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June 2015

WHAT'S WHAT?

Long Only Smart Beta and Equity Market Neutral Alternative Beta

Introduction

'Smart Beta' (long only) and 'Alternative Beta' (equity market neutral) strategies both provide investors with solutions that diverge from straightforward long exposure to equity indices, the so-called 'equity risk premium'. Because they share a common terminology, a systematic implementation framework, and a reliance on similar well documented effects – e.g., Momentum, Value, Quality, Low Volatility, Small-Cap vs Large-Cap – the two are seen as similar. However, in spite of the obvious commonalities, the two actually differ in many respects, specifically in their construction process, the actual exposures they provide, and where they fit in a portfolio.

This note attempts to offer some clarity. While we focus on equities here, the same logic can be (and occasionally is) applied to other asset classes.

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Defining the strategies

Smart Beta has roots in the traditional asset management world. It typically comprises long only equity strategies with no leverage, and is frequently offered via mutual funds or ETFs[1]. Examples of Smart Beta strategies include:

- Alternative weighting rules applied to capture certain factors within an equity index. For example, a fundamental weighting rule, such as 'Value', may allocate stock weights based on their Book to Price ratio.
- Risk driven portfolio construction rules such as Minimum Variance, Maximum Diversification, or Equal Risk Weighting.
- A mix of alternative indexing and risk-based portfolio construction rules.

Smart Beta portfolios, including ETFs, sometimes aim to track indices that are published by third parties, facilitating a high degree of transparency.

Equity Market Neutral (EMN) Alternative Beta strategies originate in the alternative investment universe, arising from research on well documented market effects including Value, Quality, Momentum, and Low Volatility. Persistent, robust and scalable signals based on these factors are used to construct a market neutral portfolio, with long and short positions and zero net exposure. A zero equity beta construction provides a 'pure' signal exposure. The level of gross exposure (i.e., leverage) allocated to each signal is adjusted to attain the desired volatility target.

How much Equity Beta?

Smart Beta strategies are long only; as a result, most of their risk comes from equity beta. Difficult periods for equities will therefore also be difficult for Smart Beta portfolios.

Some investors hedge the equity beta exposure by shorting futures or sector ETFs, in order to isolate the 'Smart' component. This, however, is at best an approximation to a genuinely market neutral portfolio vis-à-vis a broader spectrum of market risk factors[2].

EMN Alternative Beta strategies aspire to being a truly market neutral construction, and aim to exhibit very little equity beta risk. Neutralizing the portfolio ought to be done comprehensively: protection from undesirable market moves should not be limited to naïve dollar neutrality.

The use of single stock short selling enables a 'clean' market neutral construction, and the prudent use of leverage in the portfolio makes it possible to target specific risk exposures for each of the desired factors.

Controlling risk and factor exposures

Unlevered, long only Smart Beta solutions have most of their risk in the equity beta exposure, and so are exposed to market moves, much as other traditional long only portfolios. Time-varying volatility and stock dispersion directly impact both the overall level of portfolio risk and the risk allocated to specific factors. A construction that mixes equity beta risk with several other specific factor exposures makes it difficult to estimate the effective risk allocated to any single factor.

Some studies[3] have shown that the behaviour of 'risk based' Smart Beta portfolios (e.g., equally weighted, equal risk contribution) can largely be explained by indirect exposure to a limited set of traditional factors such as value, small cap, or low volatility. These exposures are hidden, not explicitly budgeted, which makes accounting for the actual risk allocation less transparent.

In both long only and beta-hedged implementations, unlevered Smart Beta strategies provide a relatively modest exposure to the mix of selected equity factors, which is not easily adjusted.

Smart Beta portfolios may also exhibit strong sector biases; e.g., a utilities bias in low volatility portfolios.

EMN Alternative Beta employs leverage, which managers can vary with fluctuating market volatility to maintain the desired allocation of risk to each factor. This is an attractive feature for investors who choose a risk budgeting approach to allocation.

Careful portfolio construction, combined with shorting, enables managers to hedge out equity beta and other risk factors or 'modes' that account for collective moves within stock portfolios.

[1] For an extensive review of the ETF Smart Beta landscape, please refer to 'A Global Guide to Strategic-Beta Exchange-Traded Products' by Morningstar.

[2] See Equity Market Neutral Portfolios: Hedging Out Market Factors, technical note by CFM (October 2014).

[3] See Demystifying Equity Risk-Based Strategies: A Simple Alpha plus Beta Description, The Journal of Portfolio Management, Spring 2012, Vol. 38, No. 3: pp. 56-70

Implementation skill set

The implementation of both Smart Beta and EMN Alternative Beta requires specific skills beyond those required for passive management. Managers experienced in trading markets systematically are often better equipped.

- **Trading:** Both approaches require re-balancing and so are 'active' from a trading perspective. The cost of trading and rebalancing, inclusive of market impact, is an important component of the performance of actively traded strategies. Minimizing transaction costs is a core skill of proficient systematic managers. EMN Alternative Beta solutions targeting constant risk (often with a daily reassessment of both signals and risks) will tend to trade more than Smart Beta solutions, since they factor in changes to both the signals and the market environment 'on the fly'.

  For practical reasons, Smart Beta solutions typically rebalance at a fixed monthly, quarterly or even annual frequency. Rebalancing dates are somewhat arbitrary from the perspective of trading signals, each having its own frequency. This also contributes to the time-varying factor exposure of Smart Beta: between rebalancing dates, much can happen, including changes in the volatility of both the market and individual factors.
- **Leverage and shorting:** Implementing a market neutral portfolio calls for experience with prime brokerage agreements, margin requirements, and financing costs, as well as an understanding of true levels of short interest and availability. Additional operational challenges are introduced, including margin call increases and sudden de-leveraging events (as occurred in August 2007), requiring expertise in operational risk management.

Diversification: the last free lunch

Both programs offer a mix of multiple factors, with potentially favourable results:

- **Diversification itself:** It is well-known that combining individual strategies with modest Sharpe Ratios results in a better aggregate Sharpe Ratio, provided the strategies exhibit low correlation amongst themselves. For example, Value and Momentum are known to be anti-correlated, and so tend to combine with favourable results[4]. As noted, 'risk-based' Smart Beta solutions tend to be biased toward a few factors (notably Value, Small Cap and Low Volatility). Given the high correlation between the Value and Low Volatility factors, the diversification effect is weak. 'Factor based' Smart Beta and EMN Alternative Beta solutions offer access to a broader spectrum of factors, including momentum and quality, and benefit from a larger diversification effect.
- Cost savings through diversification: Managing several strategies or factors in the same portfolio can also reduce turnover (and hence trading cost) relative to managing each in a separate portfolio[5], offering an additional benefit from diversification.

What is the true cost?

Smart Beta typically comes with a headline fee lower than EMN Alternative Beta. That said, for a fair price comparison, it is more appropriate to consider the fee per unit of 'active risk'.

As discussed, Smart Beta portfolios include a significant level of equity beta that might otherwise be accessed at very low cost (see Figure 1). The added value of these solutions, which makes the fee meaningful, resides in the 'active risk' allocated to the selected factors.

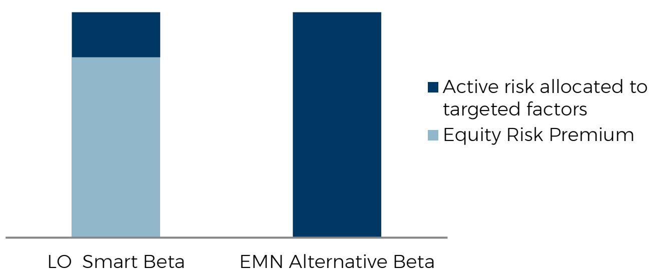

Figure 1: Breakdown of Equity Beta Risk and Active Risk for Long Only Smart Beta solutions and EMN Alternative Beta.

To illustrate this, a Smart Beta solution can be decomposed into a long only portfolio replicating a traditional index with an equity beta of one (for which fees should be very low), and a Long/Short dollar-neutral portfolio overlay (see Figure 2). This Long/Short overlay portfolio has a leverage that is structurally capped at one in order to stop the combination of the overlay with the long portfolio ever being short. The active risk that this virtual overlay portfolio (and thus the Smart Beta portfolio) delivers is limited compared to an EMN Alternative Beta

[4] See Value and Momentum Everywhere, The Journal Of Finance Vol. LXVIII, No. 3 (June 2013).

[5] See Cost Savings through Efficient Implementation in Equity Market Neutral Portfolios, technical note by CFM (February 2015).

strategy, which is able to target a specific risk budget through the use of leverage. The active risk delivered scales with the leverage employed: an EMN Alternative Beta portfolio with a gross leverage of five for example would deliver five times more active risk than its equivalent maximally tilted Smart Beta portfolio.

We leave it to the investor to decide on an appropriate level of fees for the active risk delivered. However, as an illustration, consider a mix of 80% allocated to passive index tracking products (for which fees have become extremely low, say 10bps) and 20% allocated to a leveraged EMN Alternative Beta solution with a 10% volatility target (with indicative fees set at a conservatively high 2%). The resultant portfolio would provide the same active risk as a Smart Beta portfolio, and cost 48bps in aggregate, quite comparable to a typical Smart Beta product.

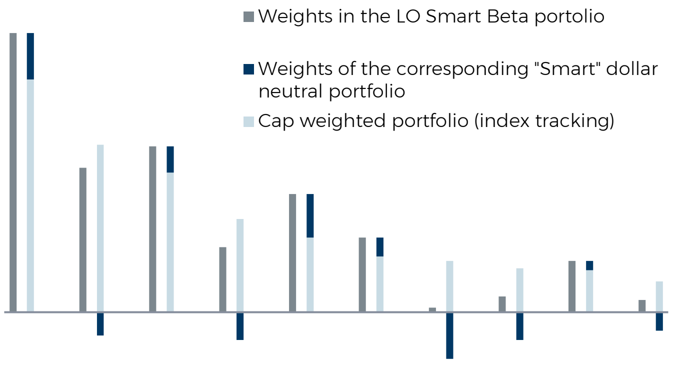

Figure 2: Illustrative decomposition of a Smart Beta portfolio (grey) into a cap-weighted portfolio (green) plus a ‘smart’ dollar-neutral portfolio (dark blue) with little leverage (and thus limited active risk). This is a simplified illustration using a portfolio of 10 stocks.

Other considerations

Beyond the points already discussed, there are numerous other factors that may influence the allocation decision. A few obvious ones include the following:

- **Transparency**: As discussed above, Smart Beta solutions often track public indices, facilitating a high level of transparency and a resultant high level of alignment with the governance guidelines of some investors. Since EMN Alternative Beta strategies are also largely well-known and not ‘proprietary’, managers are generally prepared (and should be expected) to be very transparent at all levels of their investment process, including sub-strategies and positions.
- **Acceptability**: The apparent simplicity of long only solutions may be more easily accepted by some more traditional investors. While the implementation of strategies that utilize leverage, shorting, and derivatives, requires additional market experience, EMN Alternative Beta strategies are based on an underlying simplicity that can be broadly understood and accepted by investors.
- **Regulatory and Governance Concerns**: Investors may have constrained fee budgets (e.g. regulatory expense caps) or require more efficient tax structuring, which Smart Beta managers have so far been better able to address. However, EMN Alternative Beta managers are increasingly employing regulated formats including UCITS and 40 Act Funds.

Recap

Long only Smart Beta and EMN Alternative Beta strategies share a common goal of providing investors with well-known equity factor exposures, but employ different methodologies and implementations, which in turn lead to different results.

Smart Beta solutions provide easy access to certain factor exposures in a long only format, relying on simplicity for both input (e.g., indexing rules or risk-based weighting) and format (i.e., long only equity). As a result, there is little control over the total risk of the strategy, which is dominated by (time-varying) equity volatility rather than a fixed level of risk allocated to each factor. Indeed, the residual ‘Smart’ component floats on a sea of equity beta exposure. Rigorous risk allocation to specific factors is unreliable, and certain strategies can include significant sector biases. However, the long only format is notable for its ease of implementation and wide acceptance by investors. This is an all-in-one solution that combines factor exposure with the equity beta that investors either require or are willing to accept.

EMN Alternative Beta strategies are straightforward to understand, but are implemented in a manner that employs short-selling and leverage. The additional complexity in the operational setup and the portfolio construction process delivers reliable market neutrality, specific and scalable exposures to targeted factors, rigorous performance attribution, and negligible equity beta risk. While risk allocation and performance attribution are simplified, the added complexity may be a barrier for certain investors.

Given a high degree of transparency, similar pricing per unit of active risk, and commitment on the part of managers to educate investors, we believe that EMN Alternative Beta is a viable solution for investors seeking targeted exposures to specific equity factors.

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