

Fundamental Index - Do Style and Regime Characteristics solve the Active vs. Passive Conundrum?

By

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Introduction

In its passive and systematically fundamental approach to portfolio construction, the Fundamental Index concept recently introduced by Research Affiliates LLC (RALLC) presents a groundbreaking methodology to broad equity market asset management.

By applying the Fundamental Index methodology, clients can attain a value-added comparable to that of the best-of-breed active managers, at a risk (as measured by volatility of returns) that mimics that of the broad market and at a fee schedule that "near mimics" that of passive mandates. Also, in being highly correlated with market capitalisation indices, RAFI strategies will always participate in broad market movements while maintaining high liquidity and low transaction costs. As such, the nature of the Fundamental Index could be argued to be suitable for both passive/enhanced and active mandates, depending on clients' definition of these.

Philosophy behind Fundamental Index - active or passive strategy?

Is there a coherent logic here as to why Fundamental Indexation exhibits characteristics from both? Can anything be deduced from the philosophy and process behind the Fundamental Index?

The core thinking behind Fundamental Indexation is that while traditional Market Capitalisation Weighted Indices (MCWI) have obvious strengths, they can in most cases be much improved upon without sacrificing these. More specifically, while traditional MCWI's are practical with regards to capacity, low turnover and fees, they suffer from an inherent "return-drag" that systematically causes a deterioration in results, year after year. This "return-drag" originates from the fact that MCWI's will invariably overweight stocks that are overvalued and underweight stocks that are undervalued. Since such market mispricing (aka "noise") exists at all times, and as markets strive to correct this, the negative effect on an index (or market) portfolio coming from the overvalued mispricings will far outweigh (because of sheer market capitalisation size) any positive effect from the undervalued mispricings being uncovered.

The net-effect of this so called "return-drag" causes considerable deterioration to MCWI's returns over time. Interestingly, "return-drag" also applies (in aggregate) to sector and country levels, so that MCWI's will invariably overweight sectors/countries which are overvalued and underweight sectors/countries that are undervalued. This will be expanded on below.

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The philosophy behind the Fundamental Index is thus to avoid the shortcomings presented by MCWI's when it comes to portfolio construction. In short, this is achieved by setting the measure of size to be independent of valuation, something that MCWI's do not do when basing (relative portfolio) size on (relative) market capitalisation. In practice, this means that Fundamental Indexation also takes a novel approach to the investment process, by basing the measure of company size on its fundamentals. Such measures are not dependent on market valuation and thus the ambition of decoupling size from valuation is also accomplished. By systematically weighting market constituents according to this pre-defined formulaic definitions/use of company accounting data (relative fundamental size yielding relative portfolio weight), the problem with "return-drag" is measurably reduced as weights are now determined by variables that do not depend on the vagaries of market valuation.

As such, the methodology can for most purposes be considered a passive strategy, or at least be considered to carry the advantages of passive management in providing full market coverage at low turnover and low costs.

Attribution of excess returns - occurrence of style or regime tilts?

So if the characteristics of the Fundamental Index make it suitable for both passive and active strategies, and the philosophy and process is more aligned with traditional passive management, what about the characteristics of the excess returns? Can an analysis of return attribution shed more light on Fundamental Indexation, and in so doing, help expose any such style or regime tilts that would make it more closely resemble an active strategy?

The short answer to this is that while an attribution analysis for the Fundamental Index does indeed shed more light on the methodology, the resulting conclusions if anything only show the way in which its uniquely dynamic investment style captures relative value-added in a uniquely dynamic way.

The way in which Fundamental Indexation is dynamic is that the methodology generates relative value-added largely independently of stock market or economic regimes (please refer to Table 1 for details). It also generates relative value-added largely independently of systematic style, be it Large/Small cap, Value/Growth or specific sector tilts. This latter point, that Fundamental Indexation is largely "style-neutral" deserves a special mention, and as will be argued, the fact that this holds also helps to explain the former point, namely that Fundamental Indexation™ is also largely "regime-neutral".

Traditional attribution analysis (like Brinson) here serves a useful exercise. A Brinson attribution analysis illustrates how excess returns can be attributed to a number of "style factors" such as Small/Large, Value/Growth or Sector/Country. The portion of value-added that cannot be attributed to these factors is attributed to Stock Selection as a residual. Please see Exhibit 1 and 2 for the results of Brinson attribution analysis for RAFI 1000 US and RAFI Global value-added respectively.

For Fundamental Index mandates in general, the findings here are significant since the majority of excess return is attributed to Stock Selection. To a much lesser degree style factors do have some explanatory power. More importantly, whereas the Stock Selection portions remain relatively stable over time, irrespective of time period tested, style factors will give different results depending on time period tested. This means that while there may be a relatively large Value tilt in the RAFI portfolio during one period tested, this may well have disappeared in a subsequent period. Similarly, while there may be a Small Cap tilt in the RAFI portfolio during one period tested, this may even have become a minor Large Cap tilt in a subsequent period (possible in Large, Small and/or Mid Cap rallies when the market capitalisations of these become relatively high). This dynamic behaviour of the Fundamental Indexation™ investment style is very much at the core of the methodology. Fortunately it has an intuitive explanation.

Seen as a purely passive strategy, RAFI systematically and accordingly allocates funds to the fundamentally ranked (and weighted) universe in question. There is at no point any conscious active strategy with regards to traditional factor tilts. The methodology does not even consider traditional attribution factors nor take any active bets with regards to these at any time. How RAFI allocates funds to these factors (Large/Small, Value/Growth, Sectors/Countries), and thereby attaining factor tilts vs MCWI, is therefore just a residual consequence of the RAFI weighting methodology. In fact, it is just a residual consequence of the difference between market capitalisation weights of a MCWI benchmark and the way the Fundamental Index allocates the funds to that same market. At any point in time, the result may of course show that there indeed exists Small/Large Cap tilts with regards to these style factors (for a period under consideration), but in most cases for RAFI, these will largely cancel out over time as is shown by long term attribution analysis shown here below.

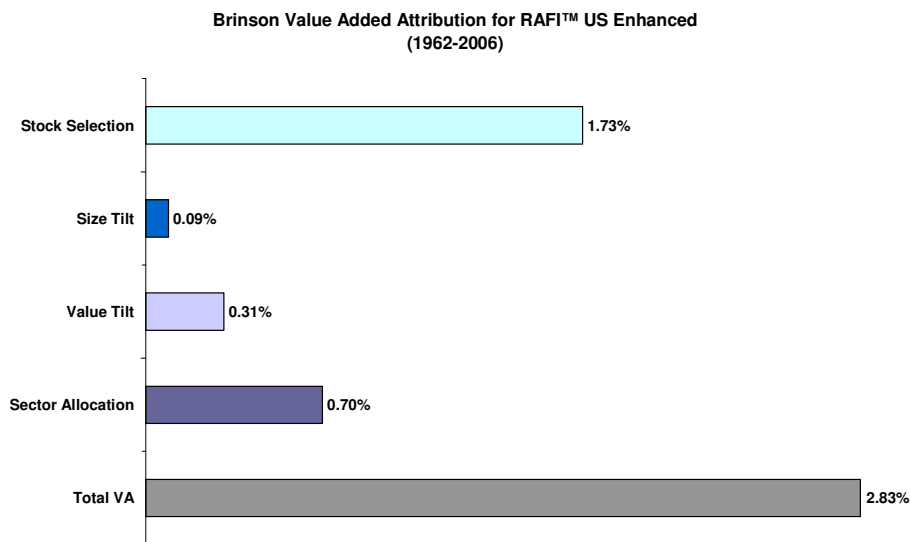


Exhibit 1. Results of Brinson Attribution Analysis for RAFI US Enhanced Value Added, 1962-2006

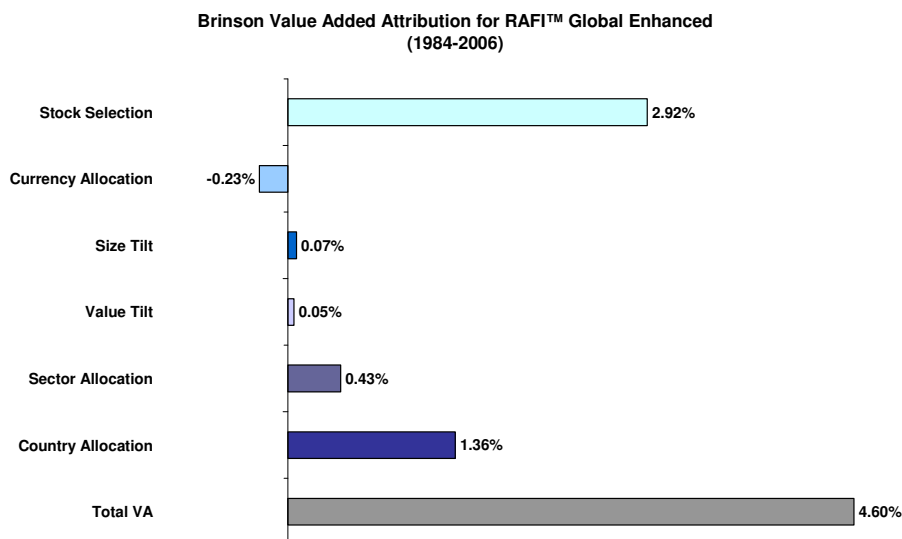


Exhibit 2. Results of Brinson Attribution Analysis for RAFI Global Enhanced Value Added, 1984-2006

However, some small systematic tilts are evident. A small systematic Value tilt is for example seen in many Fundamental Index strategies over time, for example in RAFI-US shown below. This Value tilt can actually be quite large (depending on time period or market), but at other times it can all but disappear. In fact, for some markets RAFI will occasionally even manage to build up a small Growth tilt, but only on rare occasions. On average though, a mild Value tilt is not unusual for many Fundamental Index strategies over time. However with regards to the Size factor, Fundamental Indexing™ shows no meaningful systematic style over time. The fact that a positive systematic Sector and Country tilt appears to exist will be commented on further down since they are closely connected to the Stock Selection tilt. Noteworthy here is the fact that such tilts will not measurably pertain to any specific sectors or countries on a systematic basis, and as such the tilts can be argued to be neutral in character.

A further important point to make here is that the result of any attribution analysis in order to detect existence of style is very dependent on the choice of benchmark and universe used. Naturally, the benchmark chosen should always be suitable, but because Fundamental Indexation is a "broad market strategy", style analysis can either use an "All-Share" version of the MCWI as a benchmark, in which case a RAFI-All Share would be used. Or a more practical and liquid "representative benchmark" such as "Top-100" version of the MCWI may be used as benchmark, in which case a comparable RAFI-universe would be used. It is the latter which is relevant and discussed here, since the RAFI-Index universes have been constructed so as to be practical in comparison to relevant MCWI benchmarks that are widely used by the investment community.

The distinction is interesting since it helps explain why, for example, there is typically little or no meaningful Small Cap tilt in the analysis performed. If a similar analysis were conducted on an All-Share basis it is probable that there would be a more visible Small Cap tilt to Fundamental Indexation™ strategies in general. With regards to the Value tilt however, the outcome is less obvious. In fact it is conceivable that the Value tilt of a Fundamental Index would actually be smaller here since (ceterus paribus from RAFI perspective) the growth portion of the MCWI universe will be diluted as the universe is expanded to cover the entire All-Share Index where a number of relatively large value companies would be found. Even without a ceterus paribus condition, this would hold since also the RAFI-All Share portfolio's Value portion and tilt would be diluted as the universe is expanded to include the Mid-(RAFI) sized Growth stocks that in MSCI terms are Large caps. Complex as this is, as RAFI-indices are constructed so as to cover suitable (condensed) universes, the style-neutrality discussed above holds true in general terms.

What remains therefore is the predominant occurrence of value-added stemming from Stock Selection. The reason for this is also very much at the core of the Fundamental Indexation™ methodology. Fortunately it has an intuitive explanation, and this can be found in the concept of "return-drag".

As the occurrence of mispricing or "noise" exists across the market universe at all times, largely independently of Sector or Size (although mispricing can of course at times be particularly severe depending on e.g. sector), the occurrence of "return-drag" will over time also be largely independent of Sector and/or Size. As Fundamental Indexation™ reduces the negative effects of "return-drag" by decoupling a companies' measure of Size from that of valuation, this avoidance of "return-drag" (generating relative value-added) will also over time be largely independent of Sector and/or Size. As such, the majority of value-added will show up as pertaining to Stock Selection in a Brinson style analysis. From a modelling point of view, since "return-drag" applies to Sector and Country levels as well, a small portion of the "return-drag" will be attributed to sectors/countries (with the majority ending up as stock selection). Since "noise" exists independently of specific sectors and specific countries, this tilt (as commented on earlier) will however not measurably pertain to specific sectors or countries, but explain the occurrence of a positive sector and country tilt in an attribution analysis of this kind. This is well supported by research findings at RALLC.

Finally on this subject, the fact that the occurrence of mispricing or "noise" exists across the market universe at all times, also means that it is largely independent of stock market or economic regime trends (although mispricing can of course be particularly severe during certain regimes such as recessions). Following the same arguments as above, as Fundamental Indexation™ reduces the negative effects of "return-drag" by decoupling the measure of size from that of valuation, the avoidance of "return-drag" (generating relative value-added) will also over time be largely independent of regimes. This is also well supported by research findings at RALLC and is shown in table below. A caveat is here that while RAFI indeed generates measurable value-added in all regimes, it does particularly well during difficult times - recessions and bear markets. This may well be connected to the fact that mispricings tends to be pronounced in such environments.

1962-2005	Bull Markets	Bear Markets	Expansions	Recessions
RAFI™ Index 1000	21.4%	-17.0%	13.2%	6.8%
S&P 500 Index	20.7%	-22.2%	11.4%	3.0%
3 Month T-bill	5.4%	6.8%	5.3%	8.2%
RAFI™ 1000 Volatility	13.5%	16.1%	13.6%	19.9%
S&P 500 Volatility	13.5%	15.8%	13.9%	20.1%
RAFI™ 1000 Sharpe Ratio	1.2	-1.5	0.6	-0.1
S&P 500 Sharpe Ratio	1.1	-1.8	0.4	-0.3
RAFI™ Alpha over S&P 500	0.7%	5.2%	1.8%	3.8%
RAFI™ Tracking Error vs S&P 500	3.5%	4.9%	8.1%	5.2%
RAFI™ Information Ratio	0.2	1.1	0.2	0.7

Table 1. RAFI™ 1000 Performance in Different Market Cycles, 1962-2005.

As a quality check, it also follows logically that if RAFI™ is regime-neutral over time (even if adding more value during bear markets than bull markets), it should not have any significant systematic style factor tilt, such as a Small Cap or Value tilt over time.

Conclusion

Fundamental Indexation is difficult to place into those traditional categories of active or passive management. Whereas the predominant occurrence of stock selection "alpha" does hint at active management (since excess returns must be "alpha"), perhaps no active strategy should so systematically add excess returns in the long run, and reap these gains principally from the residual measure of Stock Selection. In fact, if the lack of any style or regime tilt does carry any message, it is to hint at the shortcomings in using traditional attribution analysis for Fundamental Indexation. Explaining this residual thus seems to require a different approach than that presented by traditional attribution analysis.

Perhaps the best way to consider this is to take a step back and more closely look at the definition and meaning of beta. Could it be that Fundamental Indexation represents a smarter form of beta? Could it be that there is an overlap between alpha and beta, and that this overlap is represented by "return-drag"? Or put differently, could it be that there is an overlap between alpha and RAFI-beta, where the overlap is represented by "return-drag", and the non-overlapping part of the RAFI-beta is CAPM-beta?