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Q&A with the Father of Fundamental Index® investing—Rob Arnott

As Research Affiliates Inc. ("RAFI") prepares to celebrate the 10th anniversary of the first Fundamental Index strategies, the Schwab Center for Financial Research wanted to discuss the current and future state "Strategic Beta" or "Smart Beta" strategies. Morningstar now estimates that there is nearly $400 billion in assets in Strategic Beta ETFs and roughly $140 billion in assets following RAFI® strategies (institutional and retail).

Tony Davidow: First and foremost, congratulations, Rob, on your incredible success in transforming the industry! I remember having dinner with you late last year, and we discussed how the dialogue has changed from "Do these strategies work?" to "How do I use these strategies?" and "How do I distinguish among the many 'smart beta' strategies available in the marketplace?" In 2004, did you envision this sort of success? What do you say to the early critics now?

Rob Arnott: The explosion in the price of technology, media, and telecom companies during the tech bubble, along with input from a dear friend of mine, convinced me there had to be a better way to construct an index portfolio. George Keane, who was founding president of the Commonfund, was horrified by the amount of money pension funds were allocating to expensive—but tiny—tech stocks, based on their use of cap-weighted indexes.

It made no sense that an investor in a cap-weighted index would inherently have his greatest exposure to a company precisely when it was most expensive. That entire construct runs completely counter to the basic axiom of buy low, sell high.

In searching for a better way to build an index portfolio, we tested a number of non-price variables. I was surprised by the magnitude of outperformance rebalancing away from cap generated in simulations. I expected to see results on the order of 0.5% excess return. However, the data revealed outperformance well in excess of that. Our results revealed excess returns in U.S. large companies, and even greater excess returns in less efficient markets like small companies and emerging markets. Additionally, as we altered both the variables we tested and the sample time periods and geographies to which we applied them, we saw the excess return was persistent. I realized we were really on to something, as repeated tests in new markets corroborated our initial findings.

As a result of the robustness of our research findings, I had very high expectations for the success of the strategies in 2004. Rebalancing works! It works across time periods. It works across geographies. Routinely selling the most loved companies ("popular" stocks) and buying the most loathed ("underappreciated" stocks) generates excess returns over a cap-weighted index that assigns company weights based solely on popularity.

TD: Recently there has been some criticism about "smart beta" strategies. As you're aware, we have done a lot of research and written about the differences among the various types of smart beta/strategic beta strategies.[1] How do you suggest advisors and investors evaluate the merits of these strategies?

RA: A smart beta, or strategic beta as the team at Morningstar prefers, strategy needs to be evaluated in the same manner as any other option in an investor's tool kit. Investors need to answer two questions before determining how much they allocate to a strategy, if at all. What are the expected characteristics of the strategy based on its portfolio construction? What need, if any, does this strategy fill in my portfolio?

Investors should always understand the construction and resulting characteristics of any strategy they implement. In the case of our RAFI equity strategies, we select and weight companies according to fundamental measures of company size—such as adjusted sales, cash flow, and dividends

+ buybacks—that can be thought of as measures of a company's economic footprint. Assigning weights based on fundamental measures and rebalancing back to them on a systematic basis inherently results in a contrarian portfolio. The construction approach will, by definition, sell companies whose stock prices have increased relative to their economic footprint, and buy those whose stock prices have fallen relative to their economic footprint. Investors who use these strategies should understand this contrarian bent before allocating to the strategies.

Once the methodology itself is understood, the place in the portfolio then needs to be determined. RAFI strategies are a natural fit for investors who seek potential for more attractive long-term, risk-adjusted returns in a transparent and rules-based, low-cost index format. The amount allocated to a contrarian approach is then determined by an investor's tolerance for maverick risk. Investors who want to adhere fairly closely to the returns of a cap-weighted benchmark should keep allocations to contrarian strategies modest in size. Investors who can tolerate maverick risk, those who can stomach an overweight to financials in the U.S. in 2009 or an overweight to Russia and Brazil in an emerging markets portfolio today, can make meaningful allocations to contrarian strategies.

It is important for investors to understand their tolerance for deviation from a cap-weighted index *before* allocating to these strategies. Our own Jason Hsu and John West have written separately on the importance of not only identifying outperforming strategies but keeping them during the inevitable periods of underperformance.[2,3] No strategy works all the time; if we chase what's worked recently and drop whatever has been disappointing, we can undo the benefit of all our hard work identifying superior strategies. Investors who allocate to contrarian strategies only to sell during the first period of underperformance are actually worsening their prospects for reaching their goals, in my opinion.

I would encourage advisors and investors to employ this same framework for every strategy they evaluate, "smart beta" or otherwise. What are the expected characteristics of the construction approach? How would the resultant strategy fit in my or my clients' portfolio?

TD: We are big believers in Fundamental Index investing based on the extensive research, the academic rigor, and the simplicity in understanding the approach. Are you concerned about "me too" strategies that lack the rigor coming to the market? Ultimately, do you think all smart beta strategies are *smart*?

RA: When we created the Fundamental Index concept more than 10 years ago, the term "smart beta" did not exist. The team at Towers Watson, a leading global investment consulting firm, coined the term as a way to describe non-cap-weighted systematic strategies, such as RAFI portfolios, that provide investors an opportunity to capture a "[r]isk premium previously only available through expensive active strategies in a cheaper way."[4] I highlight the origin of the term because its intent informs my answer.

Strategies that adhere to Towers Watson's definition are "smarter" ways of achieving alpha. However, the popularity of the "smart beta" term has led many product vendors to use it as a label when it is not appropriate. I believe the moniker is inappropriate when it is applied to strategies whose construction will link the size of the investment in a stock to its price, because these strategies are less likely to deliver long-term excess returns relative to a cap-weighted benchmark.

In order to capture the rebalancing premium we identified in our early research, it is necessary to break the link between a stock's market capitalization and its portfolio weight. Some of the more complicated, optimized strategies that have adopted the smart beta handle require the reintroduction of cap weighting in order to attain reasonable capacity and liquidity. This brings price weighting back in through the back door. I would not classify such strategies as "smart beta" as they incorporate the very flaw—overweighting overvalued companies—that we sought to avoid by severing the link with price. Again, the question comes back to philosophy and construction. If a product provider does not place importance on implementation and removing the link between price and weight, then the resultant strategy may not be all that "smart."

TD: As you get ready to celebrate the 10th anniversary of Fundamental Indexing, do you think these strategies have delivered on the promise? Have they met your expectations?

RA: During our testing of fundamental indexing, we focused on implementation. We found that an annual rebalance to a non-price measure of size led to theoretical outperformance. The excess return was consistent regardless of the rebalancing anchor we selected! In other words, Fundamental Index didn't outperform because of getting the fundamental weighting right. Anchoring on equal weighting, or one over beta, or the number of executives who wear bowties, all would work just as well in adding value relative to cap weight.

Once we established that the rebalance itself, not the weights to which we rebalanced, drove the excess returns, we turned our focus primarily to implementation. Knowing that the metric selected other than price outperformed in the long run freed us to select metrics of size that best incorporate the positive attributes of cap weighting. We look for measures that can result in a portfolio with high capacity, high liquidity, low turnover, and broad economic representation. The resultant Fundamental Index portfolios reach this goal. By selecting and weighting companies by fundamental measures of size, we created portfolios that have vast capacity and easy liquidity. By using multiple measures of size, averaged over multiple years, we created

stable rebalancing anchors that keep turnover low while also providing broad economic representation.

In our "live" results (2005–present), for the most efficient markets (U.S. Large Company), we have experienced 150–200 bps of excess returns, and higher returns in the least efficient markets (small cap and emerging markets). These strategies don't outperform in each and every market environment, but over longer intervals the results have exceeded our expectations. You mentioned critics earlier. One of the early criticisms of the Fundamental Index methodology was that it was just cleverly repackaged value investing. The live data shows there is more to the rebalancing premium RAFI strategies access than just value exposure. Value has been savaged repeatedly in the last decade. It has materially underperformed growth since our first RAFI strategy went live in 2004. However, most of our portfolios have outperformed. This is because the value tilt of RAFI strategies is inherently dynamic. The value exposure will be greatest precisely when value is cheapest relative to growth. The value tilt helps, but the rebalancing is the dominant source of value added.

Because they have delivered excess returns over the cap-weighted benchmark—through highly implementable portfolios, in difficult times for value strategies—RAFI strategies have definitely met my expectations.

TD: One of my favorite highlights every year is attending your RAFI Symposium, where your team shares new research and innovation. What's next for RAFI strategies? What new ideas should we expect to see in the market?

RA: Our recent work has involved both expanding RAFI equity strategies and taking the approach into other asset classes. We launched RAFI strategies for corporate and sovereign debt and commodities, while low volatility and equity income were new applications within the equity space. For a firm that focuses solely on creating new investment strategies, this feels like a short list for 10 years of work. While it may sound counterintuitive, it is our insistence on rigorous research that has constrained our strategies to a relatively short list.

Given the vast computing power available today and the ease of gathering historical data, it's easy to mine the data, to develop a wide array of strategies that yield statistically significant outperformance in a back test. However, we have neither the desire nor the goal to launch a large number of strategies solely for the purpose of product proliferation. Rather than merely relying upon back-testing data, we require proven economic rationales, and excess returns in diverse economic and investment environments, before even considering a new strategy. We have quite deliberately forced all new product launches to meet a very high hurdle.

I referenced Towers Watson's views on smart beta. A look at the Research Affiliates' definition of smart beta serves as a road map for our product plan:

> A category of valuation-indifferent strategies that consciously and deliberately break the link between the price of an asset and its weight in the portfolio, seeking to earn excess returns over the cap-weighted benchmark by no longer weighting assets proportional to their popularity, while retaining most of the positive attributes of passive indexing.[5]

It is no coincidence that "Research" figures quite prominently in our firm's name. Research is at the heart of everything we do. As our research identifies additional ways in which we can outperform while retaining the positive attributes of passive indexing, we will carefully launch additional strategies.

TD: We have talked a lot about smart beta. Robo advisors are another recent innovation in our industry. What is your take on these automated solutions? Are they here to stay?

RA: Technology has always been a disruptive force, within our industry as with all industries. I see no reason why this would not continue to be the case in the future. So-called robo advisors are just one in a long line of disruptive innovations. The advent of mutual funds meant that financial advisors and investors could allocate capital to pooled funds run by third-party managers instead of spending time picking stocks or bonds on their own. The advent of index funds meant that financial advisors and investors could allocate to benchmarks instead of spending time picking managers, if they didn't think they could choose managers who would win, net of fees and trading costs. The advent of third-party model portfolios, including robo advisors, means advisors and investors can allocate to model portfolios instead of spending time customizing their asset allocation and adjusting it to changing market and economic conditions, if they choose to do so. I believe robo advisors are here to stay as they represent another innovative tool available to advisors and investors.

I would offer a word of caution. Not all robo advisors are created equal, just as not all mutual funds and indexes are created equal.

TD: Thanks, Rob. This is very helpful! For additional information, please visit www.CSIMFunds.com or call 800-465-4000.

[1] Anthony B. Davidow, "Strategic Beta Strategies: An Evolution of Different Approaches," Schwab Center for Financial Research, Feb. 2015, csimfunds.com.

[2] John West and Amie Ko, "Hiring Good Managers Is Hard? Ha! Try Keeping Them," Research Affiliates, Nov. 2014, http://www.researchaffiliates.com/Our%20Ideas/Insights/Fundamentals/Pages/321_Hiring_Good_Managers_Is_Hard_Ha_Try_Keeping_Them.aspx.

[3] Jason Hsu and Vivek Viswanathan, "Woe Betide the Value Investor," Research Affiliates, Feb. 2015, http://www.researchaffiliates.com/Our%20Ideas/Insights/Fundamentals/Pages/365_Woe_Betide_the_Value_Investor.aspx.

[4] "Understanding Smart Beta," Towers Watson, Aug. 2013, http://www.towerswatson.com/en/Insights/IC-Types/Ad-hoc-Point-of-View/2013/08/Understanding-smart-beta.

[5] Rob Arnott and Engin Kose, "What 'Smart Beta' Means to Us," Research Affiliates, Aug. 2014, http://www.researchaffiliates.com/Our%20Ideas/Insights/Fundamentals/Pages/292_What_Smart_Beta_Means_to_Us.aspx.

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