**SPDR® S&P 500 ETF (SPY)**

**Morningstar Category**
US ETF Large Blend

**Category Index**
S&P 500 TR USD

**Prospectus Benchmark**
S&P 500 TR USD

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**Performance Since Inception - Growth of 10,000**

- **Time Period:** 1/23/1993 to 11/9/2016
- **Fund**
- **Morningstar Category**
- **Category Index**

---

**Annual Total Returns %**

<table>
<thead>
<tr>
<th><em>annualized returns</em></th>
<th>Inception</th>
<th>2010</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPDR® S&amp;P 500 ETF</td>
<td>8.99</td>
<td>14.93</td>
<td>15.84</td>
<td>32.21</td>
<td>13.53</td>
<td>1.34</td>
<td>7.71</td>
</tr>
<tr>
<td>S&amp;P 500 TR USD</td>
<td>9.11</td>
<td>15.66</td>
<td>16.00</td>
<td>32.39</td>
<td>13.69</td>
<td>1.38</td>
<td>7.84</td>
</tr>
<tr>
<td>US ETF Large Blend</td>
<td>9.37</td>
<td>14.89</td>
<td>15.25</td>
<td>30.70</td>
<td>11.45</td>
<td>-0.59</td>
<td>7.36</td>
</tr>
</tbody>
</table>

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**Monthly Fund Flows (millions USD)**

<table>
<thead>
<tr>
<th>Time Time Frame</th>
<th>-50,000M</th>
<th>0M</th>
<th>50,000M</th>
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<tr>
<td>2012</td>
<td></td>
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<tr>
<td>2013</td>
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<td></td>
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<tr>
<td>2014</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Suitability**

By Ben Johnson, CFA 11/1/2016

SPDR S&P 500 SPY is one of the least-expensive funds in the large-blend Morningstar Category. It offers a well-diversified, market-cap-weighted portfolio that accurately represents its target market and promotes low turnover; this, together with its sizable cost advantage, support the fund's Morningstar Analyst Rating of Gold.

The S&P 500 is the most oft-cited proxy for the U.S. equity market. SPY is the most heavily traded exchange-listed fund in the world. This level of liquidity makes it very inexpensive to trade in large amounts, an attractive feature for traders and institutions with relatively short anticipated holding periods. While the fund's low expense ratio gives it a big leg up relative to peers in the large-blend category, structural issues hinder its tracking efficiency. So while a low-cost S&P 500 index fund or exchange-traded fund is generally a good bet for obtaining exposure to large-cap U.S. stocks, there are better S&P 500 funds available.

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A low fee and a soundly constructed and reasonably representative benchmark leave SPY well-positioned to continue its long streak of producing superior risk-adjusted returns relative to other S&P 500 ETFs and index mutual funds.

A low fee and a soundly constructed and reasonably representative benchmark leave SPY well-positioned to continue its long streak of producing superior risk-adjusted returns relative to its category peers over the long haul. That said, there are better options available for long-term investors looking for exposure to the index. Many would be marginally better off with S&P 500 ETFs from Vanguard and iShares or mutual funds from Vanguard or Fidelity, all of which have lower fees and aren't encumbered by the same structural disadvantages.

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**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. For performance data current to the most recent month-end, please call or visit . +1 617 7863000 http://www.spdrs.com

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.

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**Risk/Return Analysis (3 years)**

<table>
<thead>
<tr>
<th></th>
<th>ETF</th>
<th>Cat Index</th>
<th>Cat Avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Deviation %</td>
<td>10.69</td>
<td>10.71</td>
<td>10.84</td>
</tr>
<tr>
<td>Arithmetic Mean %</td>
<td>0.75</td>
<td>0.75</td>
<td>0.69</td>
</tr>
<tr>
<td>Sharpe Ratio</td>
<td>0.83</td>
<td>0.83</td>
<td>0.77</td>
</tr>
<tr>
<td>R-Squared</td>
<td>100.00</td>
<td>—</td>
<td>94.10</td>
</tr>
<tr>
<td>Beta</td>
<td>1.00</td>
<td>—</td>
<td>0.98</td>
</tr>
<tr>
<td>Alpha %</td>
<td>-0.09</td>
<td>—</td>
<td>-0.54</td>
</tr>
<tr>
<td>Treynor Ratio</td>
<td>8.63</td>
<td>—</td>
<td>8.20</td>
</tr>
<tr>
<td>Sortino Ratio</td>
<td>1.49</td>
<td>1.51</td>
<td>1.36</td>
</tr>
</tbody>
</table>

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**Fundamental View**

The S&P 500 was created in 1957. It was the first market-cap-weighted index of U.S. stocks. Its well-known predecessor, the Dow Jones Industrial Average Index (which was first calculated in 1896), is a price-weighted index. In 1896, weighting stocks on the basis of their share price made sense in that it wasn’t computationally intensive. Sixty years later, computing power had advanced significantly, making it easier to build an index that better reflects the performance of U.S. large-cap stocks, one that selects and weights its constituents on the basis of their market capitalization.

In its history, the S&P 500 has proved a difficult hurdle for many U.S. large-cap managers to clear. The first S&P 500 fund, Vanguard 500 Index VFINX, was launched 40 years ago. Few actively managed U.S. large-cap stock funds that were around in 1976 still exist today. Fewer still managed to produce better returns than Vanguard 500 Index during the past four decades.

Many attribute active managers’ collective struggles to best index funds to the overall level of efficiency of the market for U.S. large-cap stocks. Efficiency in this case is meant to indicate the speed and precision with which market participants incorporate new information into stock prices. Furthermore, given advances in information technology and the growth in the portion of investable assets that is managed by an increasingly skilled set of professional investment managers, it can be argued that the market has become ever-more efficient over time. But market efficiency alone does not explain the long-term success of broadly diversified market-cap-weighted index funds.

Market-cap-weighted indexes like the S&P 500 have some noteworthy drawbacks. By owning “the market,” investors are relying on other market participants to price stocks on their behalf. While over long stretches of time market participants have done a good job of valuing stocks, these long horizons have been marked by episodes of mania and panic. The mania most often cited as an example of the drawbacks of owning the S&P 500 outbreak was the technology bubble, when tech stocks accounted for nearly one third of the index's market cap. Episodes like this are unavoidable for index investors and create opportunities that have historically been exploited by [some] active managers.

The second leg of the investment thesis for index funds is their cost advantage. Index funds are less expensive to manage than actively managed alternatives. Their sponsors don’t have to pay teams of portfolio managers and investment analysts to identify under- or overvalued stocks to be added to or sold from their portfolios. Also, market-cap-weighted index funds have lower turnover relative to actively managed funds. Turnover has a price. Commissions, bid-ask spreads, and market impact costs all add to the headwinds facing active strategies. Also, turnover has tax implications. Higher-turnover actively managed funds will regularly distribute taxable capital gains to their shareholders. This creates an additional drag on these funds’ performance in the case where they are held in taxable accounts. Taken together, these costs are the largest and most persistent drag on the performance of actively managed strategies.

**Morningstar Global ETF Report**

**Overall Morningstar Rating**

- - - -

46 ETFs in Category

**SPDR® S&P 500 ETF**

**SPY**

<table>
<thead>
<tr>
<th>Morningstar Category</th>
<th>Category Index</th>
<th>Prospectus Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>US ETF Large Blend</td>
<td>S&amp;P 500 TR USD</td>
<td>S&amp;P 500 TR USD</td>
</tr>
</tbody>
</table>

**Morningstar Category**

- US ETF Large Blend

**Category Index**

- S&P 500 TR USD

**Prospectus Benchmark**

- S&P 500 TR USD

**Morningstar Global ETF Report**

Print Date: 11/11/2016

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Portfolio Construction

This fund employs full replication to track the S&P 500. This index effectively diversifies risk, promotes low turnover, and accurately represents its target market segment, supporting a Passive Process rating. This index has a slight quality tilt because of its conservative eligibility requirements. However, that does not mean the index will have superior performance. Constituents are determined by a set of criteria and an index committee. The presence of the index committee gives the S&P 500 a greater degree of flexibility relative to most other indexes that follow more-mechanical rules. Per S&P Dow Jones Indices, the smallest constituent of the index as measured by market capitalization was $2.4 billion as of the end of September 2016. The average market capitalization of the stocks included in the index was $39 billion. The constituents of this index account for approximately 80% of the total market cap of the U.S. stock market. As this fund holds large stakes in multinational firms, it also has substantial indirect international exposure. About half of the index's constituents' revenue is generated outside of the United States. Unlike most modern ETFs, SPY is organized as a unit investment trust, which prevents it from reinvesting dividends, holding securities that are not in the index, such as futures, or lending securities. This leads to slightly higher holding costs. It also has a one-month lag between the ex-dividend date and the payment of dividends.
**SPDR® S&P 500 ETF**  
**SPY**

**Morningstar Category**
US ETF Large Blend

**Category Index**
S&P 500 TR USD

**Prospectus Benchmark**
S&P 500 TR USD

**Fees**

This ETF’s 0.0945% expense ratio is a fraction of the 0.93% median levy taken by its peers in the large-blend category, meriting a Positive Price Pillar rating. However, it is not the lowest among ETFs and index funds tracking the S&P 500. During the five-year period ended Sept. 30, 2016, the fund lagged the S&P 500 by about 16 basis points annualized. The approximately 7 basis points of annualized tracking difference that cannot be attributed to SPY’s fee reflect, in part, the fact that it has been unable to reinvest dividends or use futures to equitize cash during a bull market for the S&P 500.

**Estimated Holding Cost** measures the difference between the ETF return and the benchmark return and represents the realized cost of replicating the benchmark. Lower costs indicate that the ETF is doing a better job of matching its benchmark while minimizing costs.

**Tracking Volatility** measures the uncertainty with which an ETF tracks a benchmark. A higher tracking error indicates a wider confidence interval for expected performance around the benchmark. Lower numbers and ranks are better.

**Alternatives**

SPY has greater trading volume and assets under management than any other ETF. But its liquidity advantage is somewhat overshadowed by its relatively higher fee and structural deficiencies. Given its abundant liquidity, frequent traders and investors moving tens of millions of dollars during very brief periods of time will likely prefer to use SPY over its closest peers.

While SPY is structured as a unit investment trust, iShares S&P 500 IVV is a Regulated Investment Company, which allows it to reinvest dividends, engage in securities lending, and use index futures if necessary—all of which result in lower estimated holding costs. Not only does IVV have a lower expense ratio (0.04%)—making it the lowest-cost S&P 500 tracker available to individual investors—it also has realized lower all-in holding costs in practice. With a 0.05% fee, Vanguard S&P 500 VOO (which, like IVV, is also structured as a RIC) is the second-lowest-cost ETF tracking the index for buy-and-hold investors.

A total stock market ETF may be more appropriate for investors looking for exposure to the broad U.S. market in one fund. Schwab U.S. Broad Market ETF SCHB, iShares Core S&P Total U.S. Stock Market ETF ITOT, and Vanguard Total Stock Market ETF VTI each own nearly every publicly traded U.S. stock, offer good liquidity, and sport rock-bottom expense ratios of 0.03%, 0.03%, and 0.05%, respectively.

**Market Impact Cost** represents the liquidity of the ETF and is based on the average market price movement in percent caused by a $100,000 trade in the ETF. Calculated as the residual volatility unexplained by movements in NAV and the previous day’s premium or discount, scaled by average dollar volume traded. Lower numbers and ranks are better.

**Overall Morningstar Rating**

46 ETFS in Category

<table>
<thead>
<tr>
<th>Expenses</th>
<th>ETF</th>
<th>Cat Avg</th>
</tr>
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<tbody>
<tr>
<td>Gross Expense Ratio %</td>
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<td>0.40</td>
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<tr>
<td>Net Expense Ratio %</td>
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</tr>
<tr>
<td>Expense Waiver %</td>
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**Total Cost Analysis Data Points**

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<th>Data Points</th>
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<tr>
<td>Estimated Holding Cost %</td>
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</tr>
<tr>
<td>Tracking Volatility %</td>
<td>0.03</td>
</tr>
<tr>
<td>Market Impact Cost %</td>
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</tr>
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**Operations**

<table>
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<tr>
<td>Longest Tenured Manager</td>
<td></td>
</tr>
<tr>
<td>Manager Tenure (Longest)</td>
<td></td>
</tr>
<tr>
<td>Manager Tenure (Average)</td>
<td></td>
</tr>
<tr>
<td>Web Address</td>
<td><a href="http://www.spdrs.com">http://www.spdrs.com</a></td>
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<tr>
<td>Exchange</td>
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</table>

**Morningstar Rating and Risk**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Morningstar Rating</th>
<th>Morningstar Risk</th>
<th>Morningstar Return</th>
<th># of ETFs</th>
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<tr>
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<td>★★★★★</td>
<td>Average</td>
<td>Above Avg</td>
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<tr>
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<td>★★★★</td>
<td>Below Avg</td>
<td>Above Avg</td>
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<tr>
<td>10 Yr</td>
<td>★★★★★</td>
<td>Average</td>
<td>Above Avg</td>
<td>18</td>
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<tr>
<td>Overall</td>
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<td>Above Avg</td>
<td>46</td>
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</table>

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The information contained in this report is from 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 portfolio. There is no assurance that the data will remain the same.

ETFs trading on a secondary market may trade at, above, or below their net asset value (NAV). If an ETF’s 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."

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. Portfolio statistics change over time. ETFs are not FDIC-insured, may lose value, and are not guaranteed by a bank or other financial institution.

For ETFs, standardized total return is reflected as of the last market close minus one day. It depicts performance without adjusting for brokerage commissions and the effects of taxation, but is adjusted to reflect all actual ongoing ETF expenses and assumes reinvestment of dividends and capital gains. If adjusted, the effects of brokerage commissions and taxation would reduce the performance quoted.

Snapshot

Inception Date: The date on which an investment product began its operations.

Prospectus Gross Expense Ratio: the percentage of fund assets used to pay for operating expenses and management fees, including marketing fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV.

Prospectus Net Expense Ratio: the percentage of fund assets, net of reimbursements, used to pay for operating expenses and management fees, including marketing fees, administrative fees, and all other asset-based costs incurred by the fund, except brokerage costs. Fund expenses are reflected in the fund's NAV.

Assets: total net assets at the share-class level, expressed in millions of U.S. Dollars.

Average Daily Volume: represents the average daily trading volume of ETF shares over the trailing three-month period. This is expressed in number of shares. The daily volume is collected, but the average daily volume is calculated.

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 during the same period. Income refers only to interest payments from fixed-income securities and dividend payments from common stocks.

30-Day SEC Yield: A calculation based on a 30-day period ending on the last 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: is computed under an SEC standardized formula based on net income earned over the past 30 days. It excludes contractual expense reimbursements, resulting in a lower yield.

Portfolio Date: is the date the portfolio was reported.

Distribution Frequency: is the number of times per year that a fund intends to make payments from dividends. Generally monthly, quarterly, semiannually, or annually.

Exchange-Traded Notes: or ETNs, are unsecured, unsubordinated debt securities issued with the backing of a financial institution. Unlike an ETF, which physically holds a portfolio of securities, an ETN represents a promissory obligation on the part of the backing financial institution to deliver the performance of the referenced benchmark. They are not guaranteed by a bank or other financial institution.

Fund Legal Structure: describes the legal structure of the ETF and has implications for how an ETF is registered and regulated. The majority of ETFs are organized as Open End Investment Companies, just like traditional mutual funds. Notable exceptions include ETFs that invest primarily in futures contracts, as well as exchange-traded notes (ETNs). ETFs that hold futures contracts are generally organized as Partnerships (3C1). ETNs are organized as Uncollateralized Debt Instruments. A small number of ETFs are organized as Unit Investment Trusts and Grantor Trusts.

Replication Methods

Index-tracking funds replicate the returns of the index they are tracking through a variety of investment management techniques. The replication method data point explains which portfolio-management techniques are employed.

Physical - Full: An index-tracking fund employing full physical replication will own all of the securities (not including derivatives) and physical commodities of the underlying index in proportion to the weights within the index. Funds with minimal exposure to cash and very small exposures to derivatives tracking the index of the portfolio, may also be treated as products using full physical replication.

Physical - Sample: An index-tracking fund employing sampling, or optimized, physical replication will own a representative set of index components in order to achieve the objective of tracking the stated benchmark. These portfolios can contain a limited number of securities outside of the index and small but material exposures gained through derivatives.

Derivatives Based: Index-tracking portfolios using derivatives-based replication primarily hold cash and exchange-traded derivatives. Some portfolios combining exchange-traded derivatives and OTC derivatives are also considered derivatives-based. This replication method includes funds that track indexes composed of exchange-traded derivatives, such as those tracking commodity indexes. Funds tracking hedge fund or other strategy indexes through combinations of derivatives are considered derivatives-based. Some optimized replication techniques combining physical holdings and derivatives are considered derivatives-based because of a majority of exposure being gained through derivatives.

Synthetic - Portfolios using synthetic replication enter into one or more over-the-counter derivatives to gain direct exposure to the index that the fund is tracking. The OTC derivative(s) deliver the return of the index less certain fees or premiums. The portfolios of funds using synthetic replication report the OTC derivative(s) (generally a swap, forward agreement, or access product) and collateral within financial statements in certain situations. The collateral holdings of funds using synthetic replication will frequently contain securities unrelated to the return of the index. Please note: While the term synthetic exposure denotes economic exposure gained through derivative contracts, the term synthetic replication only connotes index-tracking funds gaining economic exposure through OTC derivatives.

Not Applicable - Some index-tracking products use approaches that are not portfolio-based, such as exchange-traded notes. ETNs and other non-portfolio-based tracking products will be assigned to the Not Applicable tag. All ETNs, ETNs, and other listed structured products that are not ETFs are classified as Not Applicable. Additionally, as many investors assume all ETNs are index-tracking portfolios, all actively managed ETFs will also be assigned to the Not Applicable replication method.

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Monthly Fund Flows: Estimated share-class level net flow computed using beginning and ending monthly Total Net Assets and monthly total return.

Annual 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.

Growth of 10,000
This graph compares the growth of an investment of 10,000 (in the base currency of the fund) with that of an index and with that of the average for all funds in its Morningstar category. The NAV total returns are not adjusted to reflect the effects of taxation, but they are adjusted to reflect actual ongoing fund expenses and assume reinvestment of dividends and capital gains. If adjusted, the effect of taxation would reduce the performance quoted. Please note, while the investor obtaining an ETF through the secondary market does not obtain it at NAV, the purpose in presenting this graph based on NAV is to provide an illustration of the historical performance of the ETF strategy. In no way should this performance be considered indicative of or a guarantee of the future performance of this ETF nor should it be viewed as a substitute for an actual investor experience.

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

Morningstar Rating for Funds
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 three years of history. It is calculated based on a Morningstar Risk-Adjusted Return measure that accounts for variation in a managed product's monthly performance, placing more emphasis on downward variations and rewarding consistent performance. The top 10% of products in each product category receive 5 stars, the next 22.5% receive 4 stars, the next 35% receive 3 stars, the next 22.5% receive 2 stars, and the bottom 10% receive 1 star. The Overall Morningstar Rating for a mutual fund is derived from a weighted average of the performance figures associated with its three-, five-, and 10-year (if applicable) Morningstar Rating metrics. If the managed product has been in its current category over the entire evaluation period, the weights are: 100% three-year rating for 36-59 months of total returns, 60% five-year rating/40% three-year rating for 60-119 months of total returns, and 50% 10-year rating/30% five-year rating/20% three-year rating for 120 or more months of total returns. While the 10-year overall star rating formula seems to give the most weight to the 10-year period, the most recent three-year period actually has the greatest impact because it is included in all three rating periods. If the managed product's investment style and category have changed in the past, Morningstar modifies the weights for the Overall Morningstar Rating to reflect the average degree of similarity between the current category and the fund's historical categories. Slightly more weight is placed on the time periods when the fund was in the current category.

Morningstar Return
The Morningstar Return rates a managed product'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), after adjusting for all applicable loads and sales charges, in comparison with the products in its Morningstar category. In each Morningstar category, the top 10% of products earn a High Morningstar Return, the next 22.5% Above Average, the middle 35% Average, the next 22.5% Below Average, and the bottom 10% Low. Morningstar Return is calculated 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 managed product'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, the next 22.5% Below Average, the middle 35% Average, the next 22.5% Above Average, and the top 10% 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.

Style Analysis
The Morningstar Style Box reveals a fund's investment style 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 investment style (value, core, or growth).

Risk/Return Analysis
The risk measures below are calculated for ETFs with a history of at least three years.

Standard Deviation: A statistical measure of the volatility of the security's or portfolio's NAV returns. The larger the Standard Deviation is, the greater the volatility of return.

Arithmetic Mean: The average monthly return for the period shown. Calculated as the sum of all source data divided by the number of observations.

Sharpe Ratio: uses standard deviation and excess return to determine reward per unit of risk.

R-squared: The percentage of a security's 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 also helpful in assessing how likely it is that Beta and Alpha are statistically significant. A value of 1 indicates perfect correlation between the security/portfolio and the benchmark. The lower the R-squared, the lower the correlation.

Alpha: A measure of the difference between a security's 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.

Beta: a measure of a security's or portfolio's sensitivity to market movements (proxies 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.

Treynor Ratio: is a performance efficiency measure (like Sharpe Ratio) calculated by dividing excess return by market risk (Beta). Good performance efficiency is measured by a high ratio.

Sortino Ratio: is a performance efficiency measure (like Sharpe Ratio) calculated by dividing excess return by downside risk (Downside Deviation). (Volatility caused by negative returns is considered bad or undesirable by an investor, while volatility caused by positive returns is good or acceptable.) In this way, the Sortino ratio can help an investor assess risk in a better manner than simply looking at excess returns to total volatility, as such a measure does not consider how often returns are positive as opposed to how often they're negative.

Turnover Ratio %: measures the trading activity in a 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 portfolio's holdings that have changed over the past year. The inverse of a portfolio's turnover ratio is the average holding period for a security in that portfolio.
ETF Report Disclosure Statement

Morningstar Fundamental Analysis
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.

ETF Fair Value Estimate: is the aggregate, asset-weighted fair value of the stocks in an ETF portfolio that are under coverage by Morningstar equity analysts, divided by the ETF's shares outstanding. (We also derive it by dividing the ETF's market price by its price/fair-value ratio.) Depending on the coverage rate, the fair value estimate may not include all of the stocks in the portfolio. As such, when calculating the fair value estimate, we assume that all stocks not under coverage are trading at fair value. An ETF must have at least two-thirds of its market capitalization covered by Morningstar equity analysts in order to calculate an aggregate fair value estimate.

ETF Valuation Rating: Not to be confused with the Morningstar Rating for ETFs (the star rating), which is based on an ETF's trailing, risk-adjusted relative returns, the ETF Valuation Rating is a forward-looking, holdings-based assessment of a stock ETF's investment merit. There are three distinct analyst ratings—"undervalued," "fairly valued," and "neutral." We reserve the "undervalued" rating for an ETF that is trading at a significant discount to our estimate of its intrinsic worth, which is based on Morningstar's fair value estimates for the ETF's underlying holdings. The size of the discount we'd demand before deeming an ETF "undervalued" varies with the risk of the ETF; we typically demand at least an 8% discount to our fair value estimate before placing an "undervalued" rating on a lower-risk ETF, at least 15% for a moderate-risk ETF, and 20% plus for an above-average-risk ETF. By contrast, we apply the "overvalued" rating to any ETF that's trading at a meaningful premium to our fair value estimate. The size of the premium also depends on the ETF's risk. Lower-risk ETFs receive the "overvalued" rating when they're trading at least 7% above our fair value estimate, moderate-risk ETFs when they're at a 14% or greater premium, and above-average-risk ETFs at a 22% premium. We rate "fairly valued" any ETFs that trade in between those boundaries. Generally speaking, we expect an "undervalued" ETF's annualized returns to exceed its hurdle rate by at least three percentage points.

Price/Fair Value: is calculated by dividing the market price of an ETF by the ETF's Fair Value Estimate. If the Price/Fair Value is above 1.0, that indicates that the ETF is trading above its fair value estimate. A Price/Fair Value of less than 1.0 indicates that the ETF is trading below its fair value estimate.

# of Holdings Covered: the net number of holdings in the portfolio that are covered by Morningstar equity analysts.

# of Holdings: the net number of holdings in the portfolio.

Morningstar Economic Moat Rating
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, copyright, 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.

Key Fundamental Ratios
Net Margin %: Net Margin is equal to trailing-12-months net income divided by the trailing-12-months revenues. The resulting figure is then multiplied by 100. A fund's Net Margin % is calculated by taking an asset-weighted median of the net margin of all the stocks in the portfolio.

ROE %: Return on Equity is calculated as the trailing-12-months net income divided by the end-of-year shareholders' equity. The resulting figure is then multiplied by 100. A fund's Return on Equity is calculated by taking an asset-weighted median of the returns on equity of all the stocks in the portfolio.

ROA %: Return on Assets is the percentage a company earns on its assets in a given period. It is calculated as trailing-12-month net income divided by ending total assets. The resulting figure is then multiplied by 100. A fund's Return on Assets is calculated by taking an asset-weighted median of the ROA of all the stocks in the portfolio.

Debt to Capital %: measures a firm's financial leverage. This ratio is calculated by dividing long-term debt (excluding other liabilities) by the total capitalization. Total capitalization is the sum of common equity, preferred equity, and long-term debt. The resulting figure is then multiplied by 100. A fund's Debt to Capital % is calculated by taking an asset-weighted median of the debt/total capital of all the stocks in the portfolio. This figure is not provided for financial companies.

Value and Growth Measures
Price/Prospective Earnings: A ratio calculated by the forecasted earnings per share of a stock divided by the current stock price per share. A fund's price/prospective earnings % is calculated by taking an asset-weighted average of the price/prospective earnings of all the stocks in the portfolio.

Price/Book Ratio: The asset-weighted average of the price/book ratios of all stocks in a portfolio. It is calculated for a company by dividing the market price of its stock by the company's per share book value. Stocks with negative book values are excluded from this calculation. A fund's price/book ratio is calculated by taking an asset-weighted average of the price/book ratios of all the stocks in the portfolio.

Price/Sales: This represents the weighted average of the price/sales ratios of the stocks in a portfolio. Price/sales represents the amount an investor is willing to pay for a dollar of revenue generated from a particular company's operations. A fund's price/sales % is calculated by taking an asset-weighted average of the price/sales of all the stocks in the portfolio.

Price/Cash Flow: The asset-weighted average of the price/cash flow ratios of stocks in a portfolio. Price/cash flow shows the ability of a business to generate cash and acts as a gauge of liquidity and solvency. A fund's price/cash flow % is calculated by taking an asset-weighted average of the price/cash flow of all the stocks in the portfolio.

Long-Term Earnings Growth %: The estimation of the long-term 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.

Sales Growth %: 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. An ETF's sales growth % is calculated by taking a share-weighted average of the collective sales for all stocks in the portfolio.

Cash Flow Growth %: 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. An ETF's cash flow growth % is calculated by taking a share-weighted average of the cash flow of all the stocks in the portfolio.

Book-Value Growth %: 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. An ETF's book value growth % is calculated by taking a share-weighted average of the book value of all the stocks in the portfolio.
ETF Report Disclosure Statement

Market Performance Statistics

Up Capture Ratio %: measures an investment's performance in up markets relative to the market (benchmark) itself. It is calculated by taking the security's upside capture return and dividing it by the benchmark's upside capture return.

Down Capture Ratio %: measures an investment'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 investment. For example, if the ratio is 110%, the investment has captured 110% of the down-market and therefore underperformed the market on the downside.

Max Drawdown %: Measures the peak-to-trough decline during a specific record period of an investment or fund. It is usually quoted as the percentage between the peak and trough.

Max Gain %: is the peak to trough increase during a specific record period of an investment or fund. It is usually quoted as the percentage between the trough and peak.

Best Month: is the highest monthly return of the investment since its inception or for as long as Morningstar has data available.

Worst Month: is the lowest monthly return of the investment since its inception or for as long as Morningstar has data available.

Expenses

Expense Waiver: taken from the prospectus, this is the amount of expenses on a percentage basis that the fund has agreed to waive.

Expense Waiver Expiration Date: taken from the prospectus, this indicates when the waiver is set to expire.

Expense Waiver Type: taken from the prospectus, this indicates if the waiver is contractual or voluntary.

Prospectus Date: is the date of the latest Prospectus.

Peer Group: The rating group is a group of similar funds that are compared against each other for the purpose of assigning a Morningstar Risk-Adjusted Rating. For ETFs and mutual funds, the rating group is the Morningstar Category.

Max Front Load %: The initial, or front-end, sales charge is a one-time deduction from an investment made into a mutual fund. The amount is generally relative to the amount of the investment, so that larger investments incur smaller rates of charge. The sales charge serves as a commission for the broker who sold the mutual fund. The load fee compensates the broker or financial planner for the service of providing professional investment advice. This figure is expressed as a percentage of the initial investment and is incurred upon purchase of mutual fund shares. A mutual fund may have a sliding-scale maximum initial sales charge of 5.50% that is reduced to 4.50% if 200,000 is invested and reduced to 3.50% if 400,000 is invested. Its minimum may be 0.50% if at least $5 million is invested. If 0% is listed, then the mutual fund does not have a front-end sales charge. Note: This is not applicable to ETFs, as ETFs do not levy sales charges.

Max Back Load %: These are also known as back-end sales charges and are imposed when investors redeem mutual fund shares. The percentage charged generally declines the longer shares are held. This charge, often coupled with 12b-1 fees as an alternative to a traditional front-end load, diminishes over time. Understanding a mutual fund's fee structure is essential in determining whether or not a mutual fund is appropriate for your portfolio or investment plan. With a deferred fee an investor has the advantage of getting the full financial power of their investment from the onset. For deferred sales charges, the amount charged is based on the lesser of the initial or final value of the shares sold. Note: This is not applicable to ETFs, as ETFs do not levy sales charges.

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 Total US Bond Market ETF.

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. This disclosure applies to all MSCI indices: Certain information included herein is derived by Morningstar in part from MSCI's Index Constituents (the "Index Data"). However, MSCI has not reviewed any information contained herein and does not endorse or express any opinion such information or analysis. MSCI does not make any express or implied warranties, representations or guarantees concerning the Index Data or any information or data derived therefrom, and in no event will MSCI have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of this information.

S&P 500 TR USD
A market capitalization-weighted index composed of the 500 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 ETF.

S&P 500 TR USD
The index measures the performance of 500 widely held stocks in US equity market. Standard and Poor's chooses member companies for the index based on market size, liquidity and industry group representation. Included are the stocks of industrial, financial, utility, and transportation companies. Since mid 1989, this composition has been more flexible and the number of issues in each sector has varied. It is market capitalization-weighted.