

UNDERSTANDING THE RISKS OF SMART BETA, AND THE NEED FOR SMART ALPHA

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Executive Summary

There has been a proliferation of smart-beta strategies the past several years. According to Morningstar, asset flows into smart-beta offerings have been considerable and there are now literally thousands of such products, all offering a systematic but 'different' equity exposure from that offered by traditional capitalization-weighted indices. During the five years ending December 31, 2014 assets under management (AUM) of smart-beta ETFs grew by 320%; for the same period, index funds experienced AUM growth of 235% (Figure 1 on the following page). Smart beta has also become the media darling of the financial press, who often position these strategies as the answer to every investor's investing prayers.

So what is smart beta; what are its risks; and why should it matter to investors? Is there an alternative strategy that might help investors meet their investing objectives over time? These questions and more will be answered in this paper.

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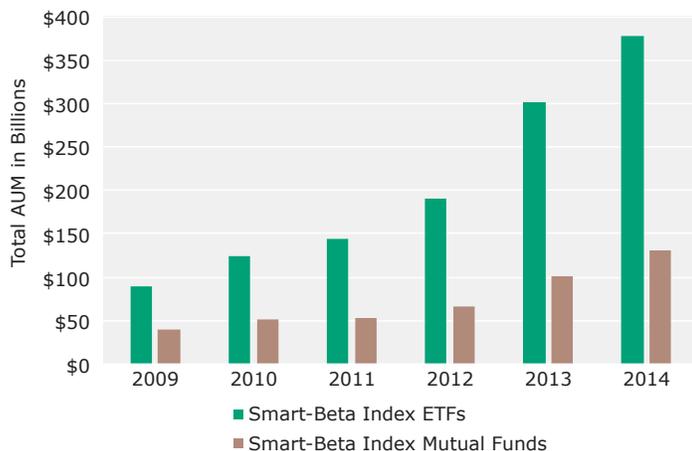
Defining smart beta and its intended use

The intended use of smart-beta strategies is to mitigate exposure to undesirable risk factors or to gain a potential benefit by increasing exposure to desirable risk factors resulting from a tactical or strategic view on the market. When considering the use of smart beta, or any strategy, investors should have a clear understanding of the expected returns and inherent risks associated with that strategy. The risks that are prevalent with smart-beta strategies include:

- Exposure risk: the inherent risk of the intended exposure and assessing how efficient a smart-beta strategy is at acquiring “pure” exposure to a given market factor;
- Relative and absolute risk: the inability to effectively manage tracking error and absolute risk through the optimal trade-off between risk, return and transaction costs; and
- Implementation risk: the risk due to the potential of illiquidity, overcrowding and susceptibility to exploitation prevalent in a given market factor and resulting trading costs.

Smart-beta offerings are usually rules-based weighting strategies designed to provide exposure to market factors such as size, volatility, value, momentum or dividend yield. However, it is often difficult to determine if smart-beta strategies are passively or actively managed. Most smart-beta strategies have an element of both. In addition to low turnover and some transparency, the most passive aspect of smart-beta strategies is that they do not attempt to make explicit forecasts or estimates of returns for individual stocks or the overall portfolio. The active element common to all

FIGURE 1
**AUM GROWTH FOR SMART BETA STRATEGIES
AS OF DECEMBER 31, 2014**



Source: Morningstar.

smart-beta strategies is that they do not hold the cap-weighted market index; instead they re-weight the index based on different factors such as those mentioned previously, and are therefore not buy-and-hold strategies like a cap-weighted index.

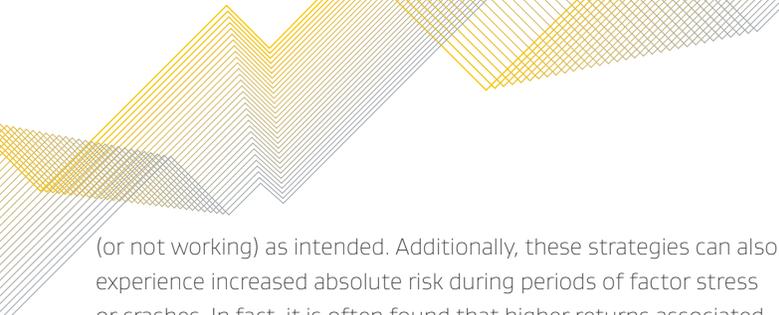
Exposure risk

Exposure risk is often tied to desirable and undesirable factor exposure from the smart-beta strategy. Smart-beta strategies are generally not well-diversified portfolios, even when holding a large number of securities, given that they target exposure to a specific factor such as size, volatility, value, momentum or dividend yield. The concentration risk resulting from these factors can lead to periods of substantial underperformance. For example, exposure to the momentum factor would have resulted in substantial underperformance in 2009 as a result of its pronounced drawdown that year.

Additionally, it is often difficult to obtain a pure factor exposure given that other unintended or undesirable exposures are generally prevalent within a smart-beta strategy. For example, when targeting lower volatility, there are often increased industry and size risks relative to a cap-weighted index. It is commonly found that different smart-beta strategies that target different exposures nevertheless have overlapping security holdings. These unintended exposures to other factors can contribute largely to the active risk of a smart-beta strategy – such as low volatility – and represent a very significant threat to investors. Furthermore, exposure risk is more prevalent when the historical performance is largely explained by unintended exposures and not the desired factors of the smart-beta strategy.

Relative/absolute risk

Additionally, smart-beta strategies may not allow for arriving at the optimal trade-off between risk, return and trading costs. As they are relatively simple weighting methods, using publicly available factors with pre-specified holding periods, smart-beta strategies often do not take into consideration correlations among stocks. Furthermore, factor exposures and other sources of risk are often not controlled by portfolio optimization or through the use of portfolio constraints. This frequently leads to high tracking error relative to the capitalization-weighted index. It also contributes to a lack of optimal re-weighting towards more-efficient (higher returns with comparable or less risk than the index) combinations of stocks, given the focus on single factors rather than a portfolio-centric approach to investing. Higher tracking error often results in a relatively low information ratio, which implies that it usually takes longer to have confidence that the smart-beta strategy is working



(or not working) as intended. Additionally, these strategies can also experience increased absolute risk during periods of factor stress or crashes. In fact, it is often found that higher returns associated with some smart-beta strategies coincide with higher absolute risk.

Implementation risk

Smart-beta strategies tend to exhibit increased exposure to small-cap stocks relative to capitalization-weighted indices. This can potentially increase the liquidity risk due to the need to regularly trade generally less liquid stocks. Additionally, given the increase in popularity of smart-beta strategies, there is a similarly increased overcrowding risk, which could result in factor crashes as capacity is used up. For example, a surge in popularity for low-volatility smart beta strategies could lead to overcrowding for low-volatility stocks, in turn leading to disappointing returns for investors in those strategies. Higher transparency and simplicity – a perceived benefit of smart-beta strategies – can also lead to overcrowding, as well as vulnerability to exploitation by predatory trading, which ultimately leads to lower returns. Finally, turnover and transaction costs are generally not integrated in the portfolio construction process, which tends to further negatively impact smart-beta returns.

Smart alpha and its potential benefits

In contrast to smart beta, smart alpha refers to the integrated framework that targets a more optimal trade-off between return, risk and transaction costs. More specifically, smart alpha means:

- the ability to customize solutions to meet investors' specific risk budgets and return targets;
- the deep understanding of when and why re-weighting a cap-weighted portfolio improves efficiency;
- using this understanding and portfolio risk controls to increase efficiency further; and
- tailoring the trading to the strategy to avoid liquidity risk, overcrowding and vulnerability to predatory trading.

It is still unclear among many investors if the ultimate source of excess returns from smart-beta strategies is indeed the risk premium of the targeted factor, or whether it is something else, such as removing biases of a cap-weighted index or systematic rebalancing. However, our research shows that systematic

rebalancing – the act of trading based on stock volatilities – contributes to the long-term returns by capturing stock volatility advantageously, and most popular smart-beta strategies are benefiting from this effect inadvertently. This is because smart-beta strategies are not buy-and-hold portfolios; they require regular rebalancing to maintain their respective exposures and stay true to style. Therefore, it makes sense to implement a smart-alpha approach to pursue this source of outperformance more directly and efficiently than a single-factor strategy.

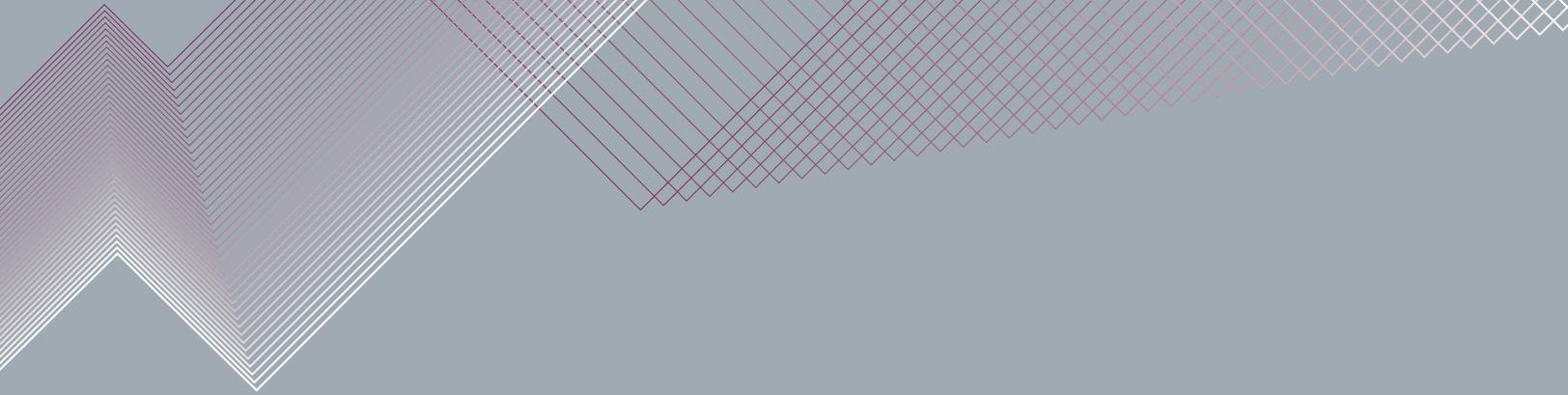
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Conclusion

Smart-beta strategies suffer from the dangers of unintended exposure risk, inadequate risk controls relative to the market benchmark and sub-optimal implementation. Investors should have a deep understanding of the active risk coming from the desired and undesired exposure trade-off within a smart-beta strategy.

Smart alpha creates a more diversified portfolio across various industries and factors to effectively manage the exposure risk and improve the consistency of performance. Moreover, smart alpha manages the liquidity risk through effective and agile trading that adapts to the market conditions. It provides a higher level of diversification due to the proprietary optimization processes and portfolio-centric effects to mitigate exposure risk, relative/absolute risk and overcrowding risk. Furthermore, smart-alpha trades may utilize randomization and proprietary methods to avoid predatory trading and control transaction costs. Therefore, in the end, smart alpha provides better risk controls that potentially lead to higher returns at comparable or reduced risk compared to smart-beta strategies.



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