Smart beta equity strategies—also called strategic beta, alternative beta and advanced beta—are attracting tremendous attention within the global asset management industry. The broad appeal of smart beta strategies has several explanations. Smart beta strategies tilt towards common equity factors (or signals) such as value, momentum, quality and low volatility, and thereby attempt to exploit the inefficiencies of market cap-weighted (pure passive) portfolios. Cap-weighted portfolios (such as the market) may be inefficient because they overweight stocks that are overvalued and underweight stocks that are undervalued. As a result, cap-weighted portfolios may not provide the maximum return per unit of risk. In contrast, numerous academic studies show that portfolios formed on the basis of common equity factors have the potential to deliver higher returns and/or lower risk than the equity market as a whole.¹

Smart beta strategies remain relatively new, but various forms of factor-based investing have been around for several decades. In particular, many traditional active managers have long tilted towards stocks that have attractive value, momentum, quality and low volatility characteristics. What is new is the way that investors can access these common equity factors. Rather than relying on active managers, investors can now get exposure to common equity factors using simple and transparent approaches. In this way, smart beta strategies have elements of both active and passive investing (see Exhibit 1). Similar to active investing, smart beta strategies offer the potential for outperformance, and like passive investing, smart beta strategies seek to follow a low-cost, rules-based methodology.

In recent years, there has been a steady flow of new money into smart beta strategies. For instance, according to Morningstar, assets in factor-based exchange traded funds (ETFs) have grown from approximately $150 billion to more than $450 billion over the past five years.²

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While smart beta strategies have experienced strong flows, assets in these strategies are still small relative to the assets in traditional active and pure passive products.\(^3\) We believe current allocations to smart beta portfolios are modest due to three primary concerns around these new strategies. First, some investors have concerns about the robustness of smart beta strategies. While skeptics may question how reliable this research is and how much confidence investors should place in the return potential of common equity factors, the academic research of these strategies has shown strong performance historically. Second, some investors are worried that smart beta strategies have become crowded. Given the popularity of smart beta products, these investors are asking if equity factor portfolios have become overvalued. Finally, some investors are not entirely sure how to evaluate smart beta strategies. There are many different approaches to choose from, and different ways to implement them. What conceptual framework should investors use to evaluate the many alternatives to traditional active or passive options?\(^5\)

### Robustness

Robustness refers to the reliability of a series of empirical tests across different research approaches, namely alternative samples and time periods, data sources, techniques for handling extreme observations and sets of control variables. Robustness may be an issue for all empirical research, and a critical consideration when developing—and evaluating—any new investment strategy.\(^4\)

In the case of smart beta strategies, some investors are concerned that the strong historical results of many common equity factors may not be a fair indication of future results. For instance, a strategy’s historical performance may be driven by strong returns for small, illiquid stocks that have limited capacity and involve significant transaction costs. Robustness could be affected by data mining and overfitting of the model, as well as the use of a small sample, or a sample dominated by a few extreme observations. But is robustness a serious issue for smart beta investing? Has the research in support of these strategies been adversely affected by data mining and other biases? Many academic studies of stock price anomalies were first conducted several decades ago and have withstood the test of time (see Exhibit 2). For instance, Black, Jensen, and Scholes (1972) and Haugen and Heines (1975) documented the lack of a positive relation between risk and return across stocks, and did so more than forty years ago.\(^5\) These studies provide a strong foundation for the potential benefits of low-risk investing, and suggest that much of the recent practitioner research supporting this approach is, in effect, out-of-sample.

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\(^3\) Napach, Bernice. 2016. Asset managers gobble up smart beta firms. ThinkAdvisor (26 July).


Exhibit 2: History of Significant Advances in The Development of Smart Beta Investing

Investors should not rely exclusively on a small handful of studies to support the benefits of a smart beta approach. In fact, there is a large body of academic research showing that factor-tilted equity portfolios have historically delivered strong performance vis-à-vis the cap-weighted market portfolio. These studies demonstrate the benefits of factor-based investing for a wide variety of signals over time and across markets. Whereas a single study may not be definitive, a number of studies yielding similar conclusions provides additional confidence in the shortcomings of cap-weighted portfolios and the robustness of smart beta strategies.

Another attraction of smart beta strategies, we believe, is their solid economic rationale. The efficacy of factor-based investing can be explained by the continued existence of significant market frictions and the well-known behavioral limitations of investors. In particular, too many investors like lottery tickets – high-risk glamour stocks that have the potential to generate high returns. As investors pile into these stocks, their herd-like behaviour leads to potential bubbles in which many of these high-flyers become overvalued. As a result, high-risk glamour stocks tend to deliver poor risk-adjusted returns, contrary to the Capital Asset Pricing Model, which suggests that higher-risk stocks should deliver higher expected returns. In fact, a portfolio that selects low-risk, high-quality value stocks has historically produced much better performance over time.

Crowding

Crowding is another reason that some investors have yet to embrace smart beta strategies. Given the strong evidence of historical mispricing (Exhibit 2), it makes sense that investors will attempt to take advantage of the mispricing, and thereby eliminate future profit potential. A strategy’s popularity can lead to crowding, where stocks become fairly priced (or temporarily overpriced). Has the success of various smart beta products led to crowding of common equity factors by investors eager to beat the market?

Crowding describes a situation in which heightened demand for factor-tilted portfolios, combined with insufficient liquidity, leads to elevated valuation levels for the stocks that make up these portfolios. Just as a “good” company is a bad investment if the price is too high, a “good” factor portfolio may underperform if the portfolio’s constituents are overpriced. Getting the timing correct for any overvaluation call, however, is extremely difficult. Many assets and strategies experience periods of mispricing, both too high and too low. This means that anyone who claims...
a portfolio is trading rich—and sticks to that claim consistently over time—has a reasonable chance of eventually being right. The problem, of course, is that the forecast may be wrong, and investors who delay and/or reduce their allocation may miss an opportunity to earn positive returns while a strategy continues to “work.”

Market participants who are concerned about crowding often point to the recent growth of smart beta strategies as supporting evidence. To be sure, assets in smart beta portfolios have increased, and many market experts expect this growth to continue. But this growth in assets does not by itself necessarily imply that assets exposed to common equity factors have gone up as well. Why? Because factor-based investing, as mentioned earlier, is not new. Traditional active managers have long tilted towards common equity factors (e.g., “inexpensive stocks”—as a way to capture the value premium), yet traditional active strategies have experienced negative flows recently—a trend that is likely to endure. In fact, the large shift from traditional active to pure passive products suggests the net effect may be negative; the amount of assets exposed to common equity factors may be going down, not up. A recent report from Casey Quirk quantifies this trend. Over the next five years (2016–2020), Casey Quirk forecasts that the global asset management industry will experience net outflows of $1.9 trillion from traditional active strategies versus net inflows of $1.1 trillion into passive/indexed strategies—$300 billion of which will be smart beta. Even if just 16% of these actively managed assets are exposed to common factors, this would represent a net decrease in the overall allocation to factor-based equity portfolios.

Finally, it is worth noting that smart beta strategies, like traditional active strategies, are not all the same. In fact, smart beta strategies exhibit important differences; no two strategies are tilting on the exact same set of stocks. For instance, value strategies vary depending on the specific value metrics used to select stocks, the algorithm used to weight stocks and the rebalance frequency of the portfolio. These differences may help mitigate the potential impact of crowding.

Framework

Some investors are not sure how to evaluate smart beta strategies, and therefore have been reluctant to make an allocation to factor-based portfolios. What framework should investment professionals use to perform due diligence on these strategies?

The evaluation process is made more difficult, in part, by the large number of distinct smart beta strategies available to investors. While these smart beta strategies all aim to exploit the inefficiencies of cap-weighted portfolios, they are not all alike. In fact, as demonstrated in Exhibit 3, smart beta strategies typically differ in several notable ways, including their methodology, performance objective and uniqueness.

Not surprisingly, the choice of methodology is important. The specific investment process affects a portfolio’s holdings, sector weights, turnover, and—ultimately—performance (be it the return, the tracking error, or both).

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6 Over the past few years, some analysts have claimed that smart beta strategies have become overpriced, yet many of these strategies have continued to deliver good returns. Perhaps now is (finally) different. Drawing definitive conclusions is difficult given normal variation over time in the level of valuation ratios for factor-based portfolios.


8 Sixteen percent of $1.9 trillion (the projected outflow from passive strategies) is $304 billion, which is slightly greater than the $300 billion projected to flow into smart beta strategies.

9 For example, the Pearson rank correlation between the Book/Price ratio (B/P) and the Earnings/Price ratio (E/P)—two widely used value metrics—for stocks in the S&P 500 is only 0.20, on average, over the period July 2001 to June 2016 (monthly).

10 While crowding in smart beta strategies does not appear to be a problem now, crowding could become a problem at some point in the future. As investors increase their allocations to smart beta strategies over time, portfolio managers should continually monitor their strategies for signs of crowding (overvaluation and/or illiquidity).

11 According to a recent article by John Maher in ETF Strategy (26 November 2015), there are 764 smart beta equity ETFs globally. In addition, there are numerous smart beta strategies that are only available as a separate account.
Besides methodology, investors need to consider the source of any funds that are to go into a smart beta portfolio. Should smart beta replace a portion of an investor’s pure passive allocation? Conversely, should smart beta replace a portion of an investor’s active allocation? How should investors use their risk budget most efficiently, and form realistic expectations about future returns?

Exhibit 3: Considerations When Selecting A Smart Beta Strategy

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Single- vs. multi-factor approach</strong></td>
<td>Some smart beta strategies consist of a single factor, whereas others include multiple factors. Single-factor strategies may give users flexibility, while multi-factor strategies seek to offer methodological consistency, implementation efficiency and diversification.</td>
</tr>
<tr>
<td><strong>Signal definitions</strong></td>
<td>Different strategies tend to calculate signals differently. Consider momentum as an example; some smart beta strategies use “standard” momentum, namely the 11-month stock return lagged by one month. However, standard momentum has an embedded beta exposure that fluctuates over time and can experience large drawdowns when market sentiment shifts. Other momentum strategies aim to improve risk-adjusted returns by removing the embedded beta exposure and by adjusting a stock’s past return for stock-specific risk.</td>
</tr>
<tr>
<td><strong>Individual stock weights</strong></td>
<td>The weighting methodology used to construct each factor portfolio is another difference among smart beta equity strategies. Most portfolios are long-only, but others are long/short. Some strategies use a risk model and optimizer to build factor portfolios, which can lead to complexity. Other strategies use a simple ranking and weighting algorithm.</td>
</tr>
<tr>
<td><strong>Factor portfolio weights</strong></td>
<td>For some strategies, performance is driven disproportionately by one or two factors, whereas other strategies provide more balanced exposure to the factors. In addition, factor portfolio weights are largely fixed over time for some strategies, but vary dynamically based on a timing model for other strategies.</td>
</tr>
<tr>
<td><strong>Performance objective</strong></td>
<td>Some strategies are benchmark-aware, in keeping with a relative return objective. Other strategies do not take explicit account of a benchmark, and hence have more of an absolute return orientation.</td>
</tr>
<tr>
<td><strong>Strategy differentiation</strong></td>
<td>Some strategies are proprietary (and hence unique), having been developed by asset managers to deliver differentiated exposure to common equity factors. Strategies offered by index providers, on the other hand, are “commodities” that are available with few meaningful limits on aggregate allocations (i.e., capacity).</td>
</tr>
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</table>

Because cap-weighted portfolios are inefficient, we think investors should consider shifting a portion of their pure passive allocations into smart beta. One question, of course, is how much should be allocated? In our view, any allocation needs to be large enough to move the needle, but not so large that it leads to excessive strategy or manager risk. After all, not only should investors diversify across common equity factors, but they should also diversify across approaches (e.g., smart beta vs. pure market-cap passive). While historical performance of factor investing has been very strong, there is no certainty that smart beta will beat a market-cap portfolio going forward. Hence, investors should not put all of their equity in these new smart beta strategies. At the same time, given the strong historical results, it seems unwise to assume that smart beta will lag the market over the long-term (i.e., that smart beta will underperform a cap-weighted portfolio over a full market cycle). Therefore, investors should also avoid putting all of their equity in a market cap-weighted portfolio. We believe a balanced allocation—one that bets on both approaches—is worth consideration.
Should investors shift a portion of their traditional active assets to smart beta as well? In our view, the answer is dependent on the nature of the active strategy. Some active portfolios provide expensive, non-transparent exposure to common equity factors. Investors with such managers may want to consider shifting assets. Other active portfolios may provide “true alpha” above and beyond the outperformance potential of common equity factors. Such active managers may be a good complement to smart beta portfolios.

One final consideration when evaluating a smart beta solution is the issue of governance. Who is responsible for the performance of a smart beta portfolio? The asset manager, who is managing the portfolio? Or the investor, who selected the strategy and manager? The question is complicated because the industry is organized around two distinct approaches: traditional active strategies, where the manager is responsible for performance, and pure passive strategies, where the investor (asset allocator) is responsible for performance. Smart beta does not fit neatly in either bucket; hence, there is the potential for confusion—and disagreement—about accountability. This can leave some investors reluctant to act.

In our view, the assignment of accountability depends on the characteristics of any smart beta strategy—namely, whether the strategy is proprietary or based on a public index. By definition, a proprietary strategy is unique. Such strategies offer the expectation of superior performance relative to smart beta products based on public indices. In our view, managers shoulder a portion of the responsibility for the success or failure of these unique approaches. In contrast, we believe it does not make sense to assign performance responsibility to a manager who successfully tracks a public index that was selected by the client. In this case, accountability belongs to the investor (along with the index provider).

**Conclusion**

Concerns about robustness, crowding and the evaluation framework can explain why some investors have not yet embraced smart beta strategies, but perhaps the biggest reason why smart beta allocations are still modest is because smart beta strategies remain relatively new. Many investors prefer to see a live track record before making a significant allocation. Even when investors are comfortable basing a decision on the economic intuition and academic support for an idea, it still takes time to thoroughly evaluate a new strategy and fit it into an overall equity allocation. The widespread interest in smart beta—by investors, consultants, asset managers, index providers and the financial press—suggests this thorough evaluation process is currently underway. Contrary to what some skeptics claim, we do not think smart beta is a fad. Rather, we believe the growth of factor-based investing via smart beta strategies is here to stay and will keep expanding in popularity. Over the past few years many traditional active managers have begun to worry about the success of smart beta strategies. In our view, they should continue to do so.

**Author**

Andrew W. Alford,
Managing Director, Quantitative Investment Strategies, GSAM
Glossary

**Active**: Strategy that aims to outperform a specific index (higher return and/or lower risk).

**Beta**: A measure of systematic risk that reflects the sensitivity of the return for a stock or portfolio to the return of the broader market.

**CAPM**: Capital Asset Pricing Model, which expresses a stock’s expected return as a function of the risk-free rate, the equity risk premium, and the stock’s beta (a measure of systematic risk).

**Cap-weighted**: Index or portfolio that weights stocks by their float-adjusted market capitalization (number of freely traded shares outstanding multiplied by their per-share stock price).

**Drawdown**: Negative return of a stock or portfolio from the peak to trough price level over a given time period.

**Factor-based investing**: Strategy for which individual stocks are selected and weighted on the basis of their factor characteristics.

**Illiquid**: Stocks that have low trading volume such that large orders incur high transaction costs.

**Long/short portfolio**: Portfolio for which the weights of some stocks are positive and the weights of other stocks are negative.

**Long-only portfolio**: Portfolio for which each stock’s weight is non-negative.

**Low volatility**: Stocks that have delivered less volatile returns over the recent past as measured by the standard deviation of stock returns.

**Market cycle**: A representative time period that covers a full range of market environments (expansion and contraction, high and low volatility, etc.).

**Momentum**: Stocks that have generated high relative returns over the recent past.

**Multi-factor**: Strategy that provides explicit exposure to two or more factors.

**Overfitting**: Conducting many tests to find a model that works well in-sample, but then performs poorly out-of-sample because the selection of variables and their coefficients are influenced by sample-specific patterns in the data that do not persist.

**Passive**: Strategy that aims to closely track the performance of a specified index.

**Quality**: Stocks that have experienced strong, persistent profitability.

**Rules-based**: Systematic approach that follows a well-defined algorithm.

**Single-factor**: Strategy that provides explicit exposure to one factor.

**Smart beta**: Strategies that provide exposure to common equity factors via a transparent rules-based methodology.

**Tracking error**: Standard deviation of a portfolio’s return in excess of the return on the portfolio’s benchmark index.

**Transparent**: Extensive information is available about a strategy’s methodology and performance drivers.

**True alpha**: Portfolio-specific return in excess of the return earned from the portfolio's exposure to common equity factors.

**Value**: Stocks that trade at a low price relative to measures of intrinsic value.
References


Maher, John. 2015. Smart beta asset flows outpacing traditional ETFs. ETF Strategy (26 November).


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