# Managed Investment Report

A The Morningstar Analyst Rating is a forward-looking, qualitative rating. It sets forth the fundamental assessment of a fund's merits according to Morningstar. It takes the form of Gold, Silver, Bronze, Neutral, or Negative, with the highest ratings going to those funds where an analyst's research leads them to conclude the manager will outperform over a market cycle, and Neutral and Negative ratings to those for which they lack conviction.

B The **Morningstar Rating** provides a quick assessment of a fund's past risk-adjusted performance relative to its Morningstar Category peers. Funds are rated for the trailing 3-, 5-, and 10-year periods and these ratings are combined to produce an overall rating. Within each rating period, the top 10% of funds receive five stars, the next 22.5% receive four stars, the middle 35% receive three stars, the next 22.5% receive two stars, and the bottom 10% receive one star. The Morningstar Rating for funds is a quantitative measure based solely on each fund's past risk-adjusted performance. Offerings with less than three years of performance history are not rated.

The Morningstar Sustainability Rating is a measure of the financially material environmental, social, and governance, or ESG, risks in a portfolio relative to a portfolio's peer group. The rating is an historical holdings-based calculation rolling company-level ESG Risk Ratings to the portfolio-level. To determine the rating first, the Morningstar Portfolio Sustainability Score is calculated for every portfolio reported within the trailing 12 months. Second, these scores are then used to calculate a portfolio's Morningstar Historical Portfolio Sustainability Score. Third, a Morningstar Sustainability Rating is assigned to a portfolio based on its Morningstar Historical Portfolio Sustainability Score relative to its Morningstar Global Category

This section is specific to the Managed Investment Report for ETFs. Look to this section to gain insight into important data points like Daily Volume, expenses, and yield.

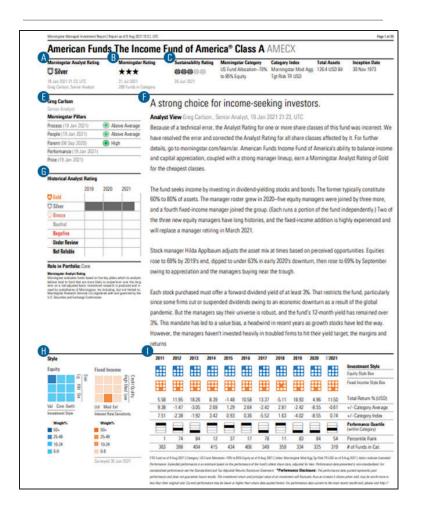
The Morningstar Analyst Rating has five key areas crucial to predicting the future success of strategies and their associated vehicles. These pillars are **People, Parent, Process, Performance,** and **Price**. Of these, three of them (People, Process, and Parent) are scored on a -2 to +2 basis, verbally expressed as Low, Below Average, Average, Above Average, and High.

(F) An **Analyst Note** is published when an event does not trigger a new Analyst Rating, but the event is noteworthy and therefore worth communicating to investors. Three types of Analyst Notes are possible: Maintain Rating, Ceasing Coverage, and Under Review. If a fund maintains its rating, here are some example of what would trigger an Analyst Note: personnel changes/issues, organizational changes/issues, extreme performance, unusual flows, or operational changes.

**G** Gain insight into the Analyst Rating for the prior three years, to understand how this might have changed over time.

The content displayed here is based on the holdings of a fund's portfolio. The Equity Style Box is a graphical representation of the portfolio's overall investment style. It is created by classifying the securities within the portfolio according to market capitalization on the vertical axis and growth and value factors on the horizontal axis. Style is first determined at the individual stock level and the individual security attributes are aggregated to determine the overall investment style of the portfolio. The Ownership Zone depicted here reflects the top 75% of a fund's equity holdings (by assets), while the centroid in the middle of each Ownership Zone is the asset-weighted average of all equity holdings.

This report packages the best-in-class managed investment research from Morningstar with the data points driving the evaluation of a fund into a single PDF report. This report covers both Analyst- and Quantitative-Rated funds.



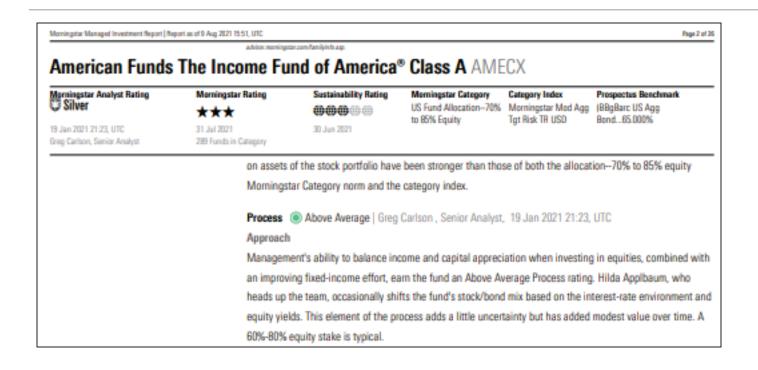
The **Fixed-Income Style Box** displays the overall interest rate sensitivity and credit quality of the bonds and bond funds in a portfolio. Placement on the horizontal axis is based on a fund's interest rate sensitivity, as measured by the average duration of all the bonds in the portfolio. The vertical axis represents credit quality.

Look to this section to see annual performance over the previous 10 years. Consider both style shift (each Style Box representation is as of December 31st of each calendar year), as well as quartile performance compared to the appropriate Morningstar Category.

# Working in the Analysis Section

In the Analyst View sections, find information explaining why each pillar received the rating it did. The pillars for the Analyst Rating of a fund are Parent, People, Price, Performance, and Process. Three of these pillars (People, Parent, and Process) receive a rating on a scale of Low, Below Average, Average, Above Average, or High. These sections surface on the report for both Analyst- and Quantitative-Rated funds. For Quantitative-Rated funds, analysis sections from the Morningstar Quantitative Analysis engine are provided. Note, these sections and ratings can be identified by the use of a superscript Q.

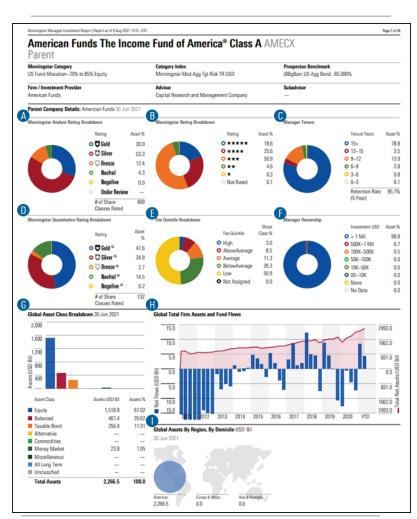
In this section	The following elements are considered
Process	<ul><li>▶ Portfolio Construction</li><li>▶ Portfolio Management</li></ul>
People	<ul> <li>The structure of the portfolio management team</li> <li>The amount of experience the team has</li> <li>The division of responsibilities</li> <li>The role the managers take in trading for the fund</li> <li>Manager investment in the fund</li> </ul>
Parent	<ul> <li>▶ Quality of fund offerings across the firm</li> <li>▶ The firm's ability to remain managers and analysts</li> <li>▶ The firm's growth plans</li> <li>▶ Expense Ratios</li> <li>▶ Level of transparency</li> </ul>
Performance	<ul> <li>▶ Performance compared to Category peers</li> <li>▶ Effect of market conditions compared to peers</li> <li>▶ Volatility compared to firms</li> </ul>
Price	<ul> <li>Expense Ratio compared to Category median</li> <li>Expense ratio compared to passive vs. active funds</li> <li>Trading Costs</li> </ul>



#### **Parent**

- △ Use the **Morningstar Analyst Rating Breakdown** charts to gain insight into the quality of other funds from the parent firm. "Under Review" denotes an already rated fund currently being reconsidered by the Morningstar Analyst. Each share class is evaluated separately for its Analyst Rating. See the total number of share classes rated under this parent company.
- B The Morningstar Rating Breakdown analyzes the percent of assets under the parent company measured in risk-adjusted past performance against category peers. Funds do not receive a rating if they have fewer than three years of history, or fewer than 30 funds in a category.
- **6** The **Manager Tenure** chart sums the percentage of assets in managed investments with average tenured manager stays of 0-3 years, 3-6 years, 6-9 years, 9-12 years, 12-15 years, and more than 15 years. The Retention Rate denoted here displays percent of managers retained over the first 5 years of their tenure.
- ① Not all funds have analyst coverage. **The Quantitative Rating Breakdown** chart gives insight to funds not covered by a Morningstar Analyst. Note the superscript Q marking the Quantitative Rating.
- The Fee Quintile Breakdown chart evaluates how the prospective net expense ratio for funds at a firm fall in comparison to their Morningstar Category peers. This data shows the percentage of share classes at the parent company with Morningstar Fee Level-Distributions of Low, Below Average, Average, Above Average, and High.
- Because fund managers must disclose any investment in their own fund portfolios, the **Manager Ownership**Breakdown chart displays the percentage of assets in managed investments for all funds under a parent company for the managers there. The values reflect the maximum manager ownership at varying levels.
- 6 The Asset Class Breakdown chart displays both the amount and percentage of assets in each asset class for managed investments associated with a parent company.
- Here, Morningstar estimates fund-level flow data (based on reported assets) and aggregates it at the firm level. The **Total Firm Assets and Fund Flows** chart shows quarterly net flows as a blue bar chart, measured on the left axis, and the firm's asset growth rate as a red shaded line chart on the right axis.

Morningstar believes the parent organization is important in evaluating both active and passive funds. Although other factors may have more immediate impact, they would not be sustainable without backing from the asset-management firm. Sections A through F do not display for ex-us funds.



This information illustrates the movement of money into and out of the firm's funds over time.

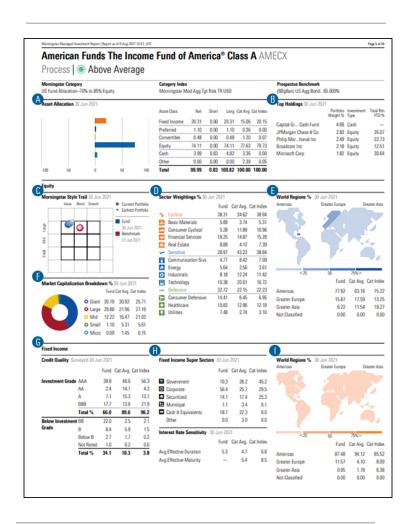
The **Global Assets by Region, By Domicile** chart displays, in billions, the amount of assets in each geographic region. Larger circles indicate more assets.



#### **Process**

- The **Asset Allocation chart** breaks down portfolio holdings by asset class: Fixed Income, Preferred, Convertible, Equity, Cash, and Other. The "Other" category includes security types not neatly classified in the named asset classes, such as convertible bonds and preferred stocks, or those that cannot be classified by Morningstar as a result of missing data.
- B The **Top Holdings** in the fund are shown, along with their Morningstar Rating, based on the most recent portfolio data and the month-end date from when the report was generated.
- The **Style Trail** chart analyzes style drift in both the fund and the Category index (listed in the header above the chart) over the trailing three-year time period. More recent portfolios are represented by larger, darker circles in the style box. Use this to determine both the current style of the fund's portfolio, as well as consistency and historic investment strategies.
- Data in the **Sector Weightings** % table is based on the proprietary sector classification from Morningstar, which divides the stock universe into three major economic spheres or Super Sectors: Cyclical, Sensitive, and Defensive. Each Super Sector includes several underlying sectors for a total of 11 sectors.
- The **World Regions** map chart shows the portfolio's percentage weightings to three broad regions.
- The Market Capitalization Breakdown % chart shows the allocation to Giant-cap stocks (the top 40% of the capitalization of the style zone), Large-cap stocks (the next 30%); Mid-cap stocks (the next 20%), Small-cap stocks (the next 7% percent), and Micro-cap stocks representing the balance. (For the traditional Style Box, giant-cap stocks are included in the Large-cap group and Micro-cap stocks are included in the Small-cap group.)
- © The **Credit Quality** section shows the breakdown of the fixed-income portion of the portfolio between investment grade (BBB and higher) and below investment grade (BB and lower).
- In the **Fixed Income Super Sector** section, learn about the fixed income breakdown into the five income super sectors.
- The **World Regions** map chart shows the portfolio's percentage weightings to three broad regions.

This page informs the Morningstar analyst's opinion about a fund's strategy and whether its management offers a competitive advantage, enabling it to execute its process consistently over time. Morningstar looks for strategies 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.

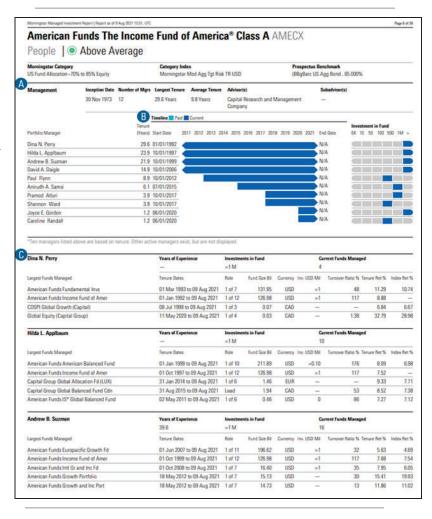




## People

- △ Use this section offers further insight into the managers of the fund, both past and present. The most long-tenured 10 managers are listed here. View common data points used to evaluate management, such as average tenure, longest tenure, and inception date.
- B The **Management** timeline displays the years someone managed this fund over the previous 10 years. Note that any manager in light blue represents a previous manager, while dark blue represents a current manager. A maximum of 10 managers can be shown here, and the managers are displayed ranking from longest-to-shortest tenure. Any current manager not present, then, is one with a tenure shorter than those already showing.
- **6** The **Manager section** displays details for up to the three longest-tenured managers in the fund. If fewer than three managers are available, then fewer sections will display. For each manager, see the top five funds the manager manages (or managed), based on their tenure of involvement. Gain insight into the fund's size and return

The overall quality of a strategy's investment team is key to a strategy's ability to deliver superior performance relative to its benchmark and/or peers. Evaluating an investment team requires analysts to assess, among other aspects, the individuals making the key decisions for the portfolio.





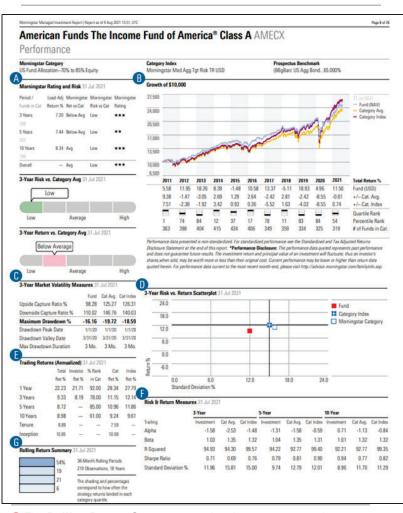
### Performance

- ⚠ The **Morningstar Rating** is based on the Morningstar Risk-Adjusted Return for the funds in a Morningstar Category. The Morningstar Rating is calculated for the three-, five-, and 10-year time periods, and then the overall Morningstar Rating is based on a weighted average of the available time-period ratings.
- B For managed investments, the **Growth of 10,000** chart compares the growth of an investment (in the base currency of the managed investment) with an index and/or with that of the average for all managed investments in its Morningstar Category. The total returns are not adjusted to reflect sales charges or taxation, but are adjusted to reflect ongoing expenses, and the assumption of reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is available for a fund, it is included here and indicated by the use of italics.
- The **Market Volatility Measures** table is where important volatility data points such as Upside and Downside Capture Ratios are found, as well as Maximum Drawdown. See how this fund compares to its category index and category average.
- ① The **Risk vs. Return Scatterplot** displays the performance and risk (measured by standard deviation) for the fund, the category index, and the Morningstar Category average. Funds to the left of the vertical axis have taken on less risk than the benchmark, while those above the horizontal axis have outperformed the benchmark.

The returns noted for a security reflect any sales charges applied over the trailing three years, but do not reflect impacts of taxation. Standard deviation is a statistical measure of the volatility of the fund's returns in relation to the mean return.

- Trailing Returns (Annualized) are calculated through the most recent calendar quarter-end time period for various time periods. It reflects the impact of sales charges (if applicable) and ongoing fund expenses. Trailing Return reflects the return an investor may have experienced if the managed investment was purchased at the beginning of the period and sold at the end, incurring transaction charges.
- The **Risk & Return Measures** table analyzes commonly utilized risk and return metrics. For the Fund column, the category index is used for the risk metric calculations.

Past performance is not necessarily predictive of future results, and receives no explicit weighting in the analyst's analysis, but is referenced instead in the evaluation of both People and Process. When considering past performance, the focus is on long-term return and risk patterns.



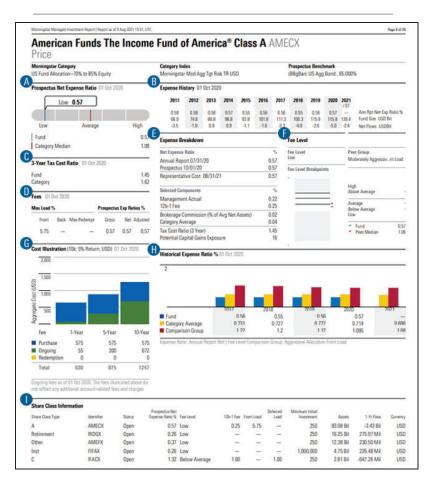
**(6)** The **Rolling Return Summary** graphic depicts a series of 36-month rolling windows to determine how often a fund's performance landed it in each quartile of its category compared to its peers. The first series is calculated as of the inception data of each share class, and the rolling windows step forward one month at a time.



### Price

- See how the Prospectus Net Expense Ratio for the fund compares to its Morningstar Category median prospective net expense ratio.
- B The **Expense History** chart illustrates a fund's expense history compared to its size over the prior 10 years. Below the chart, note the net flows into and out of the fund.
- The **3-Year Tax Cost Ratio** table measures how much a managed investment's annualized return is reduced by the taxes investors pay on distributions. Mutual funds regularly distribute stock dividends, bond dividends, and capital gains to their shareholders. Investors then must pay taxes on those distributions during the year they were received.
- The **Fees** table highlights additional sales fees associated with this share class. Determine the max load and the breakdown of the Prospectus Expense Ratios.
- The **Expense Breakdown** displays additional fees associated with this fund. Note, ETFs will not have 12b-1 or additional sales fees.
- The Morningstar **Fee Level** contextualizes the expenses of this fund compared to its Fee Level Group peers. An overall Fee Level for the managed investment is shown, along with breakpoints for five quintiles of Fee Levels for the managed investment's peer group. Morningstar defines Fee Level peer groups by combining some categories with similar expected expenses, such as large value, large blend, and large growth, then segmenting the category group by distribution class of front-load, deferred-load, level-load, no-load, or institutional to provide more-relevant fee comparisons.
- © The **Cost Illustration** chart provides an example of the fees an investor would pay over a one-, five-, or 10-year holding period for a \$10,000 (or other base currency) investment in the managed investment, and assumes all shares are redeemed at the end of the period. The example assumes an investment earns a 5% return annually, and that the investment's operating expenses remain the same. Fees are shown as being paid in a variety of ways: at purchase, by direct withdrawal while owning the investment, or when redeemed.
- He Historical Expense Ratio % chart illustrates trends of the Annual Report Net expense ratio for the fund, its Morningstar Category, and its Fee Level comparison group over the previous five calendar years.

Morningstar and independent academic research has shown that expenses are one of the better predictors of future outperformance, even when evaluating net-of-fee returns. Given this, costs form a critical part of our analysis.



The **Share Class Information** table offers insight into other share classes for this fund. Determine the expense structure and sales fees associated with different share classes.