

Vanguard S&P 500 Growth ETF VOOG

Morningstar Rating



1,141 Funds in Category

The Overall Morningstar Rating is based on risk-adjusted returns, derived from a weighted average of the three-, five-, and 10-year (if applicable) Morningstar metrics.

Morningstar Analyst Rating



Ryan Jackson, Associate Analyst

17 Jun 2020 18:08, UTC

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Total Assets

5,617 (USD Mil)

Expenses %

0.10

12-Month Yield

0.78%

3-Mo. Avg. Daily Volume (Shares)

103,868

Morningstar Category

US Fund Large Growth

Category Index

Russell 1000 Growth TR USD

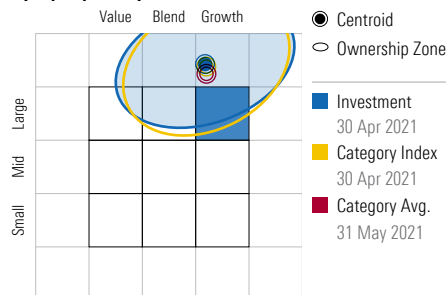
Prospectus Benchmark

S&P 500 Growth TR USD

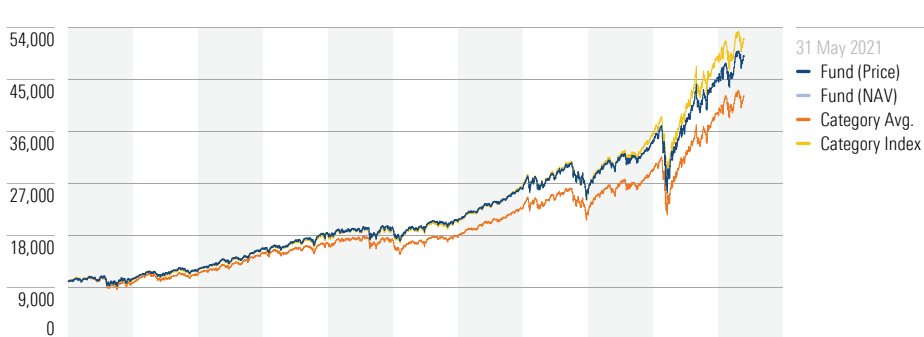
Exchange

NYSE ARCA

Equity Style Map



Growth of \$10,000



Analyst(s)

Ryan Jackson, Associate Analyst

Morningstar Analyst Rating



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Morningstar Pillars

Process (17 Jun 2020)	Above Average
People (17 Jun 2020)	Above Average
Parent (17 Jun 2020)	High

Disclosure

Morningstar Analyst Rating

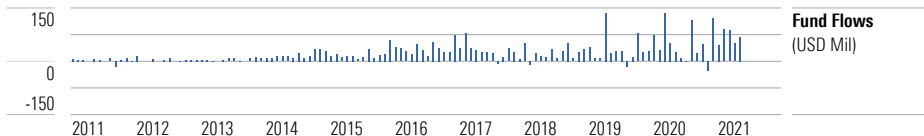
Morningstar evaluates funds based on five key pillars, which its analysts believe lead to fund that are more likely to outperform over the long term on a risk-adjusted basis.

Analyst Rating Spectrum



The Morningstar Analyst Rating for Funds is a forward-looking analysis of a fund. Morningstar has identified five key areas crucial to predicting the future success of a fund: People, Parent, Process, Performance, and Price. The pillars are used in determining the Morningstar Analyst Rating for a fund. Morningstar Analyst Ratings are assigned 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 over the long term (defined as a full market cycle or at least five years). Neutral represents funds in which our analysts don't have a strong positive or negative conviction over the long term (defined as a full market cycle or at least five years) and Negative represents funds that possess at least one flaw that our analysts believe is likely to significantly hamper future performance over the long term (defined as a full market cycle or at least five years). Past performance of a security may or may not be sustained in future and is no indication of future performance. For detailed information about the Morningstar Analyst Rating for Funds, please visit <http://global.morningstar.com/managerdisclosures>

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	Total Return %
Fund (Price)	4.63	14.16	32.65	14.71	5.41	6.84	27.18	-0.22	30.93	33.32	7.91	Fund (Price)
Fund (NAV)	4.44	14.44	32.57	14.73	5.39	6.74	27.21	-0.18	31.03	33.33	7.80	Fund (NAV)
+/- Cat. Avg.	6.90	-0.90	-1.35	4.73	1.79	3.52	-0.46	1.91	-0.87	-2.53	0.78	+/- Cat. Avg.
+/- Cat. Index	1.79	-0.82	-0.91	1.68	-0.28	-0.33	-3.00	1.34	-5.36	-5.16	1.74	+/- Cat. Index
Quartile Rank	4	57	61	6	37	23	53	30	61	50	43	Quartile Rank
Percentile Rank	1,683	1,681	1,712	1,710	1,681	1,463	1,363	1,405	1,360	1,289	1,280	Percentile Rank
# of Funds in Cat.												# of Funds in Cat.



***Performance Disclosure:** The performance data quoted represents past performance and does not guarantee future results. The investment return and principal value of an investment will fluctuate; thus an investor's shares, when sold, may be worth more or less than their original cost. Current performance may be lower or higher than return data quoted herein.

Analyst View

Vanguard S&P 500 Growth ETF VOOG is a sound, cost-efficient choice for exposure to the large-cap growth market. Under Morningstar's enhanced ratings framework, which places a greater emphasis on fees, this fund receives an upgrade to Silver from Bronze.

This strategy fully replicates the S&P 500 Growth Index, which features stocks representing the faster-growing half of the S&P 500. Most of these firms have durable competitive advantages, as close to 95% of the portfolio is invested in stocks with a wide or narrow Morningstar Economic Moat Rating. Many of these stocks draw rich valuations that reflect their attractive outlooks. These lofty expectations raise the hurdle that holdings must clear to deliver competitive returns.

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1,141 Funds in Category

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Morningstar Category

US Fund Large Growth

Category Index

Russell 1000 Growth TR USD

Prospectus Benchmark

S&P 500 Growth TR USD

Some firms will inevitably stumble, but this fund's broad diversification and market-cap-weighting approach keep it out of trouble. If stocks disappoint, they tend to become a smaller part of the portfolio as they underperform.

This fund casts a wide net that pulls blend stocks into its portfolio. In fact, nearly one third of the portfolio overlaps with its value counterpart, Vanguard S&P 500 Value ETF VOOV. This broad reach helps limit the fund's exposure to the priciest large-cap companies and reduces firm-specific risk, though there is some concentration at the top.

Market-cap weighting harnesses the market's collective wisdom about the value of each holding and mitigates turnover. However, it can also precipitate sector biases relative to the broad market. The fund does not make sector-relative adjustments in its stock selection approach. Its sector weightings are similar to the large-growth Morningstar Category average, so they shouldn't greatly affect the fund's category-relative performance, but they are a source of active risk relative to the broad market that won't always pay off.

Although SPDR Portfolio S&P 500 Growth ETF SPYG tracks the same index at a lower cost, this fund's 0.10% price tag is compelling and comfortably ranks in the category's cheapest decile.

Process Above Average

Approach

This fund tracks the S&P 500 Growth Index, which yields a well-diversified portfolio that accurately represents the opportunity set available to its active peers. Additionally, it leverages the consensus opinion of a well-defined market to weight its holdings. These considerations support a Process rating of Above Average.

The S&P 500 Growth index begins its construction by assigning each constituent of the S&P 500 both a growth and value score. Growth scores are derived from 12-month price change, three-year sales growth, and three-year change in earnings yield (where a decline in earnings yield is associated with higher growth). The stocks representing the third of the universe with the strongest growth characteristics are fully allocated to the growth index, while the cheapest third are fully allocated to the S&P 500 Value Index. Stocks in the middle third are partially allocated to each index based on their relative growth and value characteristics until each index approximates half of the S&P 500.

Stocks that land in the index are weighted by market cap, which promotes low turnover. That said, this index does not include buffers designed to mitigate turnover like some of its peers. As a result, it consistently has higher turnover than similar market-cap-weighted index strategies.

Vanguard S&P 500 Growth ETF VOOG

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 ★★★★★
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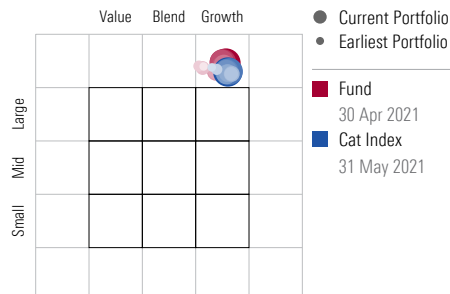
Morningstar Analyst Rating
 Silver
 17 Jun 2020 18:08, UTC

Morningstar Category
 US Fund Large Growth

Category Index
 Russell 1000 Growth TR USD

Prospectus Benchmark
 S&P 500 Growth TR USD

Historical Style Map 30 Apr 2021



Financial Metrics 30 Apr 2021

	Fund	Cat Index	Cat Avg.
Wide Moat Coverage %	59.51	62.01	56.57
Narrow Moat Coverage %	37.85	33.51	40.01
No Moat Coverage %	2.64	4.48	3.42
Financial Health	A	A-	A-
Profitability	B	B	B-
Growth	B	B	B
ROIC	21.12	20.81	15.44
Cash Return %	48.02	57.56	43.51
Free Cash-Flow Yield ex-Fins	31.91	32.09	42.46
D/C Ratio	41.31	43.03	36.82

Value & Growth Measures 30 Apr 2021

	Fund	Cat Index	Cat Avg.
P/E	28.92	28.66	30.55
P/B	8.55	9.51	6.81
P/Sales	5.02	4.23	4.92
P/Cash Flow	19.70	19.32	20.23
Div. Yield %	0.83	0.82	0.60
Long-Term Earnings %	15.51	14.53	15.74
Historical Earnings %	15.75	12.47	15.09
Sales Growth %	11.10	10.46	9.25
Cash-Flow Growth %	18.10	17.87	15.38
Book Value Growth %	11.13	9.66	11.06

Portfolio

This portfolio primarily consists of highly profitable firms with durable competitive advantages and strong outlooks. These promising characteristics are no secret and are reflected in these stocks' lofty valuations. Most firms deserve their handsome valuations, as large-cap stocks are the subject of wide investor attention and tend to be priced accurately.

As this fund includes stocks that represent half of the large-cap market, not all of its holdings have strong growth characteristics. Those that exhibit both growth and value traits are partially allocated between this portfolio and Vanguard S&P 500 Value ETF VOOV. Some of these companies receive significant investment. For example, value firms JPMorgan Chase JPM and Intel Corp INTC each represent 1% of this portfolio but do not appear at all in the Russell 1000 Growth Index. Including value and blend stocks produces a less pronounced growth tilt than the category average, but it improves diversification.

This portfolio resembles the category average more closely in its sector composition, where it is very similar aside from a slight underweighting in healthcare. This breeds confidence that the fund's low fee will translate into strong category-relative performance.

This strategy does not cap its investment in any holding, so the portfolio can be top-heavy. At the end of May 2020, the top 10 holdings claimed more than 41% of assets. Additionally, Microsoft MSFT, Apple AAPL, and Amazon AMZN jointly represent more than a fourth of the portfolio. However, market-cap weighting gradually pares exposure to firms that begin to struggle, and the fund's broad reach spreads risk, outside the crowding at the top.

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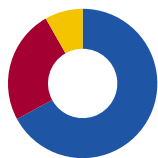
Morningstar Analyst Rating
Silver
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Morningstar Category
US Fund Large Growth

Category Index
Russell 1000 Growth TR USD

Prospectus Benchmark
S&P 500 Growth TR USD

Market Capitalization Breakdown % 30 Apr 2021

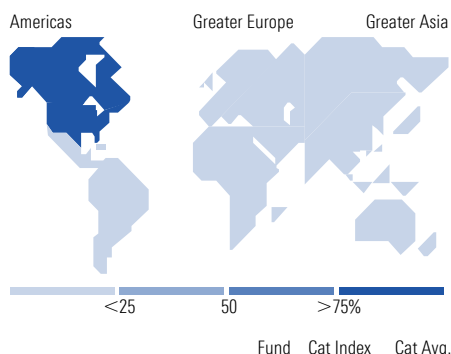


	Fund	Cat Index	Cat Avg.
● Giant	67.09	62.10	66.26
● Large	24.67	24.69	16.61
● Mid	8.23	12.33	15.37
● Small	0.00	0.89	1.73
● Micro	0.00	0.00	0.03

Top 10 Holdings 30 Apr 2021

	Portfolio Weight %	Morningstar Rating	Total Return YTD %
Apple Inc	11.31	★★★★	-5.43
Microsoft Corp	10.37	★★★★★	11.69
Amazon.com Inc	8.09	★★★★★	-0.70
Facebook Inc A	4.26	★★★★★	20.50
Alphabet Inc A	3.86	★★★★★	35.26
Alphabet Inc Cla...	3.79	★★★★★	38.21
Tesla Inc	2.97	★★	-14.25
NVIDIA Corp	2.03	★★	28.55
PayPal Holdings Inc	1.67	★	11.94
The Home Depot Inc	1.37	★	19.17

World Region %



	Fund	Cat Index	Cat Avg.
Americas	99.45	99.93	94.96
North America	99.45	99.86	94.67
Latin America	0.00	0.07	0.29
Greater Europe	0.54	0.01	2.60
United Kingdom	0.47	0.00	0.66
Europe-Developed	0.06	0.01	1.83
Europe-Emerging	0.00	0.00	0.00
Africa/Middle East	0.00	0.00	0.11
Greater Asia	0.01	0.05	2.44
Japan	0.00	0.00	0.19
Australasia	0.00	0.00	0.02
Asia-Developed	0.00	0.00	0.69
Asia-Emerging	0.01	0.05	1.54

Sector Weightings % 30 Apr 2021

	Fund	Cat Index	Cat Avg.
Cyclical	26.51	26.31	29.42
Basic Materials	1.73	0.68	1.45
Consumer Cyclical	16.69	16.52	16.06
Financial Services	7.00	7.21	10.57
Real Estate	1.09	1.90	1.35
Sensitive	57.75	55.71	53.87
Communication Serv.	15.27	12.80	15.32
Energy	0.06	0.09	0.46
Industrials	6.06	4.70	6.34
Technology	36.36	38.12	31.76
Defensive	15.74	17.98	16.70
Consumer Defensive	3.88	4.69	3.60
Healthcare	11.36	13.27	12.74
Utilities	0.50	0.02	0.36

Avg Market Cap (USD Bil)	368.55	287.75	314.51
Turnover Ratio %	24.00	—	—
% Assets in Top 10	49.71	44.48	—
# of Holdings	238	462	565
Base Currency	US Dollar	US Dollar	US Dollar

Index Attributes 21 Jan 2020

Index Selection	Growth
Index Weighting	Market Capitalization
Strategic Beta	Yes
Strategic Beta Group	Growth

Performance

Over the trailing 10 years through April 2020, this strategy outpaced the category average by 2.32 percentage points, with less volatility. Its lower-than-average cash drag, lean expense ratio, and favorable exposure to industrials and consumer staples stocks have been the main engines of this outperformance.

Unlike many of its active category peers, this fund is always fully invested. This low drag has boosted performance during market rallies without putting the fund at a disadvantage during downturns. For example, this fund beat the category average during the novel coronavirus sell-off from Feb. 19 through March 24, 2020 by 41 basis points, owing to more favorable stock exposure in the healthcare and financials sectors.

Tight index tracking has not been a problem for this portfolio management team. Over the trailing three years through April 2020, this fund trailed its benchmark by 23 basis points, close to the amount

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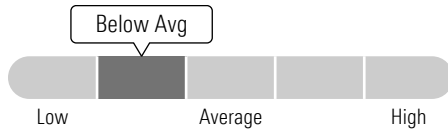
Morningstar Category
US Fund Large Growth

Category Index
Russell 1000 Growth TR USD

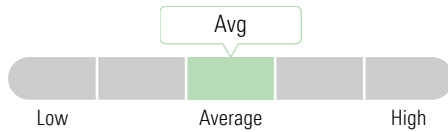
Prospectus Benchmark
S&P 500 Growth TR USD

of its expense ratio.

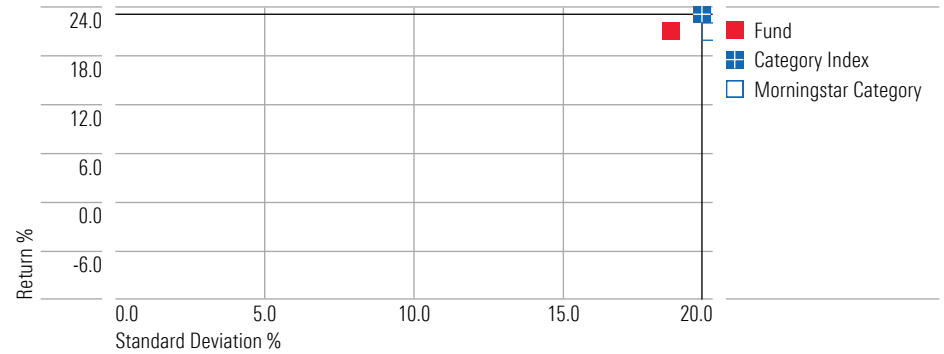
3-Year Risk vs. Category 31 May 2021



3-Year Return vs. Category 31 May 2021



3-Year Risk vs. Return Scatterplot 31 May 2021



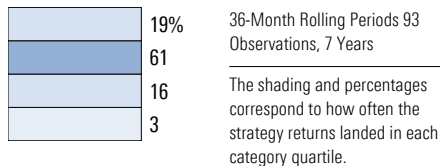
3-Year Market Volatility Measures 31 May 2021

	Fund	Cat Index	Cat Avg.
Upside Capture Ratios %	101.04	108.13	—
Downside Capture Ratios %	88.57	92.37	—
Drawdown Maximum %	-16.43	-15.98	-17.96
Drawdown Peak Date		01 May 2011	
Drawdown Valley Date		30 Sep 2011	
Max Drawdown Duration			5

Risk & Volatility Measures 31 May 2021

	1-Year			3-Year			5-Year		
	Fund	Cat Index	Cat Avg.	Fund	Cat Index	Cat Avg.	Fund	Cat Index	Cat Avg.
Trailing Alpha	-2.99	-4.42	-0.99	2.89	4.02	2.47	3.00	3.90	2.74
Beta	1.07	1.13	1.03	0.98	1.02	1.01	0.98	1.03	1.01
R-Squared	88.47	86.22	81.30	94.51	93.07	89.33	92.88	92.09	86.69
Sharpe Ratio	2.08	1.99	2.11	1.05	1.09	0.99	1.22	1.26	1.15
Standard Deviation	16.62	17.82	16.98	18.62	19.64	19.92	15.22	16.02	16.41

Rolling Return Summary 31 May 2021



Trailing Returns 31 May 2021

	1-Month	3-Month	YTD	1-Year	3-Year	5-Year	10-Year	15-Year	Since Inception
Total Return %	-0.91	8.67	8.11	39.11	20.95	20.24	16.33	—	17.70
+/- Category	0.10	2.97	1.05	-1.14	0.05	-0.17	1.10	—	—
+/- Index	0.47	1.53	1.79	-0.81	-2.07	-1.83	-0.65	—	—
Quartile Rank								—	—
Percentile Rank	47	24	40	50	48	49	28	—	—
# of Funds in Category	1292	1290	1280	1242	1141	1028	758	560	—

Sustainability Rating²

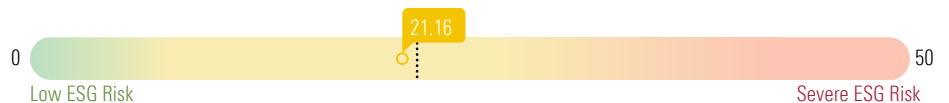


Percent Rank Relative to Global Category: Average

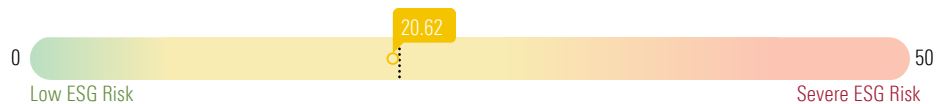
Global Category Percent Rank out of 1,000 Funds



Historical Sustainability Score | Global Category Average



Current Sustainability Score (Based on 100% of AUM)



Sustainable Fund by Prospectus?

Yes No

ESG Pillars



Morningstar Global Category: US Equity Large Cap Growth. Sustainability Score as of 31 Mar 2021. Sustainability Rating as of 31 Mar 2021. Sustainability provides company level analysis used in the calculation of Morningstar's Sustainability Score. Sustainability Mandate information is derived from the fund prospectus.

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People Above Average

This fund is managed by Donald Butler and Michelle Louie, who are experienced and talented. They are part of one of the strongest equity portfolio management teams in the industry, supported by sophisticated technology and a strong team of analysts, justifying an Above Average People rating.

Butler joined the firm in 1992 and began managing investment portfolios in 1997. Louie has been with Vanguard since 2010 and has managed portfolios since 2014.

Vanguard takes a team approach to index portfolio management. Managers in the group can provide backup if necessary, but much of the day-to-day management operations have been automated. This improves efficiency and softens the impact of personnel turnover. Additionally, managers draw on an Index Analytics team for insight on upcoming changes to underlying indexes.

The team’s primary focus is minimizing return difference between the portfolio and its index. Vanguard links managers’ compensation to their success in delivering on this objective, aligning manager and investor interests.

Management	Inception Date	Number of Managers	Longest Tenure	Average Tenure	Advisor(s)
	07 Sep 2010	2	5.5 Years	4.5 Years	Vanguard Group Inc

Portfolio Manager	Start Date	Timeline											End Date		
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021			
Michelle Louie	11/30/2017														
Donald M. Butler	12/14/2015														
Scott E. Geiger	12/14/2015														11/30/2017
Michael A. Johnson	02/22/2013														12/14/2015
Ryan E. Ludt	09/07/2010														02/22/2013

Parent High

The Vanguard Group earns a High Parent rating for its investor-centric ethos, reliable strategies, and democratization of advice.

Vanguard is the asset-management industry's only client-owned firm, and it shows. Vanguard uses the money that its passive strategies make from securities lending to lower if not eliminate headline expense ratios. Modest fees, capable subadvisors, and performance incentives spur its active business to competitive results. Vanguard also offers advice, human and digital, at an accessible cost. All of this helped its global assets under management grow to USD 7.5 trillion as of March 31, 2021.

Yet, Vanguard's non-U.S. business only accounts for a fraction of its assets. Incumbents within many

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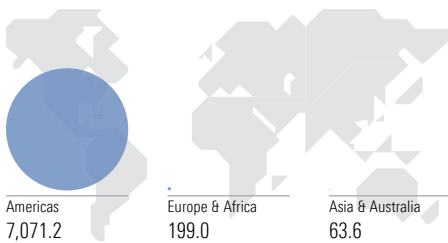
Prospectus Benchmark
S&P 500 Growth TR USD

of these markets have sought to keep this low-cost provider at bay. Vanguard has shifted from leading with exchanged-traded funds to using advice for entry, such as its joint venture with China's Ant Financial to offer a mobile-based retail service, which had more than 1 million Chinese users a year after its April 2020 launch. But there have been missteps, including the March 2021 abandonment of plans to offer index funds in China.

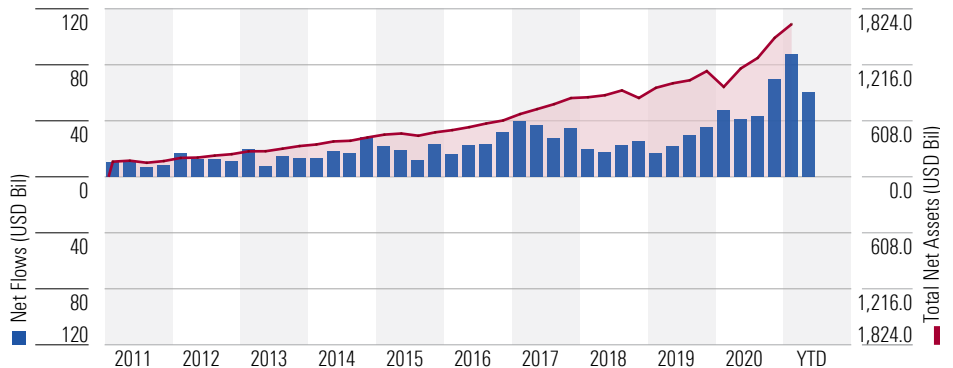
Putting client interests first is as much a matter of culture as a legal reality at Vanguard, whose U.S. funds own the firm. Keeping that culture intact as its business expands and outsiders join is Vanguard's greatest challenge.

Global Assets By Region, By Domicile Bil USD

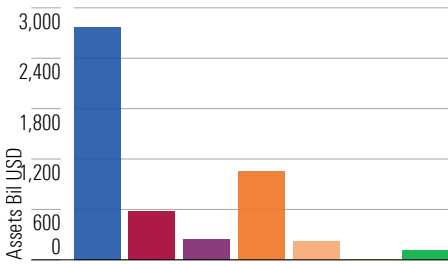
30 Apr 2021



Total Firm Assets and Fund Flows 31 Mar 2021



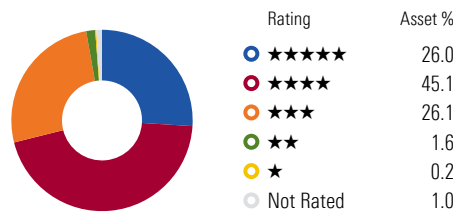
Asset Class Breakdown 30 Apr 2021



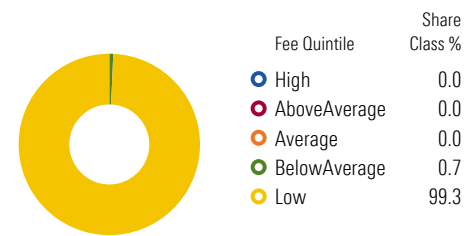
Asset Class	Assets USD Bil	Assets %
U.S. Stock	2,767.7	55.63
Non-U.S. Stock	576.6	11.59
Balanced	249.4	5.01
Taxable Bond	1,048.2	21.07
Municipal Bond	219.4	4.41
Alternative	0.4	0.01
Commodities	112.5	2.26
Total Assets	4,975.3	100.0

Parent Details

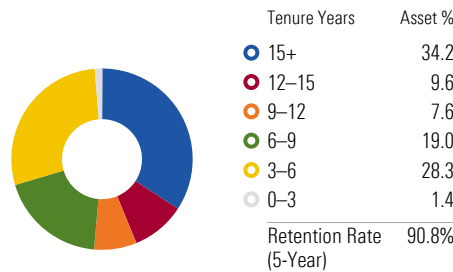
Morningstar Rating Breakdown



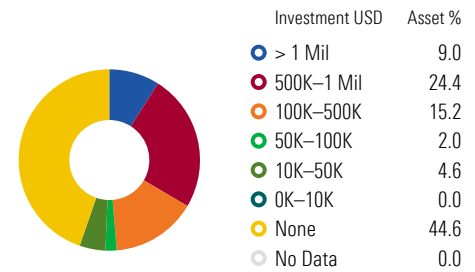
Fee Quintile Breakdown



Manager Tenure



Manager Ownership



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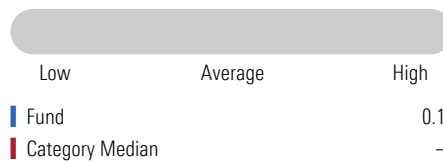
Category Index
Russell 1000 Growth TR USD

Prospectus Benchmark
S&P 500 Growth TR USD

Price

It's critical to evaluate expenses, as they come directly out of returns. The share class on this report levies a fee that ranks in its Morningstar category's cheapest quintile. Based on our assessment of the fund's People, Process and Parent pillars in the context of these fees, we think this share class will be able to deliver positive alpha relative to the category benchmark index, explaining its Morningstar Analyst Rating of Silver.

Net Expense Ratio 02 Jun 2021



3-Year Tax Cost Ratio 31 May 2021

Fund	0.34
Category	2.67

Disclosure Statement

The Global ETF Report is supplemental sales literature, and therefore must be preceded or accompanied by the ETF's current prospectus or an equivalent statement. Please read this information carefully. In all cases, this disclosure statement should accompany the Global ETF Report. Morningstar is not itself a FINRA-member firm. All data presented is based on the most recent information available to Morningstar as of the release date and may or may not be an accurate reflection of current data for securities included in the fund's portfolio. There is no assurance that the data will remain the same.

Prior to 2016, Morningstar's methodology evaluated open-end mutual funds and exchange-traded funds as separate groups. Each group contained a subset of the current investments included in our current comparative analysis. In this report, historical data presented on a calendar-year basis and trailing periods ending at the most-recent month-end reflect the updated methodology.

Risk measures (such as alpha, beta, r-squared, standard deviation, mean, or Sharpe ratio) are calculated for securities or portfolios that have at least a three-year history.

Most Morningstar rankings do not include any adjustment for one-time sales charges, or loads. Morningstar does publish load-adjusted returns, and ranks such returns within a Morningstar Category in certain reports. The total returns for ETFs and fund share classes without one-time loads are equal to Morningstar's calculation of load-adjusted returns. Share classes that are subject to one-time loads relating to advice or sales commissions have their returns adjusted as part of the load-adjusted return calculation to reflect those loads.

ETFs

Funds, including closed-end funds, exchange-traded funds (ETFs), money market funds, open-end funds, and unit investment trusts (UITs), have many similarities, but also many important differences. In general, publicly-offered funds are investment companies registered with the Securities and Exchange Commission under the Investment Company Act of 1940, as amended. Funds pool money from their investors and manage it according to an investment strategy or objective, which can vary greatly from fund to fund. Funds have the ability to offer diversification and professional management, but also involve risk, including the loss of principal.

An ETF is an investment company that typically has an investment objective of striving to achieve a similar return as a particular market index. The ETF will invest in either all or a representative sample of the securities included in the index it is seeking to imitate. Like closed-end funds, an ETF can be traded on a secondary market and thus have a market price that may be higher or lower than its net asset value. If these shares trade at a price above their NAV, they are said to be trading at a premium. Conversely, if they are trading at a price below their NAV,

they are said to be trading at a discount. ETFs are not actively managed, so their value may be affected by a general decline in the U.S. market segments relating to their underlying indexes. Similarly, an imperfect match between an ETF's holdings and those of its underlying index may cause its performance to vary from that of its underlying index. The expense ratio of an ETF is an annual fee charged to a shareholder. It includes operating expenses and management fees but does not take into account any brokerage costs. ETFs do not have 12b-1 fees or sales loads. Capital gains from funds held in a taxable account are subject to income tax. In many, but not all cases, ETFs are generally considered to be more tax-efficient when compared to similarly invested mutual funds and the sales proceeds are paid to the investor.

Sustainalytics

Sustainalytics is an independent environmental, social, and governance and corporate governance research, ratings, and analysis firm. Morningstar, Inc. holds a non-controlling ownership interest in Sustainalytics. Sustainalytics provides ESG scores on companies, which are evaluated within global industry peer groups, and tracks and categorizes ESG-related controversial incidents on companies. Morningstar has licensed Sustainalytics' company-level ESG analytics for use in calculating ratings for managed products and indexes using Morningstar's portfolio holdings database.

Performance

The performance data given represents past performance and should not be considered indicative of future results. Principal value and investment return will fluctuate, so that an investor's shares, when sold, may be worth more or less than the original investment. Fund portfolio statistics change over time. Funds are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

Morningstar calculates after-tax returns using the highest applicable federal marginal income tax rate plus the investment income tax and Medicare surcharge. As of 2018, this rate is 37% plus 3.8% investment income plus 0.9% Medicare surcharge, or 41.7%. This rate changes periodically in accordance with changes in federal law.

Pre-Inception Returns

The analysis in this report may be based, in part, on adjusted historical returns for periods prior to the inception of the share class of the fund shown in this report ("Report Share Class"). If pre-inception returns are shown, a performance stream consisting of the Report Share Class and older share class(es) is created. Morningstar adjusts preinception returns downward 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.

When pre-inception data is presented in the report, the header at the top of the report will indicate this. In

addition, the pre-inception data included in the report will appear in italics.

While the inclusion of pre-inception data provides 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.

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Morningstar Analyst Rating

	2019	2020	2021
 Gold			
 Silver			
 Bronze			
Neutral			
Negative			
Under Review			
Not Rateable			

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The Morningstar Analyst Rating™ for Funds

The Morningstar Analyst Rating™ for Funds is a forwardlooking analysis of a fund. 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 date shown next to the Morningstar Analyst Rating is the date on which Morningstar Manager Research Analyst assigned or reaffirmed the current rating for the fund based on the analyst's latest review and research

report for the fund.

The Morningstar Analyst Rating methodology was updated in 2019. For all funds rated on or after November 1, 2019:

- ▶ 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, the modification by alpha dispersion is not used.

The Five (5) Pillars

Morningstar has identified five key areas that we believe are crucial to predicting the future success of funds: People, Parent, Process, Performance, and Price. Each pillar is evaluated when assessing a fund as well as the interaction between the pillars, 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 its 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 including how key decisions are made.

Parent

We believe the parent organization is of utmost importance in evaluating funds. The fund's 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.

Process

We look for funds with a performance objective and investment process (for both security selection and portfolio construction) that is sensible, clearly defined, and repeatable. In addition, the portfolio should be constructed in a manner that is consistent with the investment process and performance objective.

Performance

We do not believe past performance is necessarily

predictive of future results. For funds rated prior to November 1, 2019, this factor received a relatively small weighting in our evaluation. For funds rated on or after November 1, 2019, this factor receives no explicit weighting in our analysis, but is referenced instead in our evaluation of people and process. 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.

Price

For funds rated prior to November 1, 2019, to reflect actual investor experience, price is evaluated within the context of the relevant market or cross-border region. In recognition of differences in scale and distribution costs in various markets, the level at which a fund is penalized for high fees or rewarded for low fees can vary with region. In Europe, for example, funds are penalized 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.

For funds rated on or after November 1, 2019, to reflect actual investor experience, rated funds are directly penalized by the amount of their fee, including of any performance fee charged, when we assign the rating. Fees are assessed at the level of the vehicle at which they are charged, in the case of open-end funds, for example, this occurs at the share-class level. Vehicles with multiple classes with different fees are therefore likely to have differentiated ratings reflecting the different impact of their fees on our expected net alpha.

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:

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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.

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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.

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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.

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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), and 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), and 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 numerical value as High (5), Above Average (4), Average (3), Below Average (2), and Low (1).

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For more information about Morningstar's quantitative methodology, please visit

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Morningstar Star Rating

The Morningstar Star Rating is a proprietary data point that is quantitatively driven. Funds are rated from one to five stars based on how well the fund performed (after adjusting for risk and accounting for sales charges) in comparison to similar funds. Within each Morningstar Category, the top 10% of funds receive five-stars and the bottom 10% receives one-star. Funds are rated for up to three time periods –three-, five-, and ten-years– and these ratings are combined to produce an overall star rating, which is noted within the Report. Funds with less than three years of history are not rated. Morningstar Star Ratings are based entirely on a mathematical evaluation of past performance. Morningstar Star Ratings are in no way to be considered a buy or sell signal nor should be viewed as a statement of fact.

Equity-Related Data Points

The Report lists the fund's top ten holdings as of the dated noted. For each underlying holding, a series of data point is provided including, where applicable, that security's Economic Moat as of the date noted.

Economic Moat

The concept of an economic moat plays a vital role in our equity analyst's qualitative assessment of a firm's long-term investment potential, but also in the actual calculation of its fair value estimate. An economic moat is a structural feature that allows a firm to sustain excess profits over a long period of time. We define economic profits as returns on invested capital (or ROIC) over and above our estimate of a firm's cost of capital, or weighted average cost of capital (or WACC). Without a moat, profits are more susceptible to competition. We have identified five sources of economic moats: intangible assets, switching costs, network effect, cost advantage, and efficient scale.

Companies with a narrow moat are those we believe are more likely than not to achieve normalized excess returns for at least the next 10 years. Wide-moat companies are those in which we have very high confidence that excess returns will remain for 10 years, with excess returns more likely than not to remain for at least 20 years. The longer a firm generates economic profits, the higher its intrinsic value. We believe low-quality, nomoat companies will see their normalized returns gravitate toward the firm's cost of capital more quickly than companies with moats.

For more information about methodology in analysing stocks, please go to <http://global.morningstar.com/equity-disclosures>.

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Data Definitions

7-day Yield

The 7-day yield is a measure of performance in the interest rates of money market funds.

12 Month Yield %

12 Month Yield % is derived by summing the trailing 12-months' income distributions and dividing the sum by the last month's ending NAV, plus any capital gains distributed over the same period. Income refers only to interest payments from fixed-income securities and dividend payoffs from common stocks.

30-Day SEC Yield

The 30-day SEC Yield is a calculation based on a 30-day period ending on the last day of the previous month. It is computed by dividing the net investment income per share earned during the period by the maximum offering price per share on the last day of the period. The figure listed lags by one month. When a dash appears, the yield available is more than 30 days old. This information is taken from fund surveys.

30-Day Unsubsidized Yield

The 30-day Unsubsidized Yield is computed under a SEC standardized formula based on net income earned over the past 30 days. It excludes contractual expense reimbursements, resulting in a lower yield.

Adjusted Expense Ratio

Adjusted Expense Ratio excludes certain variable investment-related expenses, such as interest from borrowings and dividends on borrowed securities, allowing for more consistent cost comparisons across funds.

Alpha

Alpha is a measure of the difference between a security or portfolio's actual returns and its expected performance, given its level of risk (as measured by beta.) Alpha is often seen as a measure of the value added or subtracted by a portfolio manager.

Asset Allocation

Asset Allocation reflects asset class weightings of the portfolio. The "Other" category includes security types that are not neatly classified in the other asset classes, such as convertible bonds and preferred stocks, or cannot be classified by Morningstar as a result of missing data. Morningstar may display asset allocation data in several ways, including tables or pie charts. In addition, Morningstar may compare the asset class breakdown of the fund against its three-year average, category average,

and/or index proxy.

Asset allocations shown in tables may include a breakdown among the long, short, and net (long positions net of short) positions. These statistics summarize what the fund's managers are buying and how they are positioning the fund's portfolio. When short positions are captured in these portfolio statistics, investors get a more robust description of the fund's exposure and risk. Long positions involve buying the security outright and selling it later, with the hope the security's price rises over time. Short positions are taken with the hope of benefitting from anticipated price declines. The investor borrows the security from another investor, sells it and receives cash, and then is obligated to buy it back at some point in the future. If the price falls after the short sale, the investor will have sold high and can buy low to close the short position and lock in a profit. However, if the price of the security increases after the short sale, the investor will experience a loss buying it at a higher price than the sale price.

Most fund portfolios hold fairly conventional securities, such as long positions in equities and bonds. Morningstar may generate a colored pie chart for these portfolios. Other portfolios use other investment strategies or securities, such as short positions or derivatives, in an attempt to reduce transaction costs, enhance returns, or reduce risk. Some of these securities and strategies behave like conventional securities, while other have unique return and risk characteristics. Portfolios that incorporate investment strategies resulting in short positions or portfolio with relatively exotic derivative positions often report data to Morningstar that does not meet the parameters of the calculation underlying a pie chart's generation. Because of the nature of how these securities are reported to Morningstar, we may not always get complete portfolio information to report asset allocation. Morningstar, at its discretion, may determine if unidentified characteristics of fund holdings are material. Asset allocation and other breakdowns may be rescaled accordingly so that percentages total to 100 percent. (Morningstar used discretion to determine if unidentified characteristics of fund holdings are material, pie charts and other breakdowns may rescale identified characteristics to 100% for more intuitive presentation.)

Note that all other portfolio statistics presented in this report are based on the long (or long rescaled) holdings of the fund only.

Attribution Statistics

Total attribution, or excess return, is the difference between the fund and category index performance figures. Morningstar separates a fund's total attribution into several factors known as attribution effects. The primary effects are: sector weightings, country weightings, security selection, and fees. Sector weightings effect refers to the portion of a fund's value-add attributable to the fund manager's decision on how much to allocate to each Morningstar Global Equity Sector (a fund manager's decision to have an

overweighting or an underweighting in certain sectors compared with the benchmark). For funds in the international-stock categories, country weightings effect is provided to measure the impact of a fund's country allocation as a secondary decision, based on the Morningstar Country classification. In this case, a fund manager's decision to have an overweighting or an underweighting in certain countries within each sector is evaluated. Security selection effect represents the portion of performance attributable to the fund manager's stock-picking skill. Fee effect represents the impact of fund expense ratio on excess return. Morningstar attribution analysis primarily focuses on these four attribution effects. There are two remaining effects, known as interaction and residual, in order for the total attribution to be the sum of the effects. The interaction effect, as its name suggests, is the interaction between the combination of sector weightings and country weightings relative to the security selection effects, and it does not represent an explicit decision of the fund manager and is thus not considered a primary focus of Morningstar attribution analysis. The residual effect is the portion of return that cannot be explained by the equity and cash-holdings composition at the beginning of the analysis period.

If a fund holds another fund as part of its holdings (such as when a mutual fund holds an exchange-traded fund or another mutual fund), the calculation will drill down to the individual security holdings of the underlying fund for analysis. The following securities are excluded from the attribution analysis, and the remaining holdings are rescaled to 100% when performing attribution analysis.

- ▶ Nonequity securities (except cash, which is included as a stand-alone sector).
- ▶ Unidentified or unrecognized securities. These are securities Morningstar is not able to identify.
- ▶ Unclassified securities. These are securities that are missing sector or country classification.
- ▶ Missing performance. These are securities that are missing returns for the month; they are excluded from that monthly attribution calculation.

Ranking is provided for three-year attribution statistics. Each fund is ranked against its peers in the same Morningstar Category.

Average Effective Duration

Is a weighted average of the effective durations of fixed income and certain derivative holdings. The portfolio average is computed by weighting each holding effective duration by the market value of the holding (notional value for derivatives) and then averaging by the sum of holding values. Effective duration is a measure of price elasticity relative to change in yield which accounts for the impact of redemption options on return of principal. It is expressed as a factor which represents the percentage change in value that is expected for a specific unit change in yield.

Average Effective Maturity

Is a weighted average of the length of time, measured in

years, until return of principal can be reasonably expected for debt securities, and is computed by weighting each holding effective maturity term by the market value of the holding and then averaging by the sum of holding values. The effective maturity may be the nominal maturity date, the next put date, the average life of a sinking fund, the weighted average life of an amortizing prepayment, or a proxy maturity date for perpetual securities. NOTE: Effective Maturity is measured only for holdings which have a principal value or reference a security with a principal value and exclude many derivatives.

Average Weighted Coupon

Is the weighted average of the rates of interest paid of the fixed income and certain derivative securities in a portfolio. The average is computed by weighting each holding price by the market value of the holding and then averaging by the sum of holding values. For securities which pay no periodic interest but accrete in value at an assigned interest rate, (e.g. zero coupons), the value of the coupon is 0%. For non-periodic instruments which pay interest at maturity, (e.g. short-term bills/notes), the interest rate at issuance is assigned as the coupon rate.

Beta

Beta is a measure of a security or portfolio's sensitivity to market movements (proxied using an index.) A beta of greater than 1 indicates more volatility than the market, and a beta of less than 1 indicates less volatility than the market.

Book Value %

Book value is the estimation of the book value growth for a stock. This is calculated by averaging the book-value growth rate per share of the stock for up to the previous four years. A fund's book value % is calculated by taking an asset-weighted average of the book value of all the stocks in the portfolio.

Capital Retirement

Rate of return over a holding period that is attributed to a change in the fund's capital value. This measure includes the change in the fund's NAV as well as all distributions that are classified as short-term capital gains, long-term capital gains, or return of capital. It does not include distributions that are classified as income. The calculation assumes that the investor incurs no transaction fees, pays no taxes at the time of distribution, and reinvests all distributions paid during the period.

Capital Return

Capital return is the portion of a fund's total return that was generated by realized and unrealized increases in the value of the securities in the portfolio.

Cash Flow Growth%

Cash Flow Growth is the estimation of the cash flow growth for a stock. This is calculated by averaging the cash flow growth rate per share of the stock for up to the previous four years. A fund's cash flow growth % is calculated by taking a share-weighted average of the cash flow of all the stocks in its portfolio.

Cash Return

Cash return is calculated by dividing the company's free cash flow by its enterprise value, or market capitalization, plus net debt. This number tells you what cash return you would get if you bought the entire company, including its debt.

Company ESG Score Description

The ESG Score Description ranks the company-level ESG Risk Score for companies against their Sustainability peer group. The ESG Score Description is depicted as a range from Negligible to Severe, where Negligible equals a company that scores well below average relative to its peer group and Severe equals a company that scores well above average relative to its peer group. Breakpoints for the score description are established annually by determining how company scores fall into the following ranges within a peer group:

Negligible	Highest 5%
Low	Next 11%
Medium	Next 68%
High	Next 11%
Severe	Lowest 5%

Each month, a company's ESG Risk Score is compared to its peer group breakpoints and assigned a company score description. Morningstar lists the ESG Score Description for the largest holdings underlying a fund's portfolio.

Coupon Range

The coupon rates for the holdings of a portfolio are broken down into groups. The percentage value displayed represents the portfolio's allocation to holdings with coupons in that range.

Credit Quality

The credit quality breakdowns are shown for corporate bond holdings and depict the quality of bonds in the underlying portfolio. The report shows the percentage of fixed-income securities that fall within each credit-quality rating as assigned by a NRSRO. Bonds not rated by an NRSRO are included in the not-rated category.

Credit Quality Breakdown

Displays the weighted distribution of holdings by credit rating symbol categories. The percentage for each rating category is computed by weighting each holding's credit rating by the market value of the holding and then averaging by the sum of holding values. For holdings that have more than one credit rating the ratings will be combined and an average rating for the holding will be computed. The distribution is based upon available credit ratings from recognized credit rating agencies such as a Nationally Recognized Statistical Rating Organization (NRSRO) in the U.S. (For a list of all NRSROs, please visit <https://www.sec.gov/ocr/ocr-current-nrsros.html>.) The categories are based on the rating scale produced by Morningstar Credit Ratings, LLC and range from AAA, indicating the highest level of credit quality, to D, indicating a security which has defaulted on its payment

obligations. Holdings for which no credit rating is available are assigned to a "Not Rated", or "NR" category. Morningstar calculates Long, Short, and Net values.

Current Yield

Current yield is derived by taking the ratio of a bond's annual interest payment to the current price.

D/C Ratio

The debt-to-capital ratio for a fund's underlying stock holdings is calculated by dividing each security's long-term debt by its total capitalization (the sum of common equity plus preferred equity and long-term debt) and is a measure of the company's financial leverage.

All else being equal, stocks with high D/C ratios are generally riskier than those with low D/C ratios. Note that debt-to-capital figures can be misleading owing to accounting conventions.

Because balance sheets are based on historic cost accounting, they may bear little resemblance to current market values. Morningstar aggregates debt-to-capital figures for mutual funds using a median methodology, whereby domestic stocks are ordered from highest to lowest based on their D/C ratios. One adds up the asset weighting of each holding until the total is equal to or greater than half of the total weighting of all domestic stocks in the fund. The debt/total cap for that stock is then used to represent the debt/total cap of the total portfolio.

Deferred Load %

The back-end sales charge or deferred load is imposed when an investor redeems shares of a fund. The percentage of the load charged generally declines the longer the fund's shares are held by the investor. This charge, coupled with 12b-1 fees, commonly serves as an alternative to a traditional front-end load.

Dividend Yield %

The dividends per share of the company over the trailing one-year period as a percentage of the current stock price

Downside Capture Ratio %

Downside Capture Ratio measures a fund's performance in down markets. A down market is defined as those periods (months or quarters) in which market return is less than 0. In essence, it tells you what percentage of the down market was captured by the fund. For example, if the ratio is 110%, the fund captured 110% of the down market and therefore underperformed the market on the downside.

Drawdown Maximum %

Max Drawdown measures the peak-to-trough decline during a specific record period of a fund. It is usually quoted as the percentage between the peak and trough.

ESG Risk Score %

Sustainalytics' ESG Risk Ratings are designed to help investors identify and understand financially material ESG risks at the security and portfolio level. The ESG Risk

Ratings are based on a two-dimensional materiality framework that measures a company's exposure to industry-specific material risks and how well a company is managing those risks. ESG Risk Ratings are categorized across five risk levels: negligible, low, medium, high and severe. Ratings scale is from 0-100, with 100 being the most severe.

Expense Ratio %

The expense ratio is the annual fee that all funds charge their shareholders. It expresses the percentage of assets deducted each fiscal year for fund expenses, including 12b-1 fees, management fees, administrative fees, operating costs, and all other asset-based costs incurred by the fund. Portfolio transaction fees, or brokerage costs, as well as front-end or deferred sales charges are not included in the expense ratio. The expense ratio, which is deducted from the fund's average net assets, is accrued on a daily basis. The gross expense ratio, in contrast to the net expense ratio, does not reflect any fee waivers in effect during the time period.

Fee Quintile Breakdown

The fee quintile breakdown section sums the percentage of share classes associated with an Investment Provider that has a Morningstar Fee Level—Distribution of Low, Below Average, Average, Above Average, and High.

Financial Health

One of the three quantitative grades that Morningstar assigns to each stock as a quick way to get a handle on its fundamentals. To get a good grade in this area, a company should have low financial leverage (assets/equity), high cash-flow coverage (total cash flow/long-term debt), and a high cash position (cash/assets) relative to its sector.

Free Cash Flow Yield

Equal to operating cash flow minus capital spending. Free cash flow represents the cash a company has left over after investing in the growth of its business. Young, aggressive companies often have negative free cash flow, because they're investing heavily in their futures. As companies mature, though, they should start generating free cash flow.

Front-end Load %

The initial sales charge or front-end load is a deduction made from each investment in the fund and is generally based on the amount of the investment.

Geometric Average Market Capitalization

Geometric Average Market Capitalization is a measure of the size of the companies in which a portfolio invests.

Growth

The Morningstar Growth Grade is based on the trend in revenue per share using data from the past five years. For the purpose of calculating revenue per share we use the past five years' revenue figures and corresponding yearend fully diluted shares outstanding; if year-end fully diluted shares outstanding is not available, we calculate this figure by dividing the company's reported net income

applicable to common shareholders by the reported fully diluted earnings per share. A company must have a minimum of four consecutive years of positive and non-zero revenue, including the latest fiscal year, to qualify for a grade.

In calculating the revenue per share growth rate, we calculate the slope of the regression line of historical revenue per share. We then divide the slope of the regression line by the arithmetic average of historical revenue per share figures. The result of the regression is a normalized historical increase or decrease in the rate of growth for sales per share. We then calculate a z-score by subtracting the universe mean revenue growth from the company's revenue growth, and dividing by the standard deviation of the universe's growth rates.

Stocks are sorted based on the z-score of their revenue per share growth rate calculated above, from the most negative z-score to the most positive z-score. Stocks are then ranked based on their z-score from 1 to the total number of qualified stocks. We assign grades based on this ranking.

Growth of 10,000

For funds, this graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and/or with that of the average for all funds in its Morningstar Category. The total returns are not adjusted to reflect sales charges or the effects of taxation but are adjusted to reflect actual ongoing fund expenses, and they assume reinvestment of dividends and capital gains. If adjusted, effects of sales charges and taxation would reduce the performance quoted. If pre-inception data is included in the analysis, it will be graphed.

The index in the Growth of 10,000 graph is an unmanaged portfolio of specified securities and cannot be invested in directly. The index does not reflect any initial or ongoing expenses. A fund's portfolio may differ significantly from the securities in the index. The index is chosen by Morningstar.

Historical Earnings %

The historical earnings % is an estimation of the historical earnings growth for a stock. This is calculated by averaging the earnings-growth rate per share of the stock for up to the previous four years. A fund's historical earnings % is calculated by taking an asset-weighted average of the historical earnings of all the stocks in the portfolio.

Income Return

Income return is the portion of the holding period return that is attributed to dividend distributions. This calculation assumes that the investor incurs no transaction fees, pays no taxes at the time of distribution, and reinvests all distributions paid during the period.

Income Return

Income Return is the portion of a fund's total returns that was derived from income distributions. Income Return

will often be higher than capital return for bond funds and typically be lower for stock funds. Adding the Income Return and the capital return together will produce the fund's total return.

Long-Term Earnings Growth %

Long-Term Earnings Growth is the estimation of the longterm earnings growth forecast of a stock. This is collected as a third-party estimate. A fund's long-term earnings % is calculated by taking an asset-weighted average of the long-term earnings of all the stocks in the portfolio.

Manger Ownership

Manager ownership sums the percentage of assets in funds with maximum manager ownership levels of more than \$1 million, \$500,001 to \$1 million, \$100,001 to \$500,000, \$50,001 to \$100,000, \$10,001 to \$50,000, \$1 to \$10,000, and \$0, as well as no data on manager ownership.

Manager Retention Rate

This data point annualizes the manager-retention rate for the period noted. The manager-retention rate for a calendar year is the percentage of manager present at a firm in the beginning of the calendar year that are also present at the end of the calendar year.

Manager Tenure

Manager tenure sums the percentage of assets in funds with longest-tenured manager stays of 0-3 years, 3-6 years, 6-9 years, 9-12 years, 12-15 years, and more than 15 years.

Management Fees %

The management fee includes the management and administrative fees listed in the Management Fees section of a fund's prospectus. Typically, these fees represent the costs shareholders paid for management and administrative services over the fund's prior fiscal year.

Maturity Schedule

The Maturity Schedule shows the breakdown of the maturities in a fixed-income portfolio. It reveals the percentage of fixed-income securities that fall within each maturity range.

Morningstar Analyst Rating™

The Morningstar Analyst Rating™ is not a credit or risk rating. It is a subjective evaluation performed by the manager research analysts of Morningstar. Morningstar evaluates funds based on five key pillars, which are process, performance, people, parent, and price. Analysts use 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 an

analyst's conviction in a fund's prospects for outperformance. Analyst Ratings 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 <http://corporate1.morningstar.com/AnalystRating/>.

The Morningstar Analyst Rating should not be used as the sole basis in evaluating a fund. Morningstar Analyst Ratings involve unknown risks and uncertainties which may cause Morningstar's expectations not to occur or to differ significantly from what we expected.

Morningstar Category

Morningstar Category is assigned by placing funds into peer groups based on their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. Analysis of performance and other indicative facts are also considered. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent category assignment. Categories may be changed based on recent changes to the portfolio.

Morningstar Economic Moat

The idea of an economic moat refers to how likely companies are to keep competitors at bay for an extended period. The following attributes can give companies a wider economic moat: huge market share; low cost producer; patents, copyrights, or governmental approvals and licenses; unique corporate culture; high customer-switching costs; and network effect. A company can be rated as having no economic moat, a narrow economic moat, or a wide economic moat. The moat ratings of the fund's underlying equities are aggregated and displayed as a percentage of the fund's equity holdings with moat ratings.

Morningstar Equity Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report. For equity funds, the vertical axis shows the market capitalization of the long stocks owned, and the horizontal axis shows the investment style (value, blend, or growth.) A darkened square in the style box indicates the weighted average style of the portfolio.

Morningstar Fee Level

Morningstar Fee Level puts the expenses of the fund in context by showing the range of fees charged by its peers. An overall Fee Level for the fund is shown, along with breakpoints for five quintiles of Fee Levels for the fund'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.

Morningstar Fixed Income Style Box™

The Morningstar Style Box™ reveals a fund's investment strategy as of the date noted on this report.

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 (for example, 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. For a list of all NRSROs, please visit <http://www.sec.gov/divisions/marketreg/ratingagency.htm>. 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 an NRSRO nor does it issue a credit rating on the fund. 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, 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 MCB1's average effective duration; funds whose average effective duration is between 75% to 125% of the MCB1 will be classified as Moderate; and those that are at 125% or greater of the average effective duration of the MCB1 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 used. 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-U.S. taxable and non-U.S. domiciled fixed-income funds, static duration breakpoints are used: (i) Limited: less than or equal to 3.5 years; (ii) Moderate: more than 3.5 years but less than or equal to 6 years; (iii) Extensive: more 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 Global Category

Morningstar Global Categories are peer groups for managed portfolios domiciled anywhere in the world. The Global Category is assigned by placing funds into peer groups based on the characteristics of their underlying holdings. The underlying securities in each portfolio are the primary factor in our analysis as the investment objective and investment strategy stated in a fund's prospectus may not be sufficiently detailed for our proprietary classification methodology. Funds are placed in a category based on their portfolio statistics and compositions over the past three years. If the fund is new and has no portfolio history, Morningstar estimates where it will fall before giving it a permanent global category assignment. Global categories may be changed based on recent changes to the portfolio. Not all funds are available to purchase within your country. Returns-based analysis may not be valid in some circumstances due to the impact of currencies.

Morningstar Historical Sustainability Score

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.

Morningstar Ownership Zone

The Morningstar Ownership Zone provides a graphic representation of the size and investment style of long stocks in fund's portfolio. The Ownership Zone is derived by plotting each stock in the portfolio within the Morningstar Style Box™. The Ownership Zone is the shaded area that represents 75% of the assets in the portfolio and indicates the level of concentration in the

holdings. The "centroid" in the middle of the Ownership Zone represents the weighted average of all the holdings. The Ownership Zone helps investors differentiate between portfolios that may otherwise look similar. Investors can also use the Ownership Zone to construct diversified portfolios and model how multiple funds complement one another in a portfolio.

Morningstar Pillar Ratings

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:

Morningstar Pillar Ratings are subjective evaluations of funds performed by manager research analysts of Morningstar.

Morningstar evaluates funds based on five key pillars, which are process, performance, people, parent, and price. Morningstar's analysts assign each pillar a rating of Positive, Neutral, or Negative. Morningstar Pillar Scores are then used to help determine the fund's Morningstar Analyst Rating.

The Morningstar Pillar Rating should not be used as the sole basis in evaluating a fund. Morningstar Pillar Ratings involve unknown risks and uncertainties which may cause Morningstar's expectations not to occur or to differ significantly from what we expected.

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

Morningstar Pillar Ratings are subjective evaluations of funds performed by manager research analysts of Morningstar. Morningstar evaluates funds based on five key pillars, which are people, process, parent, performance and price. Morningstar's analysts assign the people, process and parent pillars a rating of Low, Below Average, Average, Above Average, or High. Price and performance then used to help determine the fund's Morningstar Analyst Rating.

The Morningstar Pillar Rating should not be used as the sole basis in evaluating a fund. Morningstar Pillar Ratings involve unknown risks and uncertainties which may cause Morningstar's expectations not to occur or outcomes to differ significantly from what we expected.

Morningstar Portfolio Environmental, Social, and Governance Pillar Scores

Morningstar Portfolio Pillar Scores are intended to measure how well the issuing companies of the securities within a fund's portfolio manage their Environmental, Social and Governance specific risks relative the fund's Morningstar Global Category peers. This is a separate methodology and calculation from the Sustainability ESG Risk Rating and the corresponding Portfolio Sustainability Score and Rating from Morningstar. Sustainability provides Morningstar three pillar or "cluster" scores - Environmental, Social, and Governance. These measure the degree to which a company's economic value may be

at risk driven specifically by environmental factors, social factors, or governance factors and represent the unmanaged risk exposure after taking into account a company's management of such risks. For each fund with at least 67% of assets covered by a company-level Pillar Score from Sustainability, the portfolio-level Pillar Score is calculated from an asset-weighted average of each score. Each portfolio-level Pillar Score ranges between 0 to 100, with a higher score indicating that a fund has, on average, more of its assets invested in companies associated with higher E, S, or G risk.

Each Morningstar Portfolio Pillar Score is then ranked within Morningstar Global Categories in which at least 30 funds receive a Portfolio Pillar Score using the following distribution:

High	Highest 10%
Above Average	Next 22.5%
Average	Next 35%
Below Average	Next 22.5%
Low	Lowest 10%

Morningstar updates its Pillar Scores monthly, upon receipt of a new portfolio. Then, the ranks are 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 Sustainability's ESG scores from the same month as the portfolio as-of date.

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.

Morningstar Rank

Morningstar Rank is the total return percentile rank within each Morningstar Category. The highest (or most favorable) percentile rank is zero and the lowest (or least favorable) percentile rank is 100. Historical percentile ranks are based on a snapshot of a fund at the time of calculation.

Morningstar Rating™

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.

Morningstar Rating Breakdown

The Morningstar rating breakdown section sums the percentage of assets in an Investment Provider’s funds (share classes) that receive, 5-, 4-, 3-, 2-, 1-star, or Null Morningstar Ratings.

Morningstar Rating for Stocks

The Morningstar Rating for Stocks is a forward-looking, analyst-driven measure of a stock’s current price relative to the analyst’s estimate of what the shares are worth. Stock star ratings indicate whether a stock, in the equity analyst’s educated opinion, is cheap, expensive, or fairly priced. To rate a stock, an analyst estimates what he thinks it is worth (its “fair value”), using a detailed, long-term cash flow forecast for the company. A stock’s star rating depends on whether its current market price is above or below the fair value estimate. Those stocks trading at large discounts to their fair values receive the highest ratings (4 or 5 stars). Stocks trading at large premiums to their fair values receive lower ratings (1 or 2 stars). A 3-star rating means the current stock price is fairly close to the analyst’s fair value estimate.

Morningstar Return

The Morningstar Return rates a fund’s performance relative to other managed products in its Morningstar Category. It is an assessment of a product’s excess return over a risk-free rate (the return of the 90-day Treasury Bill) in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return (High), the next 22.5% Above Average (+Avg), the middle 35% Average (Avg), the next 22.5% Below Average (-Ave), and the bottom 10% Low (Low). Morningstar Return is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

Morningstar Risk

Morningstar Risk evaluates a fund’s downside volatility relative to that of other products in its Morningstar Category. It is an assessment of the variations in monthly returns, with an emphasis on downside variations, in comparison with the products in its Morningstar

category. In each Morningstar category, the 10% of products with the lowest measured risk are described as Low Risk (Low), the next 22.5% Below Average (-Avg), the middle 35% Average (Avg), the next 22.5% Above Average (+Avg), and the top 10% High (High). Morningstar Risk is measured for up to three time periods (three, five, and 10 years). These separate measures are then weighted and averaged to produce an overall measure for the product. Products with less than three years of performance history are not rated.

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%
	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.

NAV

A fund’s net asset value (NAV) represents its per-share price. NAV is calculated by dividing a fund’s total net assets by its number of shares outstanding.

Percentile Rank in Category

Percentile Rank is a standardized way of ranking items within a peer group, in this case, funds within the same Morningstar Category. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable for returns (high returns), while higher percentile ranks are generally more favorable for risk measures (low risk).

Peer Group

The Peer Group, or rating group, is a group of similar funds that are compared against each other for the purpose of assigning Morningstar ratings. For funds, the rating group is the Morningstar Category

Percentile Rank in Global Category

Percentile Rank is a standardized way of ranking items within a peer group. The observation with the largest numerical value is ranked zero the observation with the smallest numerical value is ranked 100. The remaining observations are placed equal distance from one another on the rating scale. Note that lower percentile ranks are generally more favorable.

Performance Quartile

Performance Quartile reflects a fund's Morningstar Rank.

Price/Book Ratio

The Price/Book Ratio (or P/B Ratio) for a fund is the weighted average of the P/B Ratio of the stocks in its portfolio. Book value is the total assets of a company, less total liabilities. The P/B ratio of a company is calculated by dividing the market price of its outstanding stock by the company's book value, and then adjusting for the number of shares outstanding. Stocks with negative book values are excluded from this calculation. It shows approximately how much an investor is paying for a company's assets based on historical valuations.

Price/Cash Flow Ratio

The Price/Cash Flow Ratio (or P/C Ratio) for a fund is the weighted average of the P/C Ratio of the stocks in its portfolio. The P/C Ratio of a stock represents the amount an investor is willing to pay for a dollar generated from a company's operations. It shows the ability of a company to generate cash and acts as a gauge of liquidity and solvency.

Price/Prospective Earnings Ratio

The Price/Prospective Earnings Ratio for a fund is the weighted average of the reciprocal of the earnings yields (or E/P) of the stocks in its portfolio. The E/P of a stock is the company's estimated earnings per share for the current fiscal year divided by the stock's most recent monthend share price.

Price/Sales Ratio

The Price/Sales Ratio (or P/S Ratio) for a fund is the weighted average of the price/sales ratios of the stocks in its portfolio. Price/sales represents the amount an investor is willing to pay for a dollar of revenue generated from a particular company's operations.

Profitability

The profitability grade is based on return on shareholders' equity (ROE) using data from the past five years. Companies with less than four years of consecutive ROE figures, including the ROE figure for the latest fiscal year, are excluded from the calculations. For the remaining universe of stocks the profitability grade is based on the following three components:

1. The historical growth rate of ROE
2. The average level of historical ROE
3. The level of ROE in the latest fiscal year

R-Squared

R-squared is the percentage of a security or portfolio's return movements that are explained by movements in its benchmark index, showing the degree of correlation between the security or portfolio and the benchmark. This figure is helpful in assessing how likely it is that beta and alpha are statistically significant. A value of 1 indicates perfect correlation between the security or portfolio and its benchmark. The lower the R-squared value, the lower the correlation.

Regional Exposure

The regional exposure is a display of the portfolio's assets invested in the regions shown on the report.

Risk vs Return Scatterplot

The risk vs return scatterplot graph plots the return and risk (measured by standard deviation) for a selection of securities and a benchmark index for the trailing period identified in the report.

The returns noted for a security reflect any sales charges that were applied in the illustration over the time period selected, but do not reflect impacts of taxation. If impacts of taxation were reflected, the returns would be lower than those indicated in the report.

The return plotted in the graph is mean geometric return. Standard deviation is a statistical measure of the volatility of the security's or portfolio's returns in relation to the mean return. The larger the standard deviation, the greater the volatility of return in relation to the mean return.

ROIC

This figure is the percentage a company earns on its invested capital in a given year (Year 1, 2, etc.).

The calculation is net operating profit after tax divided by average invested capital. The resulting figure is then multiplied by 100. Invested capital equals the sum of total stockholders' equity, long-term debt and capital lease obligation, and short-term debt and capital lease obligation. ROIC shows how much profit a company generates on its capital base. The better the company, the more profit it generates as a percentage of its invested capital. The company's net income is found in the income statement. The components of the company's invested capital are found in the balance sheet.

Sales Growth%

Sales Growth is the estimation of the growth of sales for a stock. This is calculated by averaging the sales-growth rate per share of the stock for up to the previous four years. A fund's sales growth % is calculated by taking a shareweighted average of the collective sales for all stocks in its portfolio.

Sector Weightings

Super Sectors represent Morningstar's broadest classification of equity sectors by assigning the 11 equity sectors into three classifications. The Cyclical Super Sector includes industries significantly impacted by economic shifts, and the stocks included in these sectors generally have betas greater than 1. The Defensive Super Sector generally includes industries that are relatively immune to economic cycles, and the stocks in these industries generally have betas less than 1. The Sensitive Super Sector includes industries that ebb and flow with the overall economy, but not severely so. Stocks in the Sensitive Super Sector generally have betas that are close to 1.

Fixed-income Super Sectors represent Morningstar's broadest classification of fixed-income sectors. Securities

held in domestic taxable-bond portfolios are mapped into one of 14 fixed-income sectors, which in turn, roll up to five super sectors. The Government Super Sector includes all conventional debt issued by governments, bonds issued by a Central Bank or Treasury, and bonds issued by local governments, cantons, regions, and provinces. The Municipal Super Sector includes taxable and tax-exempt debt obligations issued under the auspices of states, cities, counties, provinces, and other non-federal government entities. The Corporate Super Sector includes bank loans, convertible bonds, conventional debt securities issued by corporations, and preferred stock. The Securitized Super Sector includes all types of mortgage-based securities, covered bonds, and asset-backed securities. The Cash & Equivalents Super Sector includes cash in the bank, certificates of deposit, currency, and money market holdings. Cash can also be any fixed-income securities that mature in certain short time frames, commercial paper, and repurchase agreements. The Derivatives Super Sector includes the common types of fixed-income derivative contracts: futures and forwards, options, and swaps. This sector may be displayed as "Other" in certain reports.

Sharpe Ratio

Sharpe Ratio uses standard deviation and excess return (a measure of a security or portfolio's return in excess of the U.S. Treasury three-month Treasury Bill) to determine the reward per unit of risk.

Standard Deviation

Standard deviation is a statistical measure of the volatility of the security or portfolio's returns. The larger the standard deviation, the greater the volatility of return.

Standardized Returns

Standardized Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experience if the security was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Tax Cost Ratio

The Morningstar Tax Cost Ratio measures how much a fund'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.

Like an expense ratio, the tax cost ratio is a measure of how one factor can negatively impact performance. Also like an expense ratio, it is usually concentrated in the range of 0-5%. 0% indicates that the fund had no taxable distributions and 5% indicates that the fund was less tax efficient.

Trailing Returns

Trailing Return applies the methodology described in the Standardized Returns page of this report. Standardized Return is calculated through the most recent calendar-quarter end for one-year, five-year, 10-year, and/or since-inception periods, and it demonstrates the impact of sales charges (if applicable) and ongoing fund expenses. Standardized Return reflects the return an investor may have experienced if the fund was purchased at the beginning of the period and sold at the end, incurring transaction charges.

Load-Adjusted Monthly Return is calculated applying the same methodology as Standardized Return, except that it represents return through month-end. As with Standardized Return, it reflects the impact of sales charges and ongoing fund expenses, but not taxation. If adjusted for the effects of taxation, the performance quoted would be significantly different.

Trailing Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Total Return

Total Return, or "Non Load-Adjusted Return", reflects performance without adjusting for sales charges (if applicable) or the effects of taxation, but it is adjusted to reflect all actual ongoing security expenses and assumes reinvestment of dividends and capital gains. It is the return an investor would have experienced if the fund was held throughout the period. If adjusted for sales charges and the effects of taxation, the performance quoted would be significantly reduced.

Total Return +/- indicates how a fund has performed relative to its peers (as measure by its Standard Index and/or Morningstar Category Index) over the time periods shown.

Turnover Ratio %

Turnover Ratio measures the trading activity in a fund's portfolio by taking the lesser of purchases or sales (excluding all securities with maturities of less than one year) and dividing by average monthly net assets. In practical terms, the resulting percentage loosely represents the percentage of the fund's underlying holdings that have changed over the past year. The inverse of a fund's turnover ratio is the average holding period for a security in that fund.

Upside Capture Ratio %

Upside Capture Ratio measures a fund's performance in up markets relative to the market (benchmark) itself. It is calculated by taking the fund's upside capture return and dividing it by the benchmark's upside capture return.

Investment Risks

International/Emerging Market Equities

Investing in international securities involves special

additional risks. These risks include, but are not limited to, currency risk, political risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Sector Strategies

Portfolios that invest exclusively in one sector or industry involve additional risks. The lack of industry diversification subjects the investor to increased industry-specific risks.

Non-Diversified Strategies

Portfolios that invest a significant percentage of assets in a single issuer involve additional risks, including share price fluctuations, because of the increased concentration of investments.

Small Cap Equities

Portfolios that invest in stocks of small companies involve additional risks. Smaller companies typically have a higher risk of failure, and are not as well established as larger blue-chip companies. Historically, smaller-company stocks have experienced a greater degree of market volatility than the overall market average.

Mid Cap Equities

Portfolios that invest in companies with market capitalization below \$10 billion involve additional risks. The securities of these companies may be more volatile and less liquid than the securities of larger companies.

High-Yield Bonds

Portfolios that invest in lower-rated debt securities (commonly referred to as junk bonds) involve additional risks because of the lower credit quality of the securities in the portfolio. The investor should be aware of the possible higher level of volatility, and increased risk of default.

Tax-Free Municipal Bonds

The investor should note that the income from tax-free municipal bond funds may be subject to state and local taxation and the Alternative Minimum Tax.

Bonds

Bonds are subject to interest rate risk. As the prevailing level of bond interest rates rise, the value of bonds already held in a portfolio declines. Portfolios that hold bonds are subject to declines and increases in value due to general changes in interest rates.

HOLDERS

The investor should note that these are narrow industry-focused products that, if the industry is hit by hard times, will lack diversification and possible loss of investment would be likely. These securities can trade at a discount to market price, ownership is of a fractional share interest, the underlying investments may not be representative of the particular industry, the HOLDER might be delisted from the AMEX if the number of underlying companies drops below nine, and the investor may experience trading halts.

Hedge Funds

The investor should note that hedge fund investing involves specialized risks that are dependent upon the type of strategies undertaken by the manager. This can include distressed or event-driven strategies, long/short strategies, using arbitrage (exploiting price inefficiencies), international investing, and use of leverage, options and/or derivatives. Although the goal of hedge fund managers may be to reduce volatility and produce positive absolute return under a variety of market conditions, hedge funds may involve a high degree of risk and are suitable only for investors of substantial financial means who could bear the entire loss of their investment.

Bank Loan/Senior Debt

Bank loans and senior loans are impacted by the risks associated with fixed income in general, including interest rate risk and default risk. They are often non-investment grade; therefore, the risk of default is high. These securities are also relatively illiquid. Managed products that invest in bank loans/senior debt are often highly leveraged, producing a high risk of return volatility.

Exchange Traded Notes (ETNs)

ETNs are unsecured debt obligations. Any repayment of notes is subject to the issuer's ability to repay its obligations. ETNs do not typically pay interest.

Leveraged ETFs

Leveraged investments are designed to meet multiples of the return performance of the index they track and seek to meet their fund objectives on a daily basis (or other time period stated within the prospectus objective). The leverage/gearing ratio is the amount of excess return that a leveraged investment is designed to achieve in comparison to its index performance (i.e. 200%, 300%, -200%, or -300% or 2X, 3X, -2X, -3X). Compounding has the ability to affect the performance of the fund to be either greater or less than the index performance multiplied by the multiple stated within the funds objective over a stated time period.

Short Positions

When a short position moves in an unfavorable way, the losses are theoretically unlimited. The broker may demand more collateral and a manager might have to close out a short position at an inopportune time to limit further losses.

Long-Short

Due to the strategies used by long-short funds, which may include but are not limited to leverage, short selling, short-term trading, and investing in derivatives, these funds may have greater risk, volatility, and expenses than those focusing on traditional investment strategies.

Liquidity Risk

Closed-end fund, ETF, and HOLDER trading may be halted due to market conditions, impacting an investor's ability to sell a fund.

Market Price Risk

The market price of ETFs, HOLDERS, and closed-end funds traded on the secondary market is subject to the forces of

supply and demand and thus independent of the NAV. This can result in the market price trading at a premium or discount to the NAV, which will affect an investor's value.

Market Risk

The market prices of ETFs and HOLDRs can fluctuate as a result of several factors, such as security-specific factors or general investor sentiment. Therefore, investors should be aware of the prospect of market fluctuations and the impact it may have on the market price.

Target-Date Funds

Target-date funds typically invest in other mutual funds and are designed for investors who are planning to retire during the target date year. The fund's target date is the approximate date when investors expect to begin withdrawing their money. A target-date fund's investment objective/strategy typically becomes more conservative over time, primarily by reducing its allocation to equity mutual funds and increasing its allocations in fixed-income mutual funds. An investor's principal value in a target-date fund is not guaranteed at any time, including at the fund's target date.

High double- and triple-digit returns

High double- and triple-digit returns were the result of extremely favorable market conditions, which may not continue to be the case. High returns for short time periods must not be a major factor when making investment decisions.

information.

Russell 1000 TR USD

Consists of the 1000 largest companies within the Russell 3000 index, which represents approximately 98% of the investable US equity market. Also known as the Market-Oriented Index, because it represents the group of stocks from which most active money managers choose. The constituents displayed for this index are from the following proxy: iShares Russell 1000.

S&P 500 TR USD

A market capitalization-weighted index composed of the 500 most widely held stocks whose assets and/or revenues are based in the US; it's often used as a proxy for the stock market. TR (Total Return) indexes include daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core S&P 500.

USTREAS T-Bill Auction Ave 3 Mon

Three-month T-bills are government-backed, short-term investments considered to be risk-free and as good as cash because the maturity is only three months. Morningstar collects yields on the T-bill on a weekly basis from the Wall Street Journal.

Benchmark Disclosure

Barclays US Agg Bond TR USD

This index is composed of the BarCap Government/Credit Index, the Mortgage- Backed Securities Index, and the Asset-Backed Securities Index. The returns we publish for the index are total returns, which include the daily reinvestment of dividends. The constituents displayed for this index are from the following proxy: iShares Core US Aggregate Bond.

MSCI EAFE NR USD

This Europe, Australasia, and Far East index is a market-capitalization-weighted index of 21 non-U.S., industrialized country indexes.

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