

# Part 5 - Smart Beta vs. Traditional Value Style Indices

November 2013

My research papers, “A Survey of Alternative Equity Index Strategies”<sup>1</sup> and “The Surprising Alpha from Malkiel’s Monkey and Upside-Down Strategies,”<sup>2</sup> find that most of the commercially available Smart Beta indices contain meaningful exposure to the value premium. In fact, I show that almost all non-price weighted index schemes will naturally access the value anomaly, which can be interpreted as the effect of contrarian rebalancing against long-horizon mean-reversion in equity prices. Long horizon mean-reversion in stock prices exists in the entire cross-section of stocks. Thus contrarian rebalancing—buying what has fallen and selling what has risen in price—can be applied to all stocks in the equity universe to extract the value premium. This approach is vastly different from traditional style investing based purely on buying low price-to-book (P/B) stocks. In this blog post, I look specifically at traditional value style index construction, and I contrast it with the smart beta approach to extracting the value premium through rebalancing across a diversified core portfolio, as represented by the Fundamental Index™ methodology.



## AUTHORS



Jason Hsu

## The structure of traditional value style indices raises some questions.

Value investing has been known since the early 1920s to deliver superior performance. In the 1990s, with the growing popularity of the consultants’ nine-box style matrices, index providers sought to provide investors with transparent, low cost “beta” exposure to value investing through cap-weighted value indices. By and large these first generation value indices were constructed by selecting stocks with low P/B ratios and then cap-weighting them. Over time, the methodologies evolved to include other measures of value, as opposed to growth, and to situate stocks on a value-growth continuum. The value style indices have produced outperformance against the broad cap-weighted market index. However, their structure raises some questions.

The conventional style indices have two important characteristics. First, their active shares relative to the market benchmark are dominated by industry bets. In traditional value indices, growth oriented industries are represented only to the extent value stocks have growth characteristics. The resulting indices are unrepresentative of the underlying economic exposure because they are poorly diversified from an industry

concentration perspective. In particular, a quick examination of traditional value indices will find large overweights in financial and energy stocks, made possible in part by underweight positions in technology stocks. The S&P 500 Value Index and the Russell 1000® Value Index have significantly more exposure to financial and energy stocks, and less to technology stocks, than the corresponding broad market indices. (**Table 1.**)

## Table 1. Index Sector Weights as of September 30, 2012

| Index               | Sector Weight (% of Total Index Capitalization) |        |            |
|---------------------|-------------------------------------------------|--------|------------|
|                     | Financial                                       | Energy | Technology |
| Russell 1000® Value | 26.8                                            | 14.7   | 8.9        |
| Russell 1000        | 17.2                                            | 9.7    | 15.4       |
| S&P 500 Value       | 24.0                                            | 14.8   | 8.2        |
| S&P 500             | 15.9                                            | 10.9   | 18.0       |

Sources: Research Affiliates, S&P Dow Jones Indices; Factsheet.

Any use of the above content is subject to all important legal disclosures, disclaimers and terms of use found at [www.researchaffiliates.com](http://www.researchaffiliates.com), which are fully incorporated by reference as if set out herein at length.

It is well understood today that, as “value” signals, ratios such as P/B and price-to-earnings (P/E) are more meaningful for comparing stocks within a more homogeneous industry. Using P/B and P/E to contrast stocks across different industries is substantially less useful. Therefore, the aggressive industry active weights, resulting from favoring stocks from industries with traditionally lower valuation ratios, are sub-optimal approaches for exploiting the value effect.

Second, although traditional value style indices are reconstituted once a year, they cap-weight the stocks that are selected into their value baskets. Consequently, the weights of the stocks in a value index fluctuate with prices. For example, prior to the Global Financial Crisis, many of the large banks became expensive relative to their own historical valuation ratios. The cap weighting scheme meant that these expensive banks also took on very dominant weights within the value index just prior to the banking sector crisis. Similarly, just at the nadir of the crisis, when banks were trading at historically low valuation multiples, they also took on substantially reduced weights in the value index before the financial stock recovery of 2009. **Table 2** displays the weights of major bank stocks before and after the financial crisis.

## Table 2. Pre-Crisis and Pre-Recovery Weights

| Index              | Major Banks (% of Total Index Capitalization) |                   |
|--------------------|-----------------------------------------------|-------------------|
|                    | May 31, 2007                                  | February 27, 2009 |
| Russell 1000 Value | 8.5                                           | 4.6               |
| Russell 1000       | 4.4                                           | 2.1               |

Sources: Research Affiliates; Factset.

Any use of the above content is subject to all important legal disclosures, disclaimers and terms of use found at [www.researchaffiliates.com](http://www.researchaffiliates.com), which are fully incorporated by reference as if set out herein at length.

Today, many academics and industry practitioners interpret the value investment strategy as capturing mean-reversion in stock valuation ratios. Under this interpretation, rebalancing against price is critical for exploiting the long-horizon mean-reversion. Applying cap-weighting to “value” stocks eliminates, substantially, the opportunity to exploit mean-reversion.

By contrast, some of the better constructed Smart Beta value indices offer more modern approaches to capturing the value premium. Let me use the Fundamental Index strategy as an illustration.

Because the Fundamental Index approach weights stocks by size fundamentals such as book value and total cash flows, and since these size-related fundamentals track capitalization over time, the Fundamental Index strategy generally contains industry exposures that are reasonably similar to the broad market index. For example, as of September 30, 2013, the FTSE RAFI® US 1000 Index held 21.0% in the financial sector and 11.7% in energy stocks (compared to 26.8% and 14.7% in the Russell 1000 Value index). Thus, much of the active shares of fundamentals-weighted indices are taken up by intra-industry bets—for instance, overweighting Ford and underweighting Tesla. Industry based active shares only become large if an industry becomes significantly more expensive relative to its own historical valuation level.

**Rebalancing against price is critical for exploiting long-horizon mean reversion.**

The Fundamental Index also rebalances annually against valuation ratio movements, buying what has become cheaper over the course of the year and selling what has become more expensive. The rebalancing is effected over hundreds of stocks across all industries. This, in effect, amplifies the weak time-series price mean-reversion effect through the law of large numbers in the equity cross-section.

The Fundamental Index’s approach to value investing thus results in approximately 200 bps of historical outperformance<sup>3</sup> substantially higher than the traditional value indices’ value-added returns. In the period from December 31, 1978 through September 30, 2013—the longest period for which data are available—the annualized return of the FTSE RAFI U.S. 1000 Index

was more than 200 bps higher than the returns of the S&P 500 Index and the Russell 1000 Index, respectively. By contrast, the S&P 500 Value Index beat the S&P 500 by approximately 3 bps and the Russell 1000 Value Index surpassed the Russell 1000 Index by 49 bps. (**Table 3.**)

## Table 3: Annualized Returns from December 31, 1978 to September 30, 2013

| Index              | Annualized Return % |
|--------------------|---------------------|
| FTSE RAFI US 1000  | 13.91               |
| S&P 500 Value      | 11.76               |
| S&P 500            | 11.73               |
| Russell 1000 Value | 12.29               |
| Russell 1000       | 11.80               |

Sources: Research Affiliates; Factset.

The index industry attempted to harvest the different equity risk premia long before the arrival of smart beta indices. However, the traditional approaches are now understood to be relatively ineffective. The style based investing approach characterized by traditional value and growth indices neither captures the value/rebalancing premium effectively in individual securities nor applies the methodology sufficiently broadly as to fully exploit the value/rebalancing premium across all stocks and all industries. Of course, within the Smart Beta index universe, the various index approaches also represent different degree of effectiveness in harvesting the different premia. While many of them do in fact outperform the cap-weighted market index by harvesting other sources of equity premia, the efficacy, as measured by transactions cost, investability and representation of the underlying economic exposure can vary wildly. Investors do, indeed, need to be smart when it comes to analyzing Smart Betas, even if the advantages of moving away from traditional bulk beta seem obvious.<sup>4</sup>

## Endnotes

1. Tzee-Man Chow, Jason Hsu, Vitali Kalesnik and Bryce Little. 2011. "A Survey of Alternative Equity Index Strategies," *Financial Analysts Journal*, vol. 67, no. 5 (September/October):37-57.
2. Robert D. Arnott, Jason Hsu, Vitali Kalesnik, and Phil Tindall. 2013. "The Surprising Alpha from Malkiel's Monkey and Upside-Down Strategies," *Journal of Portfolio Management*, vol. 39 no. 4 (Summer):91-105.
3. Rob Arnott, Jason Hsu, and Philip Moore. 2005. "Fundamental Indexation," *Financial Analysts Journal*, 61/2 (March/April):83-99.
4. Towers Watson is credited with coining the phrase Smart Beta to describe non-price weighted indices and Bulk Beta for describing traditional cap-weighted indices. Towers Watson used the word "Smart" to suggest that investors need to be smart to make the right smart beta selection.

The material contained in this document is for informational purposes only. It is not intended as an offer or a solicitation for the purchase and/or sale of any security, derivative, commodity, or financial instrument, nor is it advice or a recommendation to enter into any transaction. Research results relate only to a hypothetical model of past performance (i.e., a simulation) and not to actual results or historical data of any asset management product. Hypothetical investor accounts depicted are not representative of actual client accounts. No allowance has been made for trading costs or management fees, which would reduce investment performance. Actual investment results will differ. Simulated data may have under- or over- compensated for the impact, if any, of certain market factors. Simulated returns may not reflect the impact that material economic and market factors might have had on the advisor's decision-making if the advisor were actually managing clients' money. Simulated data is subject to the fact that it is designed with the benefit of hindsight. Simulated returns carry the risk that actual performance is not as depicted due to inaccurate predictive modeling. Simulated returns cannot predict how an investment strategy will perform in the future. Simulated returns should not be considered indicative of the skill of the advisor. Investors may experience loss of all or some of their investment. Index returns represent back tested performance based on rules used in the creation of the index, are not a guarantee of future performance, and are not indicative of any specific investment. Indexes are not managed investment products and cannot be invested in directly. This material is based on information that is considered to be reliable, but Research Affiliates, LLC ("RA") and its related entities (collectively "Research Affiliates") make this information available on an "as is" basis without a duty to update, make warranties, express or implied, regarding the accuracy of the information contained herein. Research Affiliates is not responsible for any errors or omissions or for results obtained from the use of this information.

Nothing contained in this material is intended to constitute legal, tax, securities, financial or investment advice, nor an opinion regarding the appropriateness of any investment. The information contained in this material should not be acted upon without obtaining advice from a registered professional. RA is an investment adviser registered under the Investment Advisers Act of 1940 with the U.S. Securities and Exchange Commission (SEC). Our registration as an investment adviser does not imply a certain level of skill or training. RA is not a broker-dealer and does not effect transactions in securities.

Investors should be aware of the risks associated with data sources and quantitative processes used to create the content contained herein or the investment management process. Errors may exist in data acquired from third party vendors, the construction or coding of indices or model portfolios, and the construction of the spreadsheets, results or information provided. Research Affiliates takes reasonable steps to eliminate or mitigate errors and to identify data and process errors, so as to minimize the potential impact of such errors; however, Research Affiliates cannot guarantee that such errors will not occur. Use of this material is conditioned upon, and evidence of, the user's full release of Research Affiliates from any liability or responsibility for any damages that may result from any errors herein.

The trademarks Fundamental Index™, RAFI™, Research Affiliates Equity™, RAE™, and the Research Affiliates™ trademark and corporate name and all related logos are the exclusive intellectual property of RA and in some cases are registered trademarks in the U.S. and other countries. Various features of the Fundamental Index methodology, including an accounting data-based non-capitalization data processing system and method for creating and weighting an index of securities, are protected by various patents of RA. (See applicable US Patents, Patent Publications and protected trademarks located at <https://www.researchaffiliates.com/legal/disclosures#patent-trademarks-and-copyrights>, which are fully incorporated herein.) Any use of these trademarks, logos, or patented methodologies without the prior written permission of RA is expressly prohibited. RA reserves the right to take any and all necessary action to preserve all of its rights, title, and interest in and to these marks and patents.

The views and opinions expressed are those of the author and not necessarily those of RA. The opinions are subject to change without notice.

©2024 Research Affiliates, LLC. All rights reserved. Duplication or dissemination prohibited without prior written permission.

## AMERICAS

**Research Affiliates, LLC**  
660 Newport Center Drive, Suite 300  
Newport Beach, California 92660  
USA

+1.949.325.8700  
[info@researchaffiliates.com](mailto:info@researchaffiliates.com)

## EUROPE

**Research Affiliates Global Advisors (Europe) Ltd**  
78-79 Pall Mall  
London SW1Y 5ES  
United Kingdom

+44 (0) 20 3929 9882  
[uk@researchaffiliates.com](mailto:uk@researchaffiliates.com)