

Fundamental Indexation: Superior Returns or Marketing Hype?

A new concept dubbed “fundamental indexation” was recently launched in the investment world. The idea is being billed as a revolutionary new paradigm that outperforms more traditional approaches. However, the word “fundamental” can have both positive and negative connotations. Clearly, “getting back to fundamentals” implies inherent truths from which we cannot escape, while “fundamentalism” conjures up images of radical religious zealots. We explore fundamental indexation from the perspective of fundamental investment rules and attempt to find out if this is truly a revolutionary approach or whether the sponsors are just zealots pitching their new products.

The Traditional Approach: Capitalization Weighting

Currently, a single stock’s weighting in most market indices, such as the S&P 500, Wilshire 5000, Russell 2000 and practically all the others has been determined by its market capitalization. Market capitalization is simply the total value of the company using the current stock price, in other words, the number of shares outstanding multiplied by the current share price. For example, Exxon Mobil, currently the most valuable company in the world, has over 6.05 billion shares outstanding and trades at \$63.15 per share (as of this writing). This gives the company a market capitalization of \$382.0 billion. Exxon Mobil will therefore have a weighting in the S&P 500 roughly 10 times as large as Exelon Corp., which has a market capitalization of \$38.1 billion. Market capitalization weighting has been the standard weighting scheme because of its simplicity and the belief that it most closely represents the way capital is allocated in the overall market.

Fundamental Indexation

The new paradigm of fundamentally weighted indices involves using factors such as earnings, sales, cash flow, dividends, or other “fundamental” factors to weight the stocks that comprise the index. Robert Arnott first proposed this idea, and Jeremy Siegel recently put forth a variation on the theme. This philosophy has garnered significant attention for two reasons: 1. because these two noted academics are essentially household names in the world of investing; and 2. because the modeled historical returns of fundamentally-weighted indices vastly outperform the actual returns of more traditional capitalization-weighted indices.

The basic thesis behind fundamental indexing is that traditional capitalization-weighted indexes overweight overvalued stocks. In other words, if you have two stocks both with an intrinsic value of \$100, but one trades at \$105 and the other at \$95, the overvalued stock will have a larger weight in the capitalization-weighted index. This, of course, is the reverse of what you want. It makes more sense to buy something below its intrinsic value than to overpay. Fundamental weighting, it is argued, mitigates this problem by randomizing the valuation errors so that you are overweighting some overvalued stocks and some undervalued stocks (hopefully canceling each other out), rather than primarily overweighting overvalued stocks. This, according to Arnott and Siegel, results in superior long-term performance.

Robert Arnott’s study showed that using fundamental weighting factors boosted returns by 1.97% annually, on average, versus the S&P 500 between 1962-2004. Jeremy Siegel sites an annual performance advantage of 1.23% from a dividend-weighted index over a capitalization-weighted index from 1964-2005. In a world where annual outperformance of just half a percent would propel you to the top 15% of all managers, annual excess returns of 1.23% or 1.97% using a passive strategy are downright eye popping.

New exchange-traded funds have been launched to track the new fundamentally weighted indices, so the argument is not just academic any more. Investors can actually take advantage of this new philosophy. It seems like a no-brainer then to incorporate these funds into the portfolios Alesco manages to capitalize on the higher returns available. However, we decided to test the fundamental weighting hypothesis ourselves to see if we could determine the true source of the outperformance. What we found was less than compelling.

Risk Factors Drive Investment Returns

It is true that these new funds have provided strong returns, but they have not delivered returns in excess of what they should deliver when considering their risk exposure. This is where it gets a bit complicated, since risk is not defined as volatility of returns as it usually is. In 1992 finance professors Eugene Fama and Ken French



wrote a paper describing the sources of stock market returns. What they found was that the vast majority of the returns from a portfolio of stocks can be explained by macro “risk factors.” These risk factors include beta, size, and style.

Beta risk is a measure of a portfolio’s exposure to the overall market. Beta is considered “systematic” risk in that it is risk you must take on just to participate in the stock market system. If you get more than 25 or 30 stocks in a portfolio (the average large-cap mutual fund today has 228 stocks) spread across industry sectors, your beta is likely very close to 1, meaning you have equivalent risk to that of the overall market. This risk factor is not a good differentiator since most diversified portfolios have roughly the same market risk exposure.

Size risk relates to the market capitalization of the stocks in the portfolio. Again, think of Exxon Mobil and Exelon Corp. If both companies want to borrow \$100 million from a bank, Exxon Mobil will likely pay a lower interest rate than Exelon, since it poses a lower default risk to the bank. After all, \$100 million is fairly insignificant to a \$380 billion company, but could be more difficult to repay for a smaller company. Investors should think of themselves as the bank loan officer, requiring a higher return on investment from smaller, riskier companies than from larger companies.

Finally, style relates to whether a stock is characterized as “growth” or “value”. While the definitions of growth and value are somewhat subjective, financial health and stock price performance are the primary determinants. Wal-Mart and K-Mart (before it merged with Sears) offer a good example. Both companies were in the same business, but they offered investors a very different risk/return profile. Wal-Mart’s steady sales and earnings growth made for a fairly smooth ride for its shareholders. K-Mart, on the other hand, recently went through bankruptcy, showing the extent of its financial distress. It’s stock plummeted, but then recovered strongly as the company emerged from bankruptcy, providing a nice return for those willing to bear the high risk. Again, think of yourself as the bank loan officer. A bankrupt company, if it can borrow at all, will have to pay a much higher interest rate for its loan than a healthy company like Wal-Mart. As an investor, you should also demand a higher return from financially distressed value companies.

Fundamental vs. Traditional Indexing: Performance Analysis

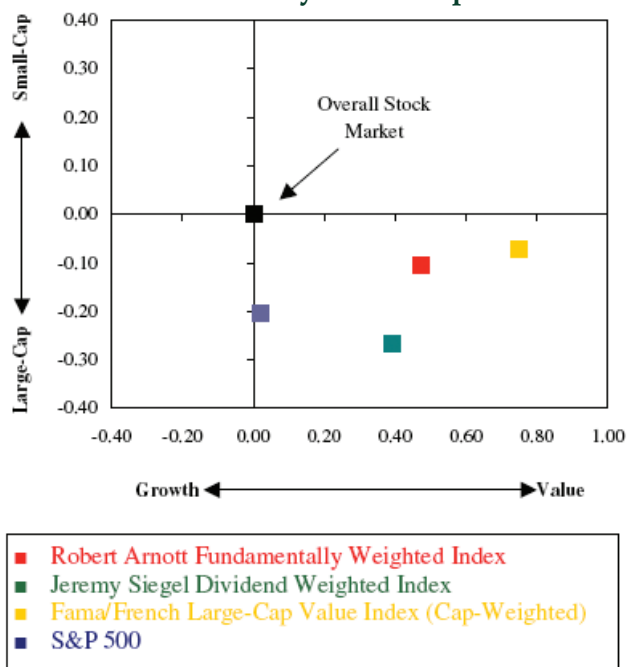
This is a long lead in to the fact that fundamentally weighted indices have outperformed traditional capitalization-weighted indices by taking on more style risk with greater value exposure, and in some cases additional size risk. The chart on the next page shows the exposure to the size and style risk factors for several indices. The overall market plots neutral since it includes stocks of all sizes and with both value and growth characteristics. Anything plotting below the horizontal axis is a large-cap portfolio, and points to the right of the vertical axis are more value oriented. The

numbers along both axes reflect regression coefficients, which in simple terms means they show the magnitude of the risk exposure.

Clearly the fundamentally weighted indices have greater value exposure than the S&P 500, a capitalization-weighted benchmark. Since greater value exposure implies greater risk, it is no surprise that the fundamental indices have provided stronger returns. The yellow point to the far right in the chart below represents the Fama/French Large-Cap Value Index. This is a capitalization-weighted index that has intentionally taken on a lot of value exposure, and has consequently outperformed every other benchmark studied here over the time periods used in the Arnott and Siegel studies. That doesn’t mean that everyone should run out and buy products tracking the Fama/French Large-Cap Value Index. It simply means that that index provides a lot of value exposure and may be a good choice for those seeking a value tilt in their portfolios. The index’s authors don’t claim superiority in index construction as an explanation for its strong performance, as Arnott and Siegel do.

The real question relevant to this claim is: have the indices provided value in excess of the risk they have taken on? The answer, unfortunately, is no. Using multiple regression analysis, we can construct a model that will tell us what the expected return of a portfolio is, given its exposure to the beta, size, and style risk factors. This model concludes there is no value added to the investment process from using fundamental factor weights.

Size and Style Risk Exposure



Getting Back to Fundamentals

Ultimately, this exercise shows us what is most important in the investment process: asset allocation, diversification, costs, and tax efficiency for those paying taxes. There have been many studies

conducted over the years on the benefits of asset allocation, and our analysis above confirms how important the concept is. Just by changing the asset allocation in the stock component of the portfolio to take on more style risk, the returns (and risk) of the portfolio can be significantly altered. Setting an appropriate mix of stocks, bonds, real estate, cash, and other asset classes is paramount in the investment process.

However, the allocation within each asset class is also important. Risk and return are related in the long run, but not all risks offer rewards in the same way. For example, buying a single stock in your portfolio, say Enron in 1999, poses very high risk, but will not necessarily result in high returns. In this case it would have wiped you out. Alternatively, exposure to compensated risks such as beta, size, and style have added value historically for those willing to invest for the long term. At Alesco, we try to eliminate uncompensated risks and maximize exposure to compensated risk factors, such as beta, size, and style, in a prudent, diversified manner.

Costs are also an important component of portfolio construction. As John Bogle, the founder of the Vanguard Group, often quips: "You get what you don't pay for." In other words, any fee for mutual funds, trading commissions, bid/ask spreads, etc. come directly out of your returns. With respect to performance, the fundamental indices described above turned out to be neutral with traditional capitalization-weighted indices. Before fees they neither added nor destroyed value versus their expected returns. However, because it is more difficult to create and maintain fundamentally weighted index funds (they need to be rebalanced more often than capitalization-weighted index funds), the management fees are generally higher than the capitalization-weighted products we are currently using, which should result in lower long-run net returns.

Taxes, for those investing in taxable accounts, also matter. Jeremy Siegel's dividend weighted products are expected to throw off 3-5 times as much income as traditional index funds. That income will be taxed in the year it is paid. However, if more of the total return of an investment comes in the form of capital gains, rather than dividends, it can generally be deferred (using exchange traded funds) and may continue to compound in the account. A fund with heavy dividend income may therefore not be the best choice for a taxable investor. Moreover, while the majority of the income is expected to be taxed at the more favorable "qualified dividend" rate of 15%, some of it will likely also fall into the higher "ordinary income" category, further hurting after-tax returns.

Traditional Approach Still the Best

It is encouraging that superior academics are focusing on broad-based portfolio construction issues. That augurs well for future improvements to the investment process. However, new research often presents a compelling theory, but falls short in its real world implementation. In the case of fundamental indexation, the theory appears equal, but not superior, to what already exists. Additionally, the real world implementation (fees, expenses, and taxes) will likely weigh on the theoretical results, leading to products that fail to live up to expectations. Arnott and Siegel have spent a lot of time heralding the supposed return benefits of their respective approaches, but very little time explaining the source of these benefits or discussing the inherent systematic frictions.

Alesco will continue to monitor new developments that may improve the portfolios we manage for our clients. However, with regard to fundamental indexation, we believe we can build portfolios with similar risk and return characteristics, lower expense profiles, and greater tax efficiency using the capitalization weighted products we currently employ.

The "fundamental" rules of investing cannot be changed regardless of the methodology employed. Ultimately the choice of active management, fundamental indexing, traditional indexing, quantitative analysis, or any other methodology is subordinate to creating a thoughtful asset allocation plan, broadly diversifying your portfolio, holding for the long-term, and keeping costs and taxes to minimum levels.



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