Ten Things Everyone Should Know About Smart Beta Strategies

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Investors have many questions about smart beta strategies, which have proliferated in recent years. This paper answers some of the most common questions and offers Schwab’s unique point of view regarding ways to incorporate these strategies into a portfolio. The paper also discusses some of the common misconceptions about these increasingly popular strategies.

While the term “smart beta” sounds like a clever marketing hook, many of these strategies rely on a lot of academic rigor. Some of the research goes back decades, and now there is actual data supporting the research. We prefer the term “strategic beta”—but understand that the market has embraced smart beta as a broad descriptor.

1. What are smart beta strategies?

Smart beta is a term the industry has broadly used to define non-market-capitalization-weighted strategies—also sometimes referred to as strategic beta, alternative beta, or advanced beta. Investment research company Morningstar now estimates that there is more than $924 billion in strategic beta assets under management and 1,336 different exchange-traded funds (ETFs) globally based on smart beta strategies, which include the following strategies (see the Glossary of Terms page for descriptions):

- Dividend yield
- Equal weight
- Fundamental Index
- Low volatility
- Momentum
- Quality

The first index-based strategies were designed to replicate a particular index (S&P 500®, Russell 1000®, Russell 2000®, MSCI EAFE, etc.). They provided cost-effective exposure to virtually every segment of the market, and they helped investors access many markets which had been difficult to efficiently gain exposure to in the past. These strategies were readily available via mutual funds or exchange-traded funds (ETFs).

We believe smart beta strategies represent an evolutionary step forward in indexing, leveraging academic research to help provide enhanced index results. Over the years, there has been a lot of academic research suggesting that there are certain factors that can lead to outperformance over time, such as size, value, quality, and momentum, among others. Two of the most common factors are size and value. Research has shown that small-cap stocks outperform large-cap stocks over time, and that value outperforms growth over time—not in every market environment, but over longer intervals.¹

In 2005, the first ETF was launched that tracked Research Affiliates’ RAFI™ (Research Affiliates Fundamental Index™) methodology, which weights companies based on fundamental measures rather than by their market capitalization (that is, the number of outstanding shares multiplied by share price) or size. Research Affiliates conducted research showing that an investor could achieve better results by screening and weighting securities based on economic factors such as sales, cash flow, and dividends + buybacks, rather than by market cap.

Some initially questioned the merits of this research, but today Fundamental Index strategies have proved to be viable alternatives to market-cap strategies. Investors have been introduced to many more strategic beta strategies since the introduction of Fundamental Index strategies.

2. Are they active or passive?

Smart beta strategies capture many of the positive attributes of traditional passive strategies and active management. Like traditional passive strategies, they tend to be cost-effective ways

Exhibit 1: Strategic beta strategies are designed to capture positive attributes of active and passive investing.
of owning segments of the market. Like active management, they generally employ a disciplined investment process designed to improve upon the market experience (enhanced returns or reduced risk compared with a benchmark). We view them as being on a continuum (see Exhibit 1).

3. How are smart beta strategies different from market-cap strategies?

Market-cap strategies provide the largest weighting to the largest companies based on market capitalization. Smart beta strategies “break the link with price” and weight securities based on other metrics. The difference in weighting methodologies can lead to dramatically different results. Exhibit 2 compares market-cap and Fundamental Index strategies. Much of our research has focused on Fundamental Index strategies because of the academic rigor and availability of data.

Market-cap strategies generally do well when the biggest companies perform best, or in periods where momentum stocks dominate. The composition of a market-cap strategy’s underlying index changes only when companies are added or deleted from the index (known as “reconstitution”). Because the index isn’t rebalanced, large companies can increase their weights over time based on market appreciation. Market-cap ETFs are generally the lowest cost and tend to be relatively tax efficient. Because they are deemed to be the market proxy, they deliver market beta.

Fundamental Indexes employ a disciplined, rules-based approach that selects and weights securities based on economic factors such as sales, cash flow, and dividends + buybacks. They tend to exhibit a value tilt and rebalance at regularly scheduled intervals (generally quarterly). Importantly, the magnitude of this value tilt varies over time. Rebalancing to non-price measures results in Fundamental Index strategies having a value tilt that tends to reflect the market’s willingness to pay for growth at any given time. When the valuation dispersion between growth and value companies is narrow, Fundamental Index strategies will tend to have a modest value tilt. When the valuation dispersion between growth and value companies is large, Fundamental Index strategies will tend to have a large value tilt.

Fundamental Index strategies are typically more expensive than market-cap strategies, but more cost-effective than actively managed strategies. Based on research conducted by Schwab Center for Financial Research (SCFR) and other independent research, Fundamental Index strategies historically have delivered alpha (that is, excess return relative to the market-cap benchmark index) over the long run.

4. How should investors incorporate Fundamental Index strategies in their portfolios?

We view Fundamental Index strategies as a complement to market-cap strategies and active management. We believe that each of these types of strategies has a specific role, and that

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Exhibit 2: Portfolio comparisons

<table>
<thead>
<tr>
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<th>Market cap</th>
<th>Fundamental Index</th>
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<tbody>
<tr>
<td>Portfolio weighting</td>
<td>Cap weighting</td>
<td>Economic factors</td>
</tr>
<tr>
<td>Portfolio construction</td>
<td>Larger-cap bias</td>
<td>Value tilt</td>
</tr>
<tr>
<td>Portfolio turnover</td>
<td>Reconstitution</td>
<td>Reconstitution and rebalancing</td>
</tr>
<tr>
<td>Tax efficiency</td>
<td>Typically</td>
<td>Typically</td>
</tr>
<tr>
<td>Cost structure</td>
<td>Lowest cost</td>
<td>Low cost</td>
</tr>
<tr>
<td>Alpha/beta</td>
<td>Beta</td>
<td>Potential alpha</td>
</tr>
<tr>
<td>Investment process</td>
<td>Passive</td>
<td>Rules-based</td>
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combining them can provide a better-diversified portfolio. We have developed four “key levers” to guide us in the portfolio construction process—tracking error, loss aversion, alpha, and cost. In Exhibit 3, we evaluate each strategy relative to these levers.

Market-cap strategies exhibit little or no tracking error and are generally the lowest-cost solution—but they offer no downside protection or alpha potential because they are essentially the market benchmark.

Fundamental Index strategies offer the potential for alpha, but they will likely exhibit large tracking error relative to a comparable market-cap-weighted index. They are typically more expensive than market-cap strategies, but more cost-effective than actively managed strategies. Fundamental Index strategies provide no downside protection because, like market-cap strategies, they are unable to alter their composition based on market conditions.

Active managers vary a great deal from one to another. They are, however, best equipped to respond to changing market conditions, and may be effective in providing downside protection. Research by Nobel Prize-winning psychologist Daniel Kahneman showed that investors will go to great lengths to avoid losses, and some investors may be more comfortable working with an active manager who has been effective in providing downside protection in the past.

5. How can investors distinguish among myriad smart beta strategies?

With the proliferation of smart beta strategies, investors have had a challenging time distinguishing among the options. Although these strategies are often grouped together, they can differ significantly depending on index construction methodology.

In our paper Strategic Beta Strategies: An Evaluation of Different Approaches, we dissect a few of the most common strategies. The purpose is not to suggest that one strategy is better than another, but rather to illustrate the vast differences within the universe. We suggest that investors follow the steps listed below in analyzing the strategies:

- What is the methodology for screening and weighting securities?
- What is the underlying index?
- What are the sector allocations, and does this introduce some unintended bets?
- What is the capitalization breakdown of the strategy?
- What is the allocation across value, growth, and core stocks?
- For international and emerging markets, what’s the country allocation?

The methodology is constructive in understanding what the strategy is attempting to do. The underlying index methodology identifies the eligible securities in an index. The methodology used in constructing a Fundamental Index portfolio is vastly different from the one used for equal weight, low volatility, or momentum. The methodology used may also lead to large sector bets or market capitalization that differs from that of the market-cap benchmark indexes. Some of these strategies may have a smaller-cap bias in their portfolios.

6. Recently there have been a number of new strategies that refer to themselves as “factor strategies.” Do all smart beta strategies employ factors?

<table>
<thead>
<tr>
<th>Key lever</th>
<th>Market cap</th>
<th>Fundamental Index</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracking error</td>
<td>Little or no tracking error</td>
<td>Higher tracking error</td>
<td>Varies by manager</td>
</tr>
<tr>
<td>Loss aversion</td>
<td>No downside protection</td>
<td>No downside protection</td>
<td>May provide a level of</td>
</tr>
<tr>
<td>Alpha</td>
<td>No</td>
<td>Potential alpha</td>
<td>Varies</td>
</tr>
<tr>
<td>Cost</td>
<td>Lowest cost</td>
<td>Low cost</td>
<td>Varies by manager and vehicle</td>
</tr>
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</table>
With the popularity of smart beta strategies, many of the newer entrants to the ETF marketplace have introduced smart beta strategies. Some refer to their strategies as “factor” or “multi-factor” strategies—but let’s be clear that not all smart beta strategies employ a factor-oriented approach. Factors have their origins in academic literature going back to the 1960s. While the industry often uses the terms “factor” and “smart beta” interchangeably, not all smart beta strategies employ factors.

The term “factor” describes characteristics of a group of securities that can explain return and risk. In recent years, there has been a plethora of new strategies coming to market claiming to have identified new factors. MSCI has conducted extensive research on factor investing and offered the following perspective:

While many factors have been shown to have statistical significance in explaining variations in risk and returns, not all of these factors offer risk premia relative to CAPM pricing. Risk premia factors are those which represent exposure to systematic sources of risk that have historically earned a long-term premium. We have so far identified six risk premia factors: Value, Low Size, Low Volatility, High Dividend Yield, Quality and Momentum. These factors have been empirically tested in years of academic research and there are solid explanations on why they have historically provided risk premia.

Factor investing dates back to the 1960s, following the introduction of the Capital Asset Pricing Model (CAPM), which describes the relationship between systematic risk (i.e., volatility) and expected returns. Eugene Fama and Kenneth French built on CAPM, introducing their three-factor model in the 1990s.

7. Are all smart beta strategies really smart?

Smart beta strategies are often grouped together, but as previously discussed, not all strategies are created equal. Some of these strategies are based on a lot of academic rigor and sound research analysis. Others are primarily relying upon hypothetical data that may or may not play out in real time.

Our research has shown that there is a great deal of variability within the smart beta universe. Momentum is very different from low volatility, which in turn is very different from Fundamental Index strategies. Because there are significant differences in the weighting and construction methodologies, investors shouldn’t assume the same outcomes for all these strategies. Certain market environments tend to reward one type of strategy over another.

We encourage investors to spend the time to understand the strategies they are investing in—not just smart beta, but any investments they make. Some will do well in certain market conditions, and others will thrive in different environments. It’s important to know what you own—and know how you own it.

8. Why does the Schwab Center for Financial Research favor Fundamental Index strategies?

The Schwab Center for Financial Research has done a lot of research on smart beta broadly and Fundamental Index strategies specifically. We tend to prefer strategies with strong fundamental underpinnings and available data to analyze. We like the fact that Fundamental Index strategies have been battle-tested over the last decade-plus, and that a lot of rigor went into the development of these strategies.

Research Affiliates focused a lot of attention on implementation before introducing this methodology. It wanted to make sure that Fundamental Index strategies could support significant growth without deviating from their underlying indexes.

Our research has shown that these strategies have delivered attractive risk-adjusted returns over time. Fundamental Index strategies are intuitive and easy to understand.

Based on our research, however, we don’t believe that it is prudent to group all strategic beta strategies together and expect the same outcomes. There may be large differences from one strategy to the next, and some may ultimately not deliver the desired results.
9. Why have Fundamental Index strategies lagged their equivalent market-cap benchmarks recently?
Fundamental Index is a value-tilting strategy, and growth-oriented stocks have led market performance during the past several years. As the data below illustrates, the Russell 1000® Value Index significantly lagged the Russell 1000® Growth Index during much of the bull run between January 2009 through December 2018 (11.18% vs. 15.29%).

In recent years, the domestic equity markets have been dominated by the FANG stocks—Facebook, Amazon, Netflix, and Google (which changed its name to Alphabet). These companies dominated the headlines. In fact, these four stocks became the darlings of Wall Street, rising in price without any apparent regard for valuation. Because of the weighting methodology, these stocks became larger and larger components of the traditional market-cap indexes (such as the S&P 500). However, based on their valuations, their weightings in the Fundamental Indexes have been much smaller.

10. Is now the right time for Fundamental Index strategies?
As we enter the latter stages of this historic bull market, we believe that the markets will begin to reward good companies with strong fundamental characteristics. We believe that investors will be much more discerning in distinguishing among companies and valuations, and Fundamental Index strategies will be well positioned for this.

We believe that good companies, trading at attractive valuations, should outperform expensive companies with no regard for valuations. Market-cap strategies tend to reward companies that are popular, while Fundamental Index strategies reward companies with attractive valuations.

Conclusion
We believe smart beta strategies represent an evolutionary step forward in indexing. As we’ve pointed out, however, not all strategies are created equal. We encourage investors to take the time to understand the type of strategy they are considering for an investment. Spend the time in advance to avoid surprises in the future.

We believe that Fundamental Index strategies can serve as a complement to active management and market-cap strategies. We have developed a framework for allocating among these strategies based on the role they play in building portfolios. We believe that the current market environment will likely reward Fundamental Index strategies because of their disciplined screening and weighting methodology.
Learn more

Better Together: Fundamental & Market-Cap Indexes
The Elegance of Indexing
Strategic Beta ETFs: New Challenges in Evaluation and Adoption

These whitepapers can be found on SchwabFunds.com

3 Mehdi Alighanbari, Raman Aylur Subramanian & Padmakar Kulkarni, Factor Indexes in Perspective: Insights from 40 Years of Data, September 2014.
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Anthony Davidow is responsible for providing Schwab’s point of view on asset allocation and portfolio construction. He is also responsible for providing research and analysis on alternative beta strategies and how investors can incorporate them in their portfolios. Davidow is also a member of the firm’s Asset Allocation Working Group and Alternative Investment Product Council.

Before joining Schwab, Davidow was a managing director, portfolio strategist, and head of the ETF Knowledge Center for Guggenheim Investments. Before joining Guggenheim, Davidow was executive vice president and head of distribution for IndexIQ. Previously, he spent 15 years at Morgan Stanley, where he served as managing director and head of sales and training for the Consulting Services Group. While at Morgan Stanley, he was responsible for building and managing the Institutional Consulting Group and Graystone Wealth Management.

Davidow has authored several white papers, and spoken at numerous industry conferences on a range of topics, including: “Asset Allocation and Manager Selection,” “Alpha-Beta Separation,” “Democratizing Alternative Investments,” “An Evolutionary Approach to Portfolio Construction,” and “The Case for Global Asset Allocation,” among others. In 2017, he was awarded the Stephen L. Kessler Writing Award by the Investment & Wealth Institute™ (formerly IMCA), and in 2015, he received the Stephen L. Kessler Writing Award (Honorable Distinction).

Davidow holds a B.B.A. degree in finance and investments from Bernard M. Baruch College, and has earned the Certified Investment Management Analyst (CIMA®) designation from the Investment Management Consultants Association (IMCA) and the Wharton School of the University of Pennsylvania.

He served on the Board of Directors for IMCA from 2009 to 2015, and currently serves as the Chair, Investment & Wealth Monitor, Editorial Advisory Board. He holds FINRA Series 7, 24, and 63 registrations.
Glossary of Terms

**Alpha:** A performance measure on a risk-adjusted basis. Alpha takes the volatility (risk) of a mutual fund, or other type of investment, and compares its risk-adjusted performance with a benchmark index. The excess return of the fund relative to the return of the benchmark index is a fund's alpha.

**Beta:** A measure of the volatility, or systematic risk, of a security or a portfolio in comparison with the market as a whole. Beta is used in the capital asset pricing model (CAPM), which calculates the expected return of an asset based on its beta and expected market returns.

**Dividend yield:** The dividend yield is the ratio of a company's annual dividend compared to its share price. MSCI research has shown that companies with higher dividend yields have historically outperformed those with lower yields.

**Equal weight:** Equal weight is a type of weighting that gives the same weight, or importance, to each stock in a portfolio or index fund, and the smallest companies are given equal weight to the largest companies in an equal-weight index fund or portfolio.

**Fundamental Index:** Pioneered by Research Affiliates, Fundamental Index strategies were one of the first smart beta strategies. Fundamental Index strategies screen and weight securities based on metrics such as sales, cash flow, and dividends + buybacks.

**Low volatility:** Low volatility is a type of weighting methodology that weights stocks based on the level of volatility over a specific period, such as one year.

**Market-capitalization weighting:** Most of the broadly used market indexes today are “cap-weighted” indexes, such as the S&P 500, Russell, and MSCI indexes. In a cap-weighted index, large price moves in the largest components can have a dramatic effect on the value of the index. Some investors believe this over weighting toward the larger companies gives a distorted view of the market.

**Momentum:** This strategy looks to capture gains by investing in “hot” stocks in the belief that they will continue to rise. There are mutual funds and ETFs that buy or overweight securities that have exhibited momentum over some predetermined time period (three, six, or 12 months). The basic idea is that once a trend is established, it is more likely to continue in that direction than to move against the trend.
**Quality**: Quality is a type of weighting that weights stocks based on strong balance sheets (i.e., low debt), consistent earnings, and high levels of profit measures, such as return on equity.

**Strategic beta**: Also known as alternative beta and smart beta. Strategic beta strategies attempt to deliver a better risk and return trade-off than conventional market-cap-weighted indexes by using alternative weighting schemes based on measures such as volatility. Strategic beta strategies include a range of alternative weighting methods: fundamentally weighted, equal weighting, minimum variance, and low volatility, among others.
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For index definitions, please see schwab.com/indexdefinitions

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