



Validea ETF Factor Report User Guide

The Validea ETF Factor Report looks at US Equity ETFs through the lens of the major investing factors that academic research has shown to produce an excess return over the market over time. The report rates each ETF using the five major investing factors (size, value, quality, momentum and low volatility) and the individual metrics that make up each factor. It also offers some additional metrics that help you evaluate what you are getting from both a value and price standpoint when purchasing each ETF.

This guide will explain the data provided in our ETF report in more detail and how it can be valuable to you as you analyze individual ETFs.

Fund Overview Table

The fund overview table provides some basic metrics about the ETF, its holdings and its fees.

Here is some of the data it provides:

Active Share: Active share shows you how different an ETF is from a benchmark index. Being different is not necessarily good or bad, but anything that is different from a benchmark can be expected to produce a very different return stream. Active share is calculated by comparing the holdings of an ETF and the holdings of the benchmark. It does this by looking at the holdings that are in the ETF, but not in the benchmark, the holdings that are in the benchmark, but not in the ETF, and the differences in position weights for the holdings they both have in common.

Active share can range from 0% to 100%. An ETF with an active share of 0% has the same holdings as the benchmark, held at the same weights, while an ETF with an active share of 100% has no holdings in common with the benchmark and is completely different. We calculate active share for each fund against both the S&P 500 and the Russell 2000.

ETFs with high active share have the potential to produce more significant outperformance and underperformance relative to the benchmark and will have bigger differences between their return and the benchmark return over time. ETFs with low active share will likely have a return that looks much more like the benchmark.

Fee For Active Share: Fee for active share shows you how much you are paying for the portion of the fund's portfolio that is different than the S&P 500. It is calculated by dividing the expense ratio by the active share. A fund that is very different from the benchmark will have a fee for active share that is very close to its expense ratio. This is because the majority of its portfolio is different from the benchmark and so most of its expense ratio goes to cover the active portion of its portfolio. On the other hand, closet index funds that look a lot like the index will have a fee for active share that is much higher than their expense ratio.

Let's look at an example. Fund A has an expense ratio of 0.49% and an active share of 95%, meaning it is very different from its benchmark. Fund B has an expense ratio of 0.25% and an active share of 25%, meaning it is very similar to its benchmark. To calculate the active fee, we divide the expense ratio by the active share. Fund A has an active fee of $0.49\% / .95$ or 0.52%. Fund B, on the other hand, has an active fee of $0.25\% / .25$ or 1%. Fund A is providing investors with more active share relative to the index for the money. This doesn't mean it will necessarily offer more or less value long-term, but if the way in which Fund A is different than the index is a positive, it could actually offer more value for the money than Fund B, despite its higher expense ratio.

Fee For Factor Exposure: While the fee for active share tells you how much you are paying for the portion of a fund's portfolio that is different from the benchmark, the fee for factor exposure tells you how much exposure to the fund's primary investment factor you are getting for your money. Our system analyzes the portfolio of each ETF on a nightly basis and identifies its exposure to each factor. For funds with a high exposure to one factor, the fee for factor exposure is calculated relative to that factor. For funds that use a multi-factor approach, the fee is calculated relative to its exposure to all the major factors. The calculation is performed by dividing the fund's expense ratio by its exposure to the factor divided by 100. For example, if a value fund has an exposure to the value factor of 99 and an expense ratio of 0.59%, its fee for factor exposure would be $0.59\% / .99$ or 0.60%.

For investors looking to get the most exposure to a particular factor for the lowest cost, the fee for factor exposure can be a valuable metric to consider.

Validea Category: Our system analyzes every ETF that we have holdings data for and ranks its exposure to all the major factors. We then use that data to classify each fund into a primary category. A fund that has one factor exposure that is much greater than all the others will be classified using that factor. A fund with more broad exposure to multiple factors will be classified as multi-factor. Our category does not utilize the stated objective of the fund. It instead looks at its actual holdings to analyze where it best fits from a factor perspective.

Implied Liquidity: Implied liquidity attempts to measure how much could be invested in a fund on any given day without impacting the price of its underlying holdings. Since the volume of an ETF can often not properly reflect its actual liquidity, implied liquidity can sometimes provide a more accurate picture. It is computed by calculating the dollar amount that could be invested in the fund without exceeding 25% of the daily dollar volume of any of its individual holdings. Since actual trading volume of an ETF often does not present a full picture of its liquidity, implied volatility can be utilized as a supplement in fund liquidity determination.

Factor Exposure Bar Chart

The factor exposure chart graphically displays the fund's exposure to each investing factor and the metrics that go into that factor score. All the factor exposures displayed in the chart are presented on a 1-99 scale with 99 indicating the highest factor exposure.

You can see any fund's factor exposures on its own or use the comparison tool to compare it to any other fund in our database.

The chart covers six major factor exposures.

- **Size:** Our size exposure calculation looks at both the average and median market cap of the fund's holdings and ranks it relative to all other funds. Funds with high size exposure will contain a significant allocation to small-cap stocks.

- **Value:** The value exposure indicates how cheap the holdings of the ETF are relative to all other ETFs using a series of value metrics. Each ETF is evaluated using the PE Ratio, Price/Sales, Price/Book, Price/Cash Flow, EV/EBITDA and Shareholder Yield. The combined score is calculated using a combination of all the metrics.
- **Quality:** Quality exposure attempts to measure the quality of the businesses of the fund's holdings. To do this, we use return on equity, return on total capital, gross and net profit margin, and earnings and sales consistency.
- **Negative Quality:** Negative quality attempts to measure a fund's exposure to stocks with potential red flags in their factor exposures. To calculate this, we look for firms with high debt, earnings that are declining, cash flows that are not keeping up with their earnings, and poor price performance. All of these factors are combined to produce our negative quality exposure score. **It is important to note that this is the one factor exposure where higher values are not a good thing. The funds with the highest negative quality exposures will have the highest scores for this factor.**
- **Momentum:** Momentum exposure measures how well a fund's holdings have performed. We measure both price momentum (how much the stocks have gone up relative to their peers) and fundamental momentum (how fast their underlying businesses have been growing). To measure price momentum, we use the 12-1 return, which is a stock's return in the past 12 months, excluding the most recent month. The most recent month is excluded because short-term momentum often tends to reverse, so excluding it provides a better momentum signal. Fundamental momentum is measured using a variety of income statement and balance sheet variables that indicate how much a company's business has been improving.
- **Low Volatility:** It can seem counterintuitive to many investors, but stocks that are less volatile than their counterparts have historically produced comparable or better returns. This means that on a risk-adjusted basis, low volatility stocks have been superior investments. We measure low volatility in two ways. The standard deviation measures the volatility of each of the fund's holdings on a standalone basis. Beta also accounts for a stock's correlation with other stocks. The combined score uses both metrics. Since we are measuring low volatility, funds with high scores for this factor will be the least volatile.

Sector and Industry Exposures

Our sector and industry charts help you to evaluate the size of the bets the fund has made on specific sectors and industries relative to the S&P 500. The sector chart compares the fund's weighting for each major sector to the market's weighting. The industry chart identifies the ten industries where the fund's industry weighting differs most from the market. When combined together, the charts allow you to quickly see the major deviations the fund has from the market as a whole. The tool can also be used to compare a fund's sector and industry weightings to any other fund in our database.