

Designing Smart Allocation for Smart Beta

Increased flows suggest that more and more investors have embraced the concept of smart beta, with \$7.9 billion in net new investments and \$793.2 billion in AUM as of March 31, 2016.¹ In addition, investors are also gravitating to risk-reduction strategies within the smart beta camp, with this relatively nascent category seeing some of the fastest growth.² But even those intrigued by these strategies may still be unsure where these strategies fit in the context of a broader portfolio. We argue that risk-reducing smart beta can be implemented in three primary ways:

- As an enhancement to passive exposure
- As a replacement for active management, or
- As a tactical asset allocation component

While there are other ways to structure portfolios using smart beta, these examples offer three distinct strategies with the potential to reduce risk and enhance long-term returns

ADDRESSING THE LIMITS OF CAP-WEIGHTED INDICES

Before diving into portfolio construction, a quick primer on smart beta is in order. Also known as strategic beta, smart beta is defined as any rules-based investment process employing a weighting system based on factors other than market capitalization, the primary determinant for traditional market indices.

One reason why smart beta strategies in general have garnered so much attention and assets recently is that investors have witness limitations in traditional market capitalization weighted indices, such as the MSCI World Index or the S&P 500. Such indices assign a larger weight to stocks with larger market capitalization, which by definition means that the weight of a stock within the index increases as its stock price increases (all other things being equal). The concept of “buying low and selling high” cannot exist within a market capitalization weighted index; in fact it does the opposite. Such an approach allocates portfolio weights according to a rule and passively accepts the risk that results from the allocation.

This weighting scheme can cause problems when considering the risk of each individual security in the portfolio. A research study by Rothschild shows that the risk within the portfolio tends to be concentrated in the larger stocks. This results in an overweight of risk in a few large securities rather than equally across the portfolio like an equal risk contribution strategy would create.

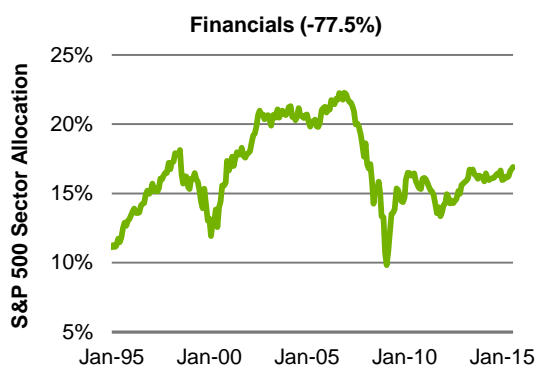
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- 1 Morningstar Direct
- 2 See for example, “The Most Important ETF Of 2016,” ETF.com, May 17, 2016



Market cap-weighting also can create less than ideal situations in terms of sector exposure, as was the case leading into the Global Financial Crisis. From 1995 to 2007, the S&P 500's exposure to Financials grew from 12% to 22%, since increasing values led to increased market capitalization. As we now know, the benchmark's exposure to Financials was peaking just as the sector was about to suffer a massive decline.

S&P 500 Sector Weights (January 1995 - January 2015)



Source: Bloomberg

- Post-repeal of Glass-Steagal during the credit boom, Financials roughly doubled from 12% to 22% of the S&P 500
- Due to cap-weighting, the index created a maximum exposure just as Financial stocks plummeted 78%
- A risk-focused approach would have avoided such an over-concentration

Past performance is no guarantee of future performance and performance may vary over time.

The earliest smart beta strategies used fairly rudimentary techniques to avoid such mistakes, including equal-weighting schemes (e.g., in a 100-security portfolio, each security comprises 1% of the benchmark), or so-called factor tilts, such as using the size of corporate revenues to determine the level of representation in portfolio.

Risk-focused smart beta solutions have taken this construct a step further, by using risk inputs to determine portfolio weights. Rothschild's approach, called Equal Risk Contribution 2.0 (ERC 2.0), is to consider both volatility and correlation, then weight the portfolio so that each security contributes equally to the portfolio's overall risk.

IMPLEMENTATION 1: ENHANCING PASSIVE EXPOSURE

The first and most obvious consideration for investors looking to implement smart beta risk-reduction strategies is to look to their existing passive exposure. Because smart beta strategies and more specifically risk-based strategies have an active design but a passive implementation, they are uniquely able to fill the role of either the core or satellite sections of an investor's portfolio asset allocation model. So within our first implementation model, smart beta offers two underlying alternatives: the first is serving as a satellite to the investor's existing passive exposure, while the second alternative is serving as the core passive allocation.



PASSIVE SATELLITE

Typical U.S. investors will often have a sizeable allocation to a broad-based market index, such as the Standard & Poor's 500 (S&P 500). This allows them to gain a very traditional exposure to the market as a whole, albeit with some of the limitations described above. Even for investors and their advisors aware of the limitations of a cap-weighted index, abandoning this exposure altogether may give them pause. For these conservative (read: "traditional") investors, a more reasonable move may be to augment this exposure with a risk-based investment solution.

Under this approach, an investor with a traditional "60/40" allocation might reallocate half of their passive exposure to risk-based solutions. As previously discussed, the objectives of risk-based solutions are to lower a portfolio's volatility. Taking this approach a step further includes a focus on reducing maximum drawdown (the greatest peak-to-trough loss), while trying to maintain similar or even superior returns to the traditional passive indices.

The satellite position's ability to provide a different return stream than the traditional passively managed indices can help reduce the portfolio's overall volatility. This approach could make sense for investors looking to dial back risk without deviating significantly from market returns.

PASSIVE CORE

Advisors should also consider risk-based investment solutions as valuable solutions for core passive exposure. These strategies provide the user with an unemotional, quantitative approach to investing that most investors require in their core positions. In addition, lower-risk strategies can provide an anchor for a diversified portfolio, making them suitable building block which is then enhanced by actively-managed satellites. In this scenario, the investor would replace their entire 60% passive allocation with risk-based solutions.

With a risk-based strategy in place as a core position in an asset allocation model, the client can expect to receive a less turbulent ride over a full market cycle. This smoother ride should help the clients as the move from accumulation phase into distribution phase to feel comfortable with the equity exposure they have in their portfolio.

IMPLEMENTATION 2: REPLACEMENT FOR ACTIVE MANAGEMENT

As previously discussed smart beta products can be referred to as having "Active design with Passive implementation". This approach makes it possible for these strategies to replace either a passive strategy or active strategy in an investor's portfolio.

Both active and passive investment strategies are important tools for building diversified portfolios. Nevertheless, the current environment for active managers has been challenging, to say the least. According to Standard & Poor's, 66% of large-cap, 57% of mid-cap, and 72% of small-cap managers underperformed their respective S&P indices in 2015.³

Notes



Beyond trailing performance, advisors are concerned with the volatility of returns. Numerous studies have shown that investors miss out on nearly 2% annually because they tend to pile in after funds have outperformed and right before performance reverts to the mean.⁴ Aside from this behavioral argument, advisors naturally question the comparatively high fees charged by active managers, especially when these stock-pickers fail to add value.

If an active manager needs to be replaced in a portfolio, a risk-based solution could also fit the bill there. This solution can still over the long haul still outperform the traditional passive indices but likely do it at a lower cost than traditional active management. If behavioral finance suggests that investors struggle with active strategies that fluctuate wildly, strategies that focus on risk reduction may improve the likelihood that investors stay committed to investing for the long haul.

IMPLEMENTATION 3: TACTICAL

Another potential role for risk-based solutions in an investor's portfolio is a tactical one. Today, investors face a conundrum: while they know that they must hold equities to achieve their long-term targets, they are very uncomfortable with current market risk. Yet, using fixed income to moderate equity risk is also challenging, with bond markets appearing overextended.

More than seven years into a bull market, many investors are concerned that the majority of risk in today's equity markets lies to the downside. As of May 31, the S&P was trading at over 17 times earnings.⁵ Some critics have argued that stock market fluctuations have been disconnected from fundamentals, rather than driven by compelling valuations or earnings expectations.

In the current environment, investors looking to mute equity risk by using fixed income investments are likely to be disappointed. First, yields are extremely low by historical standards, and unlikely to help investors meet their return targets. Second, there is price risk to fixed income securities trading above par, as they have the potential to suffer declines.

Low and even negative interest rates in many markets have led some investors to take speculative positions as they seek yield or make bets on high-risk stocks. Since these movements are more the product of a distorted reality, rather than any underlying fundamentals, investors may be better served to consider a lower-volatility approach, at least until market conditions normalize. Such a strategy allows advisors and their clients to "stay in the game" while shifting out of those equities that might offer too much risk for the level of potential reward.

Notes

4 "The Big Mistake Investors Still Make," The Wall Street Journal, April 3, 2016

5 Rothschild analysis using FactSet

BUILDING LOWER VOLATILITY PORTFOLIOS

Conceptually, risk-based solutions make sense in each of the scenarios outlined above, but what do the numbers say? Let's consider the traditional balanced portfolio as the benchmark.

As we might expect, augmenting a traditional "60/40" portfolio with risk-based investment solutions (as represented by ERC 2.0) does in fact reduce risk. For example, splitting the U.S. equity exposure equally between the S&P 500 Index and the ERC 2.0 reduces standard deviation by over 13% and maximum drawdown by nearly 15%. Making a full substitution to 60% ERC 2.0 reduces standard deviation by nearly 22% and maximum drawdown by nearly 23%.

Traditional Balanced Portfolio	Allocation	Balanced: 30% Risk-Based	Allocation	Balanced: 60% Risk-Based	Allocation
S&P 500 Index	60%	S&P 500 Index	30%		
		Risk-Based Investment Solutions	30%	Risk-Based Investment Solutions	60%
Barclays Intmd. Gov't. Corp.	40%	Barclays Intmd. Gov't. Corp.	40%	Barclays Intmd. Gov't. Corp.	40%
Annualized Total Returns (as of May 31, 2016)		Annualized Total Returns (as of May 31, 2016)		Annualized Total Returns (as of May 31, 2016)	
One Year	2.21%	One Year	2.88%	One Year	3.26%
Three Year	7.55%	Three Year	7.69%	Three Year	7.66%
Five Year	8.15%	Five Year	8.44%	Five Year	8.45%
Seven Year	6.34%	Seven Year	7.06%	Seven Year	7.19%
Risk Statistics		Risk Statistics		Risk Statistics	
Std. Dev. (5 Year)	7.25	Std. Dev. (5 Year)	6.29	Std. Dev. (5 Year)	5.67
Sharpe (5 Year)	1.11	Sharpe (5 Year)	1.31	Sharpe (5 Year)	1.32
Max Drawdown	-29.94%	Max Drawdown	-25.53%	Max Drawdown	-22.60%

Source: Morningstar Direct

Disclosures:

Past performance is no guarantee of future results. Past performance of the strategy stocks is hypothetical, gross of fees, shown for illustrative purposes only and is not intended to indicate the future performance of any investment. The strategy stocks for a given year consist of the securities selected by applying the strategy as of the beginning of the period. Total return represents the sum of the change in market value of each group of stocks between the first and last trading day of a period plus the total dividends paid on each group of stocks during such period divided by the opening market value of each group of stocks as of the first trading day of a period. Total return figures assume that all dividends are reinvested immediately.



An additional benefit, however, is that returns are also enhanced by using ERC 2.0. This is not only true over the short term, but also over a seven-year period, where 30% and 60% allocations to ERC 2.0 increased returns by 0.72% and 0.85% annualized, respectively. Impressively, this risk-based strategy outperformed during an extended bull market, when one would expect more volatile, momentum-oriented approaches (i.e., traditional cap-weighted indexing) to outperform.

Finally, as suggested earlier, Rothschild believes that there is a place for active, passive, and risk-based strategies in an investor's portfolio. Including each of these ensures diversification of the investment process, on top of any statistical benefits. Given active managers' struggle to outperform passive benchmarks, and investors' desire to reduce fees, replacing a portion of their active allocation with risk-based solutions might yield even more efficient portfolios.

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