-

cate well with fund owners, and treat fund owners' capital as if it were their own. The latter might be characterised by their view of fund investors as sales opportunities—they tend to offer faddish products in an attempt to gather assets, and have higher charges and incentive programs that do a poor job of aligning managers' interests with those of fund investors. Although relatively few firms fall obviously at one extreme or another, determining where a fund company falls on the spectrum is a key part of our research approach. In markets where Morningstar issues Stewardship Grades to fund firms, the parent assessment performed for the Stewardship Grade will form the basis of this evaluation.

Key areas of evaluation include:

- ▶ recruitment and retention of talent
- ▶ organisational structure
- ▶ capacity management
- ▶ organisational and business strategy
- ▶ alignment of interests with fund investors
- ▶ regulatory compliance

For closed-end funds, our assessment doesn't stop with the parent. We also consider the board of directors and its actions as a steward of shareholder capital. We look to see whether or not directors have acted in the best interests of shareholders. Our evaluation covers:

- ▶ Tenure across the board – we like to see a mix of longer-serving directors with more recent appointments, as the latter bring a fresh perspective.
- ▶ Directors' shareholdings – we believe in an alignment of interests between directors and their shareholders.
- ▶ Independence – how independent or otherwise each director is, as well as the board overall.
- ▶ Level of engagement – does the board make gearing decisions, for example. How frequently do directors interact with the manager?
- ▶ Discount Control Mechanisms (DCMs) -- are DCMs in place and is the board making good on its commitments when it should?

Performance

We do not believe past performance is necessarily predictive of future results, and this factor accordingly receives a relatively small weighting in our evaluation process. In particular we strive not to anchor on short-term performance. However, we do believe that the evaluation of long-term return and risk patterns is vital to determining if

a fund is delivering to our expectations.

The broad principles behind our evaluation of performance are as follows:

- ▶ We should have clear expectations for performance in different market environments based on our analysis of the fund's process and portfolio.
- ▶ These expectations are checked against actual performance in such environments.
- ▶ Trailing returns and calendar year returns are of interest, but they are insufficient in themselves given end-point dependency in the former case and the arbitrary nature of the latter. We consider many periods and performance aspects to build as comprehensive a picture as possible.
- ▶ It is extremely important that performance be viewed within the context of risks taken, and we prefer to focus on downside risk.
- ▶ Performance is viewed relative to the correct benchmark and/or an appropriate peer group for the fund; if a custom peer group is required, one will be created.
- ▶ Performance attributions are evaluated to determine whether the sources of outperformance match expectations and if they appear to be sustainable.

Gearing is one of the key structural benefits a closed-end fund manager has in his toolkit. We look at how effectively he/she uses leverage in the fund, taking into consideration:

- ▶ The type of gearing used – credit lines, bonds, preferred shares; fixed-interest rates or variable rates.
- ▶ The extent to which a manager uses cash to offset any fixed-term gearing
- ▶ The decision-makers regarding the use of gearing – whether it is viewed as an investment decision and therefore left to the manager, or whether the board chooses to actively set/revisit the parameters

Fees

Morningstar and independent academic research has shown that fund expenses are one of the better predictors of future outperformance even when evaluating net-of-fee returns. Given this, costs cannot be ignored.

To reflect actual investor experience, fees are evaluated

within the context of the relevant market or cross-border region—for example, the United States, Australia, Canada, or Europe. These align with the proprietary fund classification systems used by Morningstar around the world. In recognition of differences in scale and distribution costs in various markets, the level at which a fund is penalised for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalised if they land in the most expensive quintile of their Morningstar category and are rewarded if they land in the cheapest quintile. The assessment is made using annual expense ratios, but in the case of funds with performance fees, expenses are evaluated excluding any performance fees and then the structure of the performance fee is evaluated separately.

Research Process

Pre-Interview Evaluation

Prior to interviewing the fund manager, our analysts typically perform an in-depth review of the fund. The goal is to develop a preliminary investment view and identify any potential areas of concern, thereby ensuring the analysts' questions to the manager are targeted to gain insight into the key issues that affect our investment opinion. The following may be taken into consideration as part of the pre-interview evaluation:

- ▶ fund documents including prospectus and latest annual or interim report to shareholders;
- ▶ any recent news regarding the parent, fund, or portfolio manager;
- ▶ Morningstar complete holdings data through time to build our independent perspective on the fund's investment exposures and risks;
- ▶ performance data through time to ensure the fund is behaving as we would expect in different market environments given our knowledge of its strategy and analysis of its holdings.

Manager & Key Executives Interview

Our analysts form their initial view of the fund during the Pre-Interview Evaluation, after which they interview the portfolio manager and other relevant parties. Separately, we also seek interviews with key parent executives, analysts, risk managers, and traders. At the manager interview, we focus on the issues we have identified in the pre-interview, and on fleshing out our knowledge of the manager, the process, and the firm.

Ratings Committee

After consultation with their peers, analysts produce an internal ratings note that assesses each of the five key pillars. The analyst then presents this note at the relevant ratings committee and defends his or her assessment of the fund. Only when the committee is satisfied with the soundness of the judgments expressed in each area is the final rating approved.

Report Creation

We believe transparency is extremely important and our analysts invest considerable time in writing detailed research reports that are enhanced with our proprietary graphics and calculations. The reports justify the ratings decision, evaluate each of the five key pillars, provide readers with guidance on how the fund might behave in different market environments, and highlight key developments in performance and portfolio holdings.

Monitoring

Analyst teams monitor their funds for developments that may impact the rating decision and provide updates on such matters as soon as possible. Fund ratings and reports are otherwise updated up to four times per year on a regular schedule, with the frequency dependent on the fund size, type, and rating level (report data is updated monthly).