
Disclosure Language

Morningstar Essentials

October 2019

Contents

What guidelines must be followed?

When submitting materials for review, where do I send it and what information do I need to include?

When should I use the Overall Morningstar Rating™ versus the rating for a particular time period?

What are the disclosures that should accompany the use of the Morningstar Rating™?

What is the proper way to refer to the Morningstar Rating™?

Can the Morningstar Rating™ be used to depict an endorsement of a particular fund or be depicted as a “Ranking?”

How often must the presentation of the Morningstar Rating be updated?

How should multi-class funds be treated?

Can the Morningstar Rating™ be used to imply predictive value or a forecast of future performance?

Can the Morningstar Rating™ be used in conjunction with other data provider’s analysis or data?

If my fund has less than ten years of history, should I use the 3-Year, 5-Year or Overall Morningstar Rating™?

What other disclosure language is available?

What guidelines must be followed?

All use of the Morningstar Rating™ must be submitted to Morningstar for review. Morningstar bases its review of fund company use in advertising and marketing material on the guidelines contained herein. These guidelines were designed in part to help you fulfill the requirements of FINRA as they relate to the use of specific Morningstar data. The disclosure of these guidelines in no way replaces the need for fund companies to send advertisements and marketing materials to Morningstar for review of usage of Morningstar’s proprietary data. Morningstar does not require that you obtain written approval prior to your proceeding with publication. However, to ensure that future use follows these guidelines, we may require you to revise your use of the Morningstar material at a later date. Upon notification, you must comply with any requested changes prior to publishing, producing or disseminating any future materials. Morningstar’s review guidelines are subject to change at Morningstar’s discretion. Any use of Morningstar data must be accompanied by the following language:

© [Insert year] Morningstar. All Rights Reserved. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Past performance is no guarantee of future results.

When submitting materials for review, where do I send it and what information do I need to include?

Material can be submitted to your sales director or relationship manager. When submitting a piece to Morningstar for review, include a description of the piece (i.e., state the type of piece and its intended distribution). Please confirm whether the piece is being used for 3rd party advertising or is a marketing piece (e.g., web site, shareholder communication, press release, flyer, brochure, etc.) If known and easy to summarize, please give the name of the newspaper, television station, or magazine and the date the advertisement will start running.

When should I use the Overall Morningstar Rating™ versus the rating for a particular time period?

The Overall Morningstar Rating™ must be the **featured** Morningstar Rating in the materials. The three-, five-, and 10-year ratings may also be illustrated, but the Overall Morningstar Rating must be featured with them. For example, if a fund has received 5 stars for the three-year period and 3 stars for the five-year period and has an Overall Morningstar Rating™ of 4 stars, the 4-star Overall Morningstar Rating is required to be the featured Morningstar Rating. In this instance, if the fund company chooses to show the 3- and 5-year ratings, then the 10-year and Overall ratings must also be shown. “Cherry-picking”

time periods when using the Morningstar Rating is not accepted. In other words, the rule for featuring the Morningstar Rating is "Overall or All." In addition, when illustrating the Morningstar Rating, the respective time period for the rating (i.e., 3-Year, 5-Year, 10-Year or Overall) and the number of funds in the rating category for each illustrated time period must be in immediate proximity to the applicable rating.

What are the disclosures that should accompany the use of the Morningstar Rating™?

The following disclaimer is required when using the Morningstar Rating:

© [Insert year] Morningstar, Inc. All Rights Reserved. The information contained herein: (1) is proprietary to Morningstar; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Past performance is no guarantee of future results.

FINRA member firms should use the following paragraph with any use of the Morningstar Rating to satisfy FINRA disclosure requirements. In the event that FINRA or another regulatory agency requires revisions to the following disclaimer, you may make such changes as deemed appropriate:

The Morningstar Rating™ for funds, or "star rating", is calculated for managed products (including mutual funds, variable annuity and variable life subaccounts, exchange-traded funds, closed-end funds, and separate accounts) with at least a three-year history. Exchange-traded funds and open-ended mutual funds are considered a single population for comparative purposes. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The Morningstar Rating does not include any adjustment for sales loads. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

If the number of funds in the rating category is not included in immediate proximity to the rating, the following language should be included:

[Insert name of fund] was rated against the following numbers of [insert name of category] funds over the following time periods: [insert number of funds in category during prior 3-year period] funds in the last three years, [insert number of funds in category during the prior 5-year period] funds in the last five

years, and [insert number of funds in category during the prior 10-year period] funds in the last ten years. Past performance is no guarantee of future results.

In addition, in the event that Licensee has multi-class funds, the following language should also be included:

Morningstar Rating is for the _____ share class only; other classes may have different performance characteristics.

What is the proper way to refer to the Morningstar Rating™?

The phrase "Morningstar Rating" should always be designated with the proper trademark identifier (e.g., Morningstar Rating™, Overall Morningstar Rating™, or 3-Year Morningstar Rating™) in all headings and titles, and at its first appearance on each page within the body text of a document. Subsequent appearances do not require use of the trademark identifier.

When depicting the number of stars in a particular Morningstar Rating, express the number of stars A) using plain, solid, two-dimensional, undecorated stars (e.g., "★★★★★ Overall Morningstar Rating™") or B) in an alphanumeric depiction (e.g., "5-Star Overall Morningstar Rating™").

When depicting the Morningstar Rating for your fund, if possible, please place the depiction of the number of stars in front of the time period followed by the phrase "Morningstar Rating™": [number of stars] [time period] [Morningstar Rating™]. The following examples are correct:

"5-Star Overall Morningstar Rating™"

"★★★★★ 3-Year Morningstar Rating™".

The format "XYZ Fund received a 4-Star Morningstar Rating™ for the 3-Year period" is also acceptable.

Can the Morningstar Rating™ be used to depict an endorsement of a particular fund or be depicted as a "Ranking?"

Any reference to the Morningstar Rating™ must use the term "Rating" as opposed to "Ranking." The Morningstar Rating is not to be confused with a "Ranking."

Language cannot be used that depicts the Morningstar Rating as *an endorsement of the referenced fund*. For example:

Incorrect usage:

"The XYZ Fund was awarded Morningstar's highest rating – 5 stars!"

"XYZ Fund earned 5 stars!"

The Morningstar Rating is based on an *objective, mathematical calculation* and is not to be construed as an endorsement of any fund(s). An acceptable phrasing would be:

Correct usage:

"XYZ Fund received a 5-Star Overall Morningstar Rating™!"

How often must the presentation of the Morningstar Rating™ be updated?

The *date* of the Morningstar Rating™ must be the *most recent for which data are available* (most recent quarter or month-end) and must be *clearly labeled* in the advertisement, as well as in *close proximity* to the actual rating. This date is also known as the "*as of*" date.

How should multi-class funds be treated?

Materials that focus on multi-class funds should not leave any doubt as to which class received a particular Morningstar Rating™. There are some instances where two classes of a fund each have a different Morningstar Rating (due to the way fees and expenses affect returns). A clear mention of the specific class, or the additional statement in the disclosure language above, must be included.

Can the Morningstar Rating™ be used to imply predictive value or a forecast of future performance?

The referenced fund's Morningstar Rating™ *should not imply a predictive value*. The Morningstar Rating is an evaluation of *past performance only*. This is why the phrase, "Past performance is no guarantee of future results," is mandatory in the disclosure or somewhere else in the body text of the advertisement, provided the reference is prominent and clearly applies to the advertisement as a whole.

Can the Morningstar Rating™ be used in conjunction with other data provider's analysis or data?

Yes, however each data provider must be clearly labeled. The Morningstar Rating™ may not be displayed in connection with, or in close proximity to any information or data furnished by any of Morningstar's direct competitors in a manner in which attribution is unclear, including the following entities:

- ▶ Financial Engines Advisors, LLC
- ▶ Lipper, a Thomson Reuters company
- ▶ Standard and Poor's, a division of The McGraw-Hill Companies, Inc.
- ▶ Value Line, Inc.

If my fund has less than ten years of history, should I use the 3-Year, 5-Year or Overall Morningstar Rating™?

If your fund has only been in existence for three years, its Three-Year Morningstar Rating™ is also its Overall Morningstar Rating. If a fund has only been in existence for five years, its Overall Morningstar Rating is based on a weighted average of the performance figures associated with its three- and five-year Morningstar Rating metrics. In either case, you may refer to the rating as the Overall Morningstar

Rating in your advertisement, but should also disclose that the rating is based only on three or five years. The Overall Morningstar Rating must always be the featured rating.

What other disclosure language is available?

Morningstar Rating: Based on Extended Performance

For use on displays with fund share classes whose ratings are based on returns prior to the inception of that particular share class.

Some of Morningstar's proprietary calculations, including the Morningstar Rating™, are not customarily calculated based on adjusted historical returns. However, for new share classes/channels, Morningstar may calculate an extended performance Morningstar Rating that is based, in part, on adjusted historical (or "pre-inception") returns for periods prior to the inception of the share class of the fund shown herein ("Report Share Class").

The extended performance is calculated by creating a performance stream consisting of the Report Share Class and older share class(s). Morningstar adjusts the historical total returns of the older share class(es) of a fund to reflect higher expenses in the Report Share Class. We do not hypothetically adjust returns upwards for lower expenses. For more information regarding calculation of pre-inception returns, please see the Morningstar Extended Performance Methodology.

The extended performance Morningstar Risk-Adjusted Return is then calculated for three-, five-, and 10-year time periods and used to determine the extended performance Morningstar Rating. The extended performance Morningstar Rating for this fund does not affect the retail fund data published by Morningstar, as the bell curve distribution on which the ratings are based includes only funds with actual returns. The Overall Morningstar Rating for multi-share open-end funds will be either based on actual performance only or extended performance only. Once the share class turns three years old, the Overall Morningstar Rating will be based on actual ratings only. The Overall Morningstar Rating for multi-share variable annuities is based on a weighted average of any ratings that are available. For more information, please see the Morningstar Rating Methodology.

While the inclusion of pre-inception data, in the form of extended performance, can provide valuable insight into the probable long-term behavior of newer share classes of a fund, investors should be aware that an adjusted historical return can only provide an approximation of that behavior. For example, the fee structures of a retail share class will vary from that of an institutional share class, as retail shares tend to have higher operating expenses and sales charges. These adjusted historical returns are not actual returns. The underlying investments in the share classes used to calculate the pre-performance string will likely vary from the underlying investments held in the fund after inception. Calculation methodologies utilized by Morningstar may differ from those applied by other entities, including the fund itself.

Morningstar Rating: Separate Accounts

The Morningstar Rating™ for funds, or "star rating", is calculated for separate accounts with at least a three-year history. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly excess performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a managed product is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. The weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods.

Notes

Fees for separate accounts can vary widely and are negotiated between the asset manager, the separate account program sponsor or advisor, and the investor. Morningstar has chosen to present gross-of-fees performance (before fees have been taken out) to compare separate accounts. Net-of-fees calculations often deduct the highest theoretical fees that an investor may pay.

Morningstar will not calculate ratings for categories or time periods that contain fewer than five separate accounts. Each investor in the same separate account can experience slightly different total returns, because investors have different account preferences and restrictions. Therefore, to ensure that ratings are fairly assigned, Morningstar will calculate ratings for only those firms that report performance for "composites" of similarly managed portfolios according to the guidelines of the CFA Institute's Global Investment Performance Standards (GIPS®).

Separate accounts that do not have ratings can be divided into two groups: those that do not qualify to be rated and those that did not participate. A separate account will not get a Morningstar Rating if: It is less than three years old, the firm is not GIPS-compliant, or the category contains fewer than five separate accounts that are eligible for a rating.

Morningstar Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy.

For equity funds the vertical axis shows the market capitalization of the long stocks owned and the horizontal axis shows investment style (value, blend, or growth). A darkened square in the stylebox indicates the weighted average style of the portfolio.

For fixed-income funds, the vertical axis shows the credit quality of the long bonds owned and the horizontal axis shows interest rate sensitivity as measured by a bond's effective duration.

Morningstar seeks credit rating information from fund companies on a periodic basis (e.g., quarterly). In compiling credit rating information Morningstar accepts credit ratings reported by fund companies that have been issued by all Nationally Recognized Statistical Rating Organizations (NRSROs). For a list of all NRSROs, please visit <https://www.sec.gov/ocr>. Additionally, Morningstar accepts foreign credit ratings from widely recognized or registered rating agencies. If two rating organizations/agencies have rated a security, fund companies are to report the lower rating; if three or more organizations/agencies have rated a security, fund companies are to report the median rating, and in cases where there are more than two organization/agency ratings and a median rating does not exist, fund companies are to use the lower of the two middle ratings. PLEASE NOTE: Morningstar, Inc. is not itself an NRSRO nor does it issue a credit rating on the fund. An NRSRO or rating agency ratings can change from time-to-time.

For credit quality, Morningstar combines the credit rating information provided by the fund companies with an average default rate calculation to come up with a weighted-average credit quality. The weighted-average credit quality is currently a letter that roughly corresponds to the scale used by a leading NRSRO. Bond funds are assigned a style box placement of "low", "medium", or "high" based on their average credit quality. Funds with a low credit quality are those whose weighted-average credit quality is determined to be less than "BBB-"; medium are those less than "AA-", but greater or equal to "BBB-"; and high are those with a weighted-average credit quality of "AA-" or higher. When classifying a bond portfolio, Morningstar first maps the NRSRO credit ratings of the underlying holdings to their respective default rates (as determined by Morningstar's analysis of actual historical default rates). Morningstar then averages these default rates to determine the average default rate for the entire bond fund. Finally, Morningstar maps this average default rate to its corresponding credit rating along a convex curve.

For interest-rate sensitivity, Morningstar obtains from fund companies the average effective duration. Generally, Morningstar classifies a fixed-income fund's interest-rate sensitivity based on the effective duration of the Morningstar Core Bond Index (MCBI), which is currently three years. The classification of Limited will be assigned to those funds whose average effective duration is between 25% to 75% of MCBI's average effective duration; funds whose average effective duration is between 75% to 125% of the MCBI will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCBI will be classified as Extensive.

For municipal bond funds, Morningstar also obtains from fund companies the average effective duration. In these cases static breakpoints are utilized. These breakpoints are as follows: (i) Limited: 4.5 years or less; (ii) Moderate: more than 4.5 years but less than 7 years; and (iii) Extensive: more than 7 years. In addition, for non-US taxable and non-US domiciled fixed income funds static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: greater than 3.5 and less than equal to 6 years; (iii) Extensive: greater than 6 years.

Interest-rate sensitivity for non-U.S. domiciled funds (excluding funds in convertible categories) may be measured with modified duration when effective duration is not available.

Morningstar Ownership Zone™

The Morningstar Ownership Zone™ provides detail about a portfolio's equity investment style by showing the range of stock sizes and styles. A portfolio's Ownership Zone is derived by plotting each stock in the fund's portfolio within the proprietary Morningstar Style Box™. The shaded area represents the center 75% of the fund's assets, and it provides an intuitive visual representation of the area of the market in which the fund invests. A "centroid" plot in the middle of the Ownership Zone represents the weighted average of all the fund's holdings. A fund that is concentrated will have a small ownership zone relative to the area of the style box, and broadly diversified fund will have an ownership zone that stretches across many sizes and style. Over a period of time, the shape and location of a fund's ownership zone may vary.

Morningstar Analyst Rating™

Effective October 31, 2019, Morningstar updated its Morningstar Analyst Rating™ methodology. For any Morningstar Analyst Rating published on or prior to October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark, or in the case of exchange-traded funds and index mutual funds, a relevant peer group, over the long term on a risk-adjusted basis. They consider quantitative and qualitative factors in their research, and the weight of each pillar may vary. The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. A Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's conviction in a fund's prospects for outperformance. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months. For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to global.morningstar.com/managerdisclosures/.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

For any Morningstar Analyst Rating published after October 31, 2019, the following disclosure applies:

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by Morningstar's manager research group, which consists of various Morningstar, Inc. subsidiaries ("Manager Research Group"). In the United States, that subsidiary is Morningstar Research Services LLC, which is registered with and governed by the U.S. Securities and Exchange Commission. The Manager Research Group evaluates funds based on five key pillars, which are process, performance, people, parent, and price. The Manager Research Group uses this five-pillar evaluation to determine how they believe funds are likely to perform relative to a benchmark over the long term on a risk adjusted basis. They consider quantitative and qualitative factors in their research. For actively managed strategies, people and process each receive a 45% weighting in their analysis, while parent receives a 10% weighting. For passive strategies, process receives an 80% weighting, while people and parent each receive a 10% weighting. For both active and passive strategies, performance has no explicit weight as it is incorporated into the analysis of people and process; price at the share-class level (where applicable) is directly subtracted from an expected gross alpha estimate derived from the analysis of the other pillars. The impact of the weighted pillar scores for people, process and parent on the final Analyst Rating is further modified by a measure of the dispersion of historical alphas among relevant peers. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, the modification by alpha dispersion is not used.

The Analyst Rating scale is Gold, Silver, Bronze, Neutral, and Negative. For active funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that an active fund will be able to deliver positive alpha net of fees relative to the standard benchmark index assigned to the Morningstar category. The level of the rating relates to the level of expected positive net alpha relative to Morningstar category peers for active funds. For passive funds, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will be able to deliver a higher alpha net of fees than the lesser of the relevant Morningstar category median or 0. The level of the rating relates to the level of expected net alpha relative to Morningstar category peers for passive funds. For certain peer groups where standard benchmarking is not applicable, primarily peer groups of funds using alternative investment strategies, a Morningstar Analyst Rating of Gold, Silver, or Bronze reflects the Manager Research Group's expectation that a fund will deliver a weighted pillar score above a predetermined threshold within its peer group. Analyst Ratings ultimately reflect the Manager Research Group's overall assessment, are overseen by an Analyst Rating Committee, and are continuously monitored and reevaluated at least every 14 months.

For more detailed information about Morningstar's Analyst Rating, including its methodology, please go to <https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx>.

The Morningstar Analyst Rating (i) should not be used as the sole basis in evaluating a fund, (ii) involves unknown risks and uncertainties which may cause the Manager Research Group's expectations not to occur or to differ significantly from what they expected, and (iii) should not be considered an offer or solicitation to buy or sell the fund.

Morningstar Quantitative Rating™

Morningstar's quantitative fund ratings consist of: (i) Morningstar Quantitative Rating (overall score), (ii) Quantitative Parent pillar, (iii) Quantitative People pillar, and (iv) Quantitative Process pillar (collectively the "Quantitative Fund Ratings"). The Quantitative Fund Ratings are calculated monthly and derived from the analyst-driven ratings of a fund's peers as determined by statistical algorithms. Morningstar, Inc. calculates Quantitative Fund Ratings for funds when an analyst rating does not exist as part of its qualitative coverage.

Morningstar Quantitative Rating: Intended to be comparable to Morningstar's Analyst Ratings for open-end funds and ETFs, which is the summary expression of Morningstar's forward-looking analysis of a fund. The Morningstar 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 a full market cycle of at least 5 years. Ratings are assigned on a five-tier scale with three positive ratings of Gold, Silver, and Bronze, a Neutral rating, and a Negative rating. Morningstar calculates the Morningstar Quantitative Rating using a statistical model derived from the Morningstar Analyst Rating our fund analysts assign to open-end funds and ETFs. Please go to <https://shareholders.morningstar.com/investor-relations/governance/Compliance-Disclosure/default.aspx> for information about Morningstar Analyst Rating Morningstar's fund analysts assign to funds.

Quantitative Parent pillar: Intended to be comparable to Morningstar's Parent pillar scores, which provides Morningstar's analyst opinion on the stewardship quality of a firm. Morningstar calculates the Quantitative Parent pillar using an algorithm designed to predict the Parent Pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

Quantitative People pillar: Intended to be comparable to Morningstar's People pillar scores, which provides Morningstar's analyst opinion on the fund manager's talent, tenure, and resources. Morningstar calculates the Quantitative People pillar using an algorithm designed to predict the People pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), Low (1).

Quantitative Process Pillar: Intended to be comparable to Morningstar's Process pillar scores, which provides Morningstar's analyst opinion on the fund's strategy and whether the management has a

competitive advantage enabling it to execute the process and consistently over time. Morningstar calculates the Quantitative Process pillar using an algorithm designed to predict the Process pillar score our fund analysts would assign to the fund. The quantitative pillar rating is expressed in both a rating and a numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

Morningstar Quantitative Ratings have not been made available to the issuer of the security prior to publication.

Risk Warning The quantitative fund ratings are not statements of fact. Morningstar does not guarantee the completeness or accuracy of the assumptions or models used in determining the quantitative fund ratings. In addition, there is the risk that the return target will not be met due to such things as unforeseen changes in changes in management, technology, economic development, interest rate development, operating and/or material costs, competitive pressure, supervisory law, exchange rate, and tax rate. For investments in foreign markets there are further risks, generally based on exchange rate changes or changes in political and social conditions. A change in the fundamental factors underlying the quantitative fund ratings can mean that the recommendation is subsequently no longer accurate.

For more information about Morningstar's quantitative methodology, please visit <https://shareholders.morningstar.com/investor-relations/governance/Compliance--Disclosure/default.aspx>.

Morningstar Sustainability Rating™

The Morningstar Sustainability Rating™ is intended to measure how well the issuing companies of the securities within a fund's portfolio holdings are managing their financially material environmental, social and governance, or ESG, risks relative to the fund's Morningstar Global Category peers.

The Morningstar Sustainability Rating calculation is a five -step process. First, each fund with at least 67% of assets covered by a company-level ESG Risk Score from Sustainalytics receives a Morningstar Portfolio Sustainability Score. The Morningstar Portfolio Sustainability Score is an asset-weighted average of company-level ESG Risk Scores. The Portfolio Sustainability Score ranges between 0 to 100, with a higher score indicating that a fund has, on average, more of its assets invested in companies with high ESG Risk.

Second, the Historical Sustainability Score is an exponential weighted moving average of the Portfolio Sustainability Scores over the past 12 months. The process rescales the current Portfolio Sustainability Score to reflect the consistency of the scores. The Historical Sustainability Score ranges between 0 to 100, with a higher score indicating that a fund has, on average, more of its assets invested in companies with high ESG Risk, on a consistent historical basis.

Third, the Morningstar Sustainability Rating is then assigned to all scored funds within Morningstar Global Categories in which at least thirty (30) funds receive a Historical Sustainability Score and is determined by each fund's Morningstar Sustainability Rating Score rank within the following distribution:

- High (highest 10%)
- Above Average (next 22.5%)
- Average (next 35%)
- Below Average (next 22.5%) and
- Low (lowest 10%)

Fourth, we apply a 1% rating buffer from the previous month to increase rating stability. This means a fund must move 1% beyond the rating breakpoint to change ratings.

Fifth, we adjust downward positive Sustainability Ratings to funds with a with high ESG Risk scores. The logic is as follows:

- If Portfolio Sustainability score is above 40, then the fund receives a Low Sustainability Rating
- If Portfolio Sustainability score is above 35 and preliminary rating is Average or better, then the fund is downgraded to Below Average
- If Portfolio Sustainability score is above 30 and preliminary rating is Above Average, then the fund is downgraded to Average
- If Portfolio Sustainability score is below 30, then no adjustment is made.

The Morningstar Sustainability Rating is depicted by globe icons where High equals 5 globes and Low equals 1 globe. Since a Sustainability Rating is assigned to all funds that meet the above criteria, the rating it is not limited to funds with explicit sustainable or responsible investment mandates.

Morningstar updates its Sustainability Ratings monthly. The Portfolio Sustainability Score is calculated when Morningstar receives a new portfolio. Then, the Historical Sustainability Score and the Sustainability Rating is calculated one month and six business days after the reported as-of date of the most recent portfolio. As part of the evaluation process, Morningstar uses Sustainalytics' ESG scores from the same month as the portfolio as-of date.

Please click on <http://corporate1.morningstar.com/SustainableInvesting/> for more detailed information about the Morningstar Sustainability Rating methodology and calculation frequency.

¹ Sustainalytics is an independent ESG and corporate governance research, ratings, and analysis firm. Morningstar, Inc. holds a non-controlling ownership interest in Sustainalytics.

Morningstar Low Carbon Designation™

The Morningstar® Low Carbon Designation™ is intended to allow investors to easily identify low-carbon funds across the global universe. The designation is an indicator that the companies held in a portfolio are in general alignment with the transition to a low-carbon economy.

The designation is given to portfolios that have low carbon-risk scores and low levels of exposure to fossil fuels. To determine carbon-risk scores and fossil fuel involvement, Morningstar uses Sustainalytics' company-level data². The Morningstar® Portfolio Carbon Risk Score™ measures the risk that companies in a portfolio face from the transition to a low-carbon economy. The Morningstar® Portfolio Fossil Fuel Involvement™ percentage assesses the degree to which a portfolio is exposed to thermal coal extraction and power generation as well as oil and gas production, power generation, and products & services.

To receive a Morningstar Portfolio Carbon Risk Score, at least 67% of portfolio assets must have a carbon-risk rating from Sustainalytics. The percentage of assets covered is rescaled to 100% before calculating the score.

To receive the designation, a portfolio must meet two criteria:

- ▶ A 12-month trailing average Morningstar Portfolio Carbon Risk Score below 10
- ▶ A 12-month trailing average exposure to fossil fuels less than 7% of assets, which is approximately a 33% underweighting to the global equity universe

Funds receive the Low Carbon designation based on the most recent quarterly calculations of their 12-month trailing average Morningstar Portfolio Carbon Risk Scores and Morningstar Portfolio Fossil Fuel Involvement. Funds holding the Low Carbon designation that no longer meet the criteria will not receive the designation for the subsequent quarter. All Morningstar Portfolio Carbon Metrics, including the Morningstar Portfolio Carbon Risk Score, Morningstar Portfolio Fossil Fuel Involvement, and the Morningstar Low Carbon Designation, are calculated quarterly. Portfolio carbon metric calculations will be completed on the sixth business day in February, May, August, and November.

Please visit <http://corporate1.morningstar.com/SustainableInvesting/> for more detail information about the Morningstar Low Carbon Designation and its calculation. ■■■

² Sustainalytics is an independent ESG and corporate governance research, ratings, and analysis firm. Morningstar, Inc. holds a non-controlling ownership interest in Sustainalytics.



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