SECOND QUARTER 2014

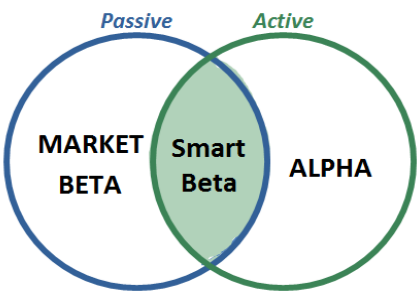
PIEDMONT PEAKS

ALTERNATIVE BETA: BLENDING SMART BETA STRATEGIES IMPROVES RISK-ADJUSTED RETURNS

Smart Beta Overview

Smart Beta strategies have increasingly become a topic of interest for investors. While implementations vary, "Smart Beta" implies a transparent, quantitative investment strategy where individual stock position weights are determined by something other than market capitalization. At Piedmont, we believe that Smart Beta portfolios combine the best attributes of active and passive investing. This piece introduces internally developed research that presents a compelling alternative to traditional cap-weighted indices.

SMART BETA: The intersection of active and passive management



Capitalization-Weighting Pros and Cons

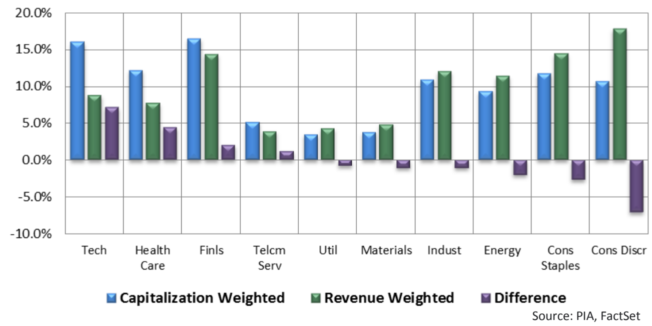
The simplicity and advantages of cap-weighting have resulted in widespread acceptance and usage of indices such as the S&P 500 as passive investment vehicles and benchmarks for active strategies. Benefits of a cap-weighted strategy include:

- Diversified representation of "the market";
- Low Turnover and Maintenance: minimal rebalancing since index weights change as prices change;
- Low Cost: low transaction costs and management fees;
- Tax-efficient: minimal capital gains.

Concerns regarding cap-weighted strategies stem from their high concentration (the largest 27 stocks make up a full one-third of the total S&P 500 weight) and the economic and factor exposures such portfolios deliver. To illustrate this, we compare the S&P 500 index to a portfolio of the same 500 stocks re-weighted by each stock's revenue (as a percentage of the sum total revenue). This replaces the price-driven weighting (capitalization) of the S&P 500 with a more fundamental rationale.

As the following chart illustrates, cap-weighting results in systematic sector biases relative to the reality of where revenue is generated within the economy, underweighting Consumer Discretionary, Staples and Energy while overweighting Technology and Health Care. These biases are due to the price-driven nature of cap-weighting; i.e., stock prices reflect investors' sentiment regarding growth expectations.

S&P 500 Sector Exposures: 1992-2013 Average



Cap-weighting produces factor tilts or biases as well, such as increased exposures to higher valuation (high P/E, P/S, P/B) and stocks with higher momentum and growth expectations.

Smart Beta Research

Piedmont's research on Smart Beta strategies focused on factor analysis over the last 20+ years (1993-2013). The results recognize the three primary drivers of investment returns and alpha: Valuation, Growth/Momentum and Risk. The index re-weighting methodology for this research is described below:

- **Valuation:** Sales and Cash Flow – Stock weights are calculated as each stock's percentage of total S&P 500 Sales and Operating Cash Flow separately; the average of these two percentages determines each stock's weight in the aggregate Valuation strategy.
- **Risk (Low Volatility):** All S&P 500 stocks are re-weighted by semi-variance (downside volatility) with the least volatile stocks receiving the largest weights.
- **Growth/Momentum:** Top half of the index by Price Momentum; stock weights are proportional to the standardized (z-scored) momentum.

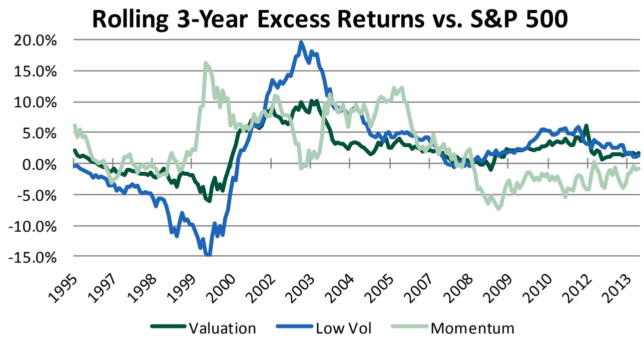
The construction of each of these Smart Beta strategies is passive in that it is transparent, rules-based and holds all or mostly all of the stocks in the index. The following table summarizes the return and risk profiles of each over our 1993-2013 test period.

	S&P 500	Valuation	Low Vol	Momentum
Ann. Return	9.3%	11.6%	11.6%	12.3%
Ann. StDev	14.8%	15.4%	13.5%	18.8%
Sharpe Ratio (Rf=0%)	0.63	0.75	0.86	0.65
Ann. Excess Return		2.3%	2.3%	3.0%
Tracking Error		4.4%	6.2%	9.3%
Information Ratio		0.52	0.37	0.32
Upside Capture		104%	93%	120%
Downside Capture		93%	75%	112%

Source: PIA, FactSet

Though each strategy is passively implemented, the resulting returns are decidedly active, as evidenced by the strong excess returns (2-3% per annum) and high tracking errors (4-9%) versus the traditional S&P 500 index.

While our research confirms the compelling absolute and risk-adjusted returns (Sharpe ratios) achievable via these simple index re-weighting methodologies, a deeper dive to explore the cyclicality of those returns is warranted. The chart below graphs the rolling three-year annualized excess returns of the Valuation, Risk and Momentum strategies.

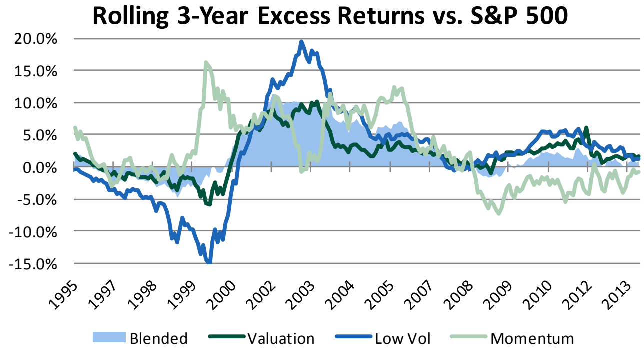


Source: PIA, FactSet

The chart clearly shows that, while all three of the strategies generate strong returns over the 20+ year test period, the performance of each is highly cyclical and less predictable over shorter periods. The Valuation-weighted strategy generated the most consistent excess returns but still struggled in the internet bubble period of the late 1990s. The Risk/Low Volatility approach performed exceptionally well since 2000 but suffered horrific underperformance in the late 1990s, culminating in an annualized -1500 basis points versus the S&P 500 for the three years ending March, 2000! Interestingly, this is exactly the period when the Momentum approach generated its strongest relative returns.

Blended Beta - A Balanced Approach

The strong, but cyclical, performance of the alternative index weighting strategies we studied has led us to believe that investors considering allocations to Smart Beta strategies should consider a balanced or diversified implementation across several such portfolios. As the graph below illustrates, the combination of the three separate Smart Beta strategies results in a more stable return pattern versus the traditional S&P 500 index, with lower risk of underperformance over shorter time periods. The shaded area represents the three-year annualized excess returns of this blended combination.



Source: PIA, FactSet

The blended strategy holds all stocks in the S&P 500; stock weights are equal to the average of the three sleeves described previously, rebalanced quarterly. Summary returns and statistics for the individual and blended strategies follow:

	S&P 500	Valuation	Low Vol	Momentum	Blended
Ann. Return	9.3%	11.6%	11.6%	12.3%	12.0%
Ann StDev	14.8%	15.4%	13.5%	18.8%	15.0%
Sharpe Ratio (Rf=0%)	0.63	0.75	0.86	0.65	0.80
Ann. Excess Return		2.3%	2.3%	3.0%	2.7%
Tracking Error		4.4%	6.2%	9.3%	4.0%
Information Ratio		0.52	0.37	0.32	0.67
Upside Capture		104%	93%	120%	106%
Downside Capture		93%	75%	112%	93%
Max 3yr Ann Alpha		10.1%	19.6%	16.3%	11.3%
Max Period End		Aug-03	Feb-03	Feb-00	Mar-02
Min 3yr Ann Alpha		-6.0%	-15.2%	-7.4%	-4.9%
Min Period End		Mar-00	Mar-00	May-09	Mar-99
Turnover	4%	20%	30%	74%	21%

Source: PIA, FactSet

Conclusion

A blended "Alternative Beta" portfolio delivers a strong, more stable combination of the active and passive attributes of stand-alone Smart Beta strategies with the following benefits:

- Diversified and liquid representation of the market;
- Passive and transparent portfolio construction with manageable turnover;
- Strong absolute and risk-adjusted excess returns;
- Diversification of sources of return: The primary drivers of stock returns are each represented in our Valuation, Risk and Momentum sleeves;
  - Excellent upside/downside capture metrics;
  - Reduced risk of severe underperformance;
- Active factor exposures: Small and value tilts relative to traditional cap-weighted indices have generated alpha over the long term, serving as primary performance drivers for most Smart Beta strategies.