

A Smart Beta ETF Due Diligence Checklist

Smart beta is a rules-based approach that seeks to capture specific factors — or investment characteristics — that active managers commonly seek exposure to, while preserving the benefits of traditional passive investments, including transparency, consistency and low cost.

Interest in smart beta is growing. 2018 saw 62 new smart beta equity ETF launches, bringing the total number of smart beta ETFs to 665 with \$704 billion in assets.¹

Such a crowded landscape demands investors conduct ample due diligence before choosing a smart beta strategy. This worksheet provides a thorough analytical framework to help ensure the smart beta ETFs you choose best meet your investment needs.

Understand the Factor Exposure of Existing Portfolios

What is the factor exposure of your existing portfolio?

Understanding your existing factor exposure will enable you to identify factors that complement your current strategies.

Choose the Factor(s) to Capture that Align with Investment Goals

What are the investment goals?

Are you looking to strengthen the core, reduce risks, enhance returns, generate yield, or a combination of a few goals?

An outcome-oriented mindset is crucial for implementation, as your investment objectives will drive which factor(s) you want to capture in the portfolio.

Are you looking for single-factor or multi-factor exposure?

Individual factors can experience periods of underperformance relative to market cap-weighted indices. Multi-factor approaches may help investors mitigate the cyclicalities across factors, while still being able to harness certain factor premia.

Choose the Factor(s) to Capture that Align with Investment Goals (cont'd)

<p><input type="checkbox"/> How will the smart beta fund be used?</p> <p>As a replacement for a broad market cap index fund or for an active fund?</p> <p>Or as a complement to existing passive or active holdings?</p>	<p>While smart beta may be able to replace active or passive exposures, the end client goal and preference will drive which factor index construction methodology to use. For example, a high exposure index² may be more suitable to replace an active fund which is usually less benchmark-aware and holds more concentrated positions. A high capacity index³ may be a better replacement for a broad market-cap index fund that provides broader security coverage.</p>
<p><input type="checkbox"/> What is the overall risk tolerance of the portfolio?</p> <p>How much risk budget is going to be allocated to smart beta portfolio(s)?</p>	<p>Factor risks should be considered in the context of the overall risk tolerance of the portfolio. The risk budget to smart beta portfolio(s) drives the decision-making process on which smart beta indices to use.</p>

Understand Index Construction and Historic Performance

<p><input type="checkbox"/> Does the smart beta index include a subset of the parent market cap-weighted index constituents (high exposure index) or include every security but re-weight them based on their fundamental metrics (high capacity index)?</p>	<p>Variations in index construction may result in different levels of factor exposure, thus yielding different performance results.</p>
<p><input type="checkbox"/> What metrics are used to select the index constituents?</p>	<p>An understanding of the selection criteria will enable you to understand how the index captures the factor premia.</p>
<p><input type="checkbox"/> How does the index weight and rebalance the securities to target the factor(s)? (i.e. rules-based vs. optimization)</p>	<p>Differences in weighting methodology and rebalancing frequency may lead to different sector allocations and index turnover.</p>
<p><input type="checkbox"/> What is the tracking error relative to a market cap-weighted index?</p>	<p>The tracking error helps quantify the risk level of the factor-based strategy and evaluate whether it is aligned with your risk budget or tolerance to deviate from traditional market cap-weighted strategies.</p>
<p><input type="checkbox"/> How does the index/fund perform in different market environments?</p>	<p>The tracking error helps quantify the risk level of the factor-based strategy and evaluate whether it is aligned with your risk budget or tolerance to deviate from traditional market cap-weighted strategies.</p>

Additional Considerations for a Multi-Factor Exposure

<p><input type="checkbox"/> What is the correlation between/among factors?</p>	<p>Certain factors have exhibited a low correlation with one another while others may be highly correlated. Factors that are highly correlated may exacerbate underperformance during certain market environments.</p>
<p><input type="checkbox"/> Are you looking to blend a few single-factor products at your own investment discretion or use a multi-factor product which employs pre-defined rules to allocate between/among factors?</p>	<p>The decision should be made based on the investors' level of experience and knowledge of factor investing. A multi-factor product may reduce transaction costs and avoid factor timing. Factor timing requires a sophisticated and advanced framework that may be better left up to skilled active managers.</p>

Additional Considerations for a Multi-Factor Exposure (cont'd)

<p>□ How do you capture multiple factors in one portfolio?</p> <p>Blend single factor portfolios by assigning weights to each of them (combination approach) or incorporate all factor characteristics of each security into a composite factor score (bottom-up approach)?</p>	<p>The combination approach has benefits of transparent factor attribution and easy implementation, but may miss some of the interaction between factors at the security level. The bottom-up approach captures interaction between factors, but it may be more difficult for investors to dissect which factor exposure is driving returns.</p>
<p>□ How are factors weighted?</p> <p>Equally weighted among factors or focused on a certain factor?</p>	<p>Equally weighting factors is commonly adopted by investors who believe in long-term risk premia from multiple factors and do not want to target any particular single factor. Focused factor strategies, where a certain factor within a multi-factor combination is emphasized, may address investors' targeted objectives, such as income generation or volatility reduction while still mitigating single factor cyclicality.</p>

Quantitative Metrics to Consider When Evaluating Smart Beta ETFs

<p>Active Risk</p> <ul style="list-style-type: none"> • Tracking error • Sector active risk • Country active risk 	<p>Liquidity/Capacity</p> <ul style="list-style-type: none"> • Portfolio turnover • Number of securities • Top 10 security weights • Overlap with market cap-weighted index • Weighted average daily volume of index constituents 	<p>Factor Exposure</p> <ul style="list-style-type: none"> • Factor exposure per unit of tracking error • Stability of factor exposures • Non-targeted factor exposure(s)
<p>Performance</p> <ul style="list-style-type: none"> • Absolute return and total risk • Sharpe ratio • Return and risk relative to the benchmark • Information ratio • Downside risk, maximum drawdown 	<p>Costs</p> <ul style="list-style-type: none"> • Total expense ratio • Trading costs • Bid-ask spread 	

Endnotes

- 1 Morningstar, as of December 31, 2018.
- 2 High exposure smart beta indices hold a subset of stocks from within a parent market cap-weighted index that best represent a particular factor.
- 3 High capacity smart beta indices hold every security in the parent index, but re-weight the constituents to be tilted toward the targeted factor.

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Glossary

Absolute Return The return that an asset or investment strategy achieves over a certain period of time.

Active Risk Risk created by an active investment manager attempting to outperform its benchmark.

Bid-Ask Spread The difference between the highest price a buyer is willing to pay for an asset and the lowest price the seller will accept to sell. Bid-ask spreads are a key measure of the liquidity of an asset or security.

Correlation The historical tendency of two investments to move together. Investors often combine investments with low correlations to diversify portfolios.

Factor Exposure The level of exposure to a factor or investment characteristic (such as momentum and yield).

Factor Exposure per Unit of Tracking Error A portfolio's factor exposures divided by the portfolio tracking error relative to market cap weighted benchmarks.

Factor Premia The historical outperformance of factors (such as momentum and yield) versus market cap weighted indices.

Stability of Factor Exposures The volatility of factor exposures over a period of time.

Information Ratio A unit of measure showing the difference between a portfolio's return and that of its benchmark index, per unit of volatility.

Market Cap-Weighted Indices A type of market index in which individual components are weighted according to their market

capitalization, so that larger components carry a larger percentage weighting in the index.

Maximum Drawdown An investment's largest loss from a peak to a trough over a certain time period.

Relative Return The return that an asset or investment strategy achieves over a period of time compared to a benchmark.

Relative Risk The volatility of an asset or investment strategy's return compared to the return of another asset or strategy.

Sharpe Ratio A measure for calculating risk-adjusted return that has become the industry standard for such calculations. It was developed by Nobel laureate William F. Sharpe. The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility or total risk.

Smart Beta Smart beta defines a set of investment strategies that use alternative index construction rules to achieve outperformance over first-generation market capitalization based indices. Smart beta indices isolate six particular "factors" – small size, value, high yield, low volatility, quality and momentum – and are again designed to deliver better risk-adjusted returns than cap-weighted indices.

Total Risk The sum of systematic or market risk plus any risk attributable to the investment itself, also known as unsystematic risk.

Tracking Error A measure of how consistent a portfolio's return is with that of its benchmark. In reality, no indexing strategy can perfectly match the performance of the index or benchmark, and the tracking error quantifies the degree to which the strategy differed from the index or benchmark, by measuring the standard deviation between the two values, annualized.

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Important Risk Information

Diversification does not ensure a profit or guarantee against loss.

ETFs trade like stocks, are subject to investment risk, fluctuate in market value and may trade at prices above or below the ETFs' net asset value. Brokerage commissions and ETF expenses will reduce returns. Investing involves risk including the risk of loss of principal.

It is not possible to invest in an index. There can be no assurance that a liquid market will be maintained for ETF shares. Frequent trading of ETF could significantly increase commissions and other costs such that they may offset any savings from low fees or costs. Passive management and the creation/redemption process can help minimize capital gains distributions.

While the shares of ETFs are tradeable on the secondary markets, they may not readily trade in all market conditions and may trade at significant discounts in periods of market stress.

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