SMART BETA SERIES PART 3:

FROM SMARTER BETA TO SMART ALPHA

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Key Ideas

Smart beta is available in many different forms and flavors. What almost all of them have in common is that they are systematic, formulaic weighting strategies. This means that some algorithm, normally at least partially transparent, is periodically used to determine the weight of each stock in the portfolio. Of course, cap-weighting itself fits into this category: the algorithm in this case is to hold each stock proportionally to its market capitalization. This is just "beta," but why should cap-weighting be so dim-witted in comparison with other weighting strategies dubbed as "smart beta?"

The answer usually given is that smart beta taps into various risk premia and/or behavioral anomalies that cap-weighting overlooks and that are responsible for improved performance. This explanation neglects to take into account the unexpectedly crucial fact that, unlike cap-weighted indexes, smart beta strategies are not buy-and-hold: they require trading and rebalancing to maintain their respective exposures. This can have a surprising impact on long-term performance, and may also provide a cause for concern in the shorter term.

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How might systematic rebalancing contribute to portfolio return? A strategy that consistently buys low and sells high across hundreds of securities intuitively has an advantage. The key is to recognize that much of the short-term price movement of stocks is dominated by natural volatility, not fundamental data or events; and, in any case, large populations of stocks tend to behave statistically as though they are primarily driven by volatility rather than trends. Rebalancing has the potential to add return to portfolios by capturing this natural volatility in a beneficial fashion.

For example, a strategy which looks to exploit the "size effect" by investing in smaller-cap names will sell stocks after they have gone up in value thus becoming ineligible to meet that strategy's rule for inclusion (by virtue of being too large). The strategy will also purchase formerly large cap securities that have recently fallen in price to become small cap. Even if the rebalancing happens only infrequently, this favorable "buy low/sell high" trading can explain **all of the long-term outperformance of small cap indexes versus large cap indexes.** Observe that not all rules-based strategies that require rebalancing consistently buy low and sell high: indeed, a large cap index generally sells out of stocks that have recently gone down in value and buys stocks that have increased in value, leading to detrimental, rather than beneficial, rebalancing. Momentum strategies may also be subject to this sort of detrimental rebalancing, but can make it up by exploiting sufficient trend-following behavior often present in equity markets.

If rebalancing, and therefore trading, is the principal source of extra return for many smart beta strategies, then trading efficacy must be scrutinized and evaluated. Very few indexes (if any) include a transaction cost component in their returns to cover the trading required to reconstitute or rebalance the index, so it is up to investors or third parties to try to replicate the index as cheaply as possible. Not surprisingly, trading cost impact is exacerbated for strategies that have higher portfolio turnover. However, even if the turnover of a strategy is relatively low, overcrowding can still adversely affect performance. For well-subscribed smart beta strategies, the magnitude of the trading shifts necessary to rebalance can be so large as to negatively impact trading efficacy, as the total size of these trades precludes getting best price and execution. A more insidious consideration is front-running. As most smart beta strategies are defined by their systematic construction process, this trait makes them potentially subject to the predatory practices of front-runners. Ironically, the rules-based and systematic portfolio construction practices that define smart beta portfolios may be playing into the hands of opportunistic traders. While overcrowding and front-running may not necessarily lead to underperformance, they could potentially reduce the index returns themselves. Investors may discover that they have subscribed to a vehicle that may not meet their initial expectations.

Even with the above caveats, smart beta strategies provide relatively cheap exposures to various risk factors in the market, and can be used to augment a portfolio of active managers, if the overall portfolio turns out to be over- or underexposed to these factors. More difficult is the prospect of building a portfolio of smart beta strategies. A naive reliance on historical correlations may be ill-advised. If many factors turn sour at the same time, underperformance versus a cap-weighted index could be severe and prolonged. It may be sensible to dynamically adjust exposures to different smart beta strategies over time, but this is probably no easier than determining when individual stock prices – or the market as a whole – are likely to rise or fall.

Given all of the above, perhaps smart beta isn't smart enough. How can investors be smarter about smart beta? The answer is smart alpha.

Smart alpha is a means by which investors can tap into the common return source of the most popular smart beta strategies, but in a way that is designed to make the best use of this return source in a risk-controlled and targeted framework.

What is "Smart Alpha?"

We have made the point that the common thread linking the various non-cap-weighted smart beta strategies described is the necessity to rebalance. It can further be demonstrated that this very rebalancing activity **is actually the principal driver of the return enhancement.** Most smart beta strategies tap into this rebalancing premium accidentally, while pursuing their own particular factor exposure objective.

But if rebalancing is the true underlying alpha source, shouldn't it follow that the truly "smart" approach would be to pursue this very alpha deliberately and efficiently?

Smart alpha means:

- A deep understanding of when and why re-weighting away from cap-weighting leads to a more efficient portfolio.
- Using this understanding, and portfolio-level risk controls, to increase efficiency further.
- Effective trading tailored to the strategy and with an eye to resistance to overcrowding and front-running effects.
- The ability to customize portfolio solutions to meet client needs based on risk budgets, return targets or funding status.

It is true that smart beta has the potential to generate long-term returns above cap-weighted indexes without picking stocks or forecasting stock returns, but suffers from the dangers of inadequate risk controls relative to the market benchmark, overcrowding/capacity issues and sub-optimal implementation.

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Intech® has been on the cutting edge of the theory and practice of equity portfolio construction techniques for more than 30 years, and currently applies its "smart alpha" approach on behalf of institutional equity investors all over the world.

Intech® is a specialized global asset management firm that harnesses stock price volatility as a source of excess return and a key to risk control. Founded in 1987 in Princeton, NJ by pioneering mathematician Dr. E. Robert Fernholz, Intech® serves institutional investors across five continents, delivering relative return, low volatility, adaptive volatility and absolute return investment solutions.

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