TOPIC: Fundamental Indexing

"Fundamental Indexing" is a hot topic in the investment world. A variety of mutual fund companies, including PIMCO, Schwab and Wisdom Tree, offer mutual funds and exchange traded funds (ETFs) designed to match different fundamental indices. But what is a fundamental index? Is it a new, revolutionary approach, as claimed by many, or is it old news in a new wrapping?

To understand fundamental indices, first we need to review the traditional approaches to index construction. The most common index methodology used by investors is called a "market capitalization-weighted index." In this type of index, the relative weight (or influence) of a company in the index is determined by the market value of its outstanding securities or, in other words, the market value of the company. This is called its market capitalization. For example, if Company A has a market capitalization of $100 million and Company B has a market capitalization of $50 million, Company A would have twice as much weight in the index as Company B. A classic example of a market capitalization index is the Standard & Poor's 500 Stock Index.

There are other forms of traditional indices. One is a price-weighted index. In this type of index, a company's weight is determined by its share price. For example, a company selling for $100 per share would have twice the weight in the index as a company selling for $50 per share. The classic example of a price-weighted index is the Dow Jones Industrial Average (although it has been converted to a "scaled" price index.)

Another form of traditional index is an equal-weighted index. As its name applies, in this type of index, all companies are given equal weight.

Market capitalization indices gained favor because they have some big advantages. First, they tend to have less turnover than other types of indices, and less turnover means lower costs. This happens because a company's weight in the index automatically adjusts as the market value of its outstanding securities changes. In an equal-weighted index, if one company's market value rises faster than average, the allocation to that company would have to be reduced to return to an equal weighting, thereby necessitating transactions. Also, market capitalization-weighted indices tend

to be concentrated in the largest most liquid companies with the lowest transaction costs. Therefore, investing in them tends to relatively easy.

In addition, there was a theoretical backing for market capitalization indices, which rose out of what is called "the capital asset pricing model." This famous theoretical work, for which William Sharpe was awarded the Nobel Prize in economics, argued that an investment's return was determined by the amount of its market risk (which was risk that could not be diversified away), and that market risk could be measured through a statistical measure called beta. This unitary notion of risk led to the further conclusion that the most efficient portfolio (in terms of return per unit of risk) was a market portfolio, with each component of the market weighted by its market capitalization.

However, over the years, a number of questions arose regarding market capitalization-weighted indices. First, investors began to characterize securities not in terms of a single overall market, but rather in terms of multiple markets with distinct risk and return characteristics. For example, instead of talking about the U.S. stock market, they talked about the large company stock market, the small company stock market, the large and small company value markets, the foreign stock market, and so on. Next, they discovered that when you constructed portfolios based upon allocations to multiple markets (as opposed to individual securities within a market), the best-performing portfolios were not necessarily constructed by making allocations to the different markets based upon their relative overall market capitalizations. In other words, when dealing at the level of markets, market capitalization allocation strategies did not produce optimal results. This violated Sharpe's market portfolio hypothesis.

Although this raised significant questions as to whether Sharpe was right, it did not explain why he might have been wrong. That was left to the development of the three-factor model by Eugene Fama and Kenneth French. They observed that small company stocks and value stocks produced higher returns than other types of stocks even after adjusting for their market risk (beta). They then argued that returns are produced not by a single type of risk, such as Sharpe's market risk (beta), but rather by at least three different types of risk (risk factors): one being the inherent risk in the market (Sharpe's market risk), one being related to a company's size (size risk), and one being related to a company's value characteristics (value risk).

A consequence of a multi-factor risk model (as opposed to a unitary risk model) is that, once there is more than one element of risk, the most efficient portfolio is not

necessarily a market capitalization-weighted portfolio. Higher returns may be achieved by overweighting small company and value stocks. By targeting different weights for different risk factors, investors can construct portfolios (or indices) that match a wide variety of different return goals and risk tolerances. No particular allocation is better than another. It depends on the importance investors place on the different types of risk (risk factors) and levels of return.

Now we come to fundamental indexing. It arose from a different approach. Fundamental indexing rests on the assumption that there is mispricing of securities in the marketplace, which means that the market value of a security does not always reflect the security's true or intrinsic value. To the extent this is true, a market capitalization index overweights companies that are overpriced relative to their true or intrinsic value, and underweights companies that are underpriced relative to their true or intrinsic value.

Based upon this idea, fundamental indexers began to construct indices that were not based upon market capitalizations, but rather were based upon other fundamental factors, such as book values, cash flows, sales and dividends. When they back-tested the historical performance of such indices, they discovered that such fundamental indices significantly outperformed traditional market capitalization indices.

This is not the end of the story, however. It turns out that when you use the fundamental index methodologies to create an index, the net effect is to (1) lower the average size of the companies in the index relative to a market capitalization methodology, and (2) increase the value tilt of the companies in the index relative to a market capitalization methodology. In other words, is the historical outperformance of fundamental indices due to a better methodology for constructing indices (i.e., using book values, cash flow, sales, dividends) or is it due to the fact that such methodologies just happen to result in greater weights to small company and value stocks compared to market capitalization indices? If the answer is that superior performance is due to their greater weight to small company and value stocks, then fundamental indices appear to be a crude and imprecise way of setting such weights.

Whether the outperformance of fundamental indices is due to their small company and value tilts or is due to their methodology of index construction is still an open question that is being hotly debated. Based on the data we've seen to date, most of their outperformance appears to be explained by their small company and value weights.

Where does BOS stand in this debate? There are really two issues. First, we do not believe that portfolios should be constructed based solely (or largely) on market capitalization weightings, and in this regard we agree with fundamental indexers. Nor do we construct portfolios based upon market capitalization weightings (although we use some index funds that track market capitalization indices). In other words, use of non-capitalization- weighted index methodologies is old news as far as we are concerned.

The second issue is which portfolio construction methodologies should be used instead of market capitalization methodologies? Here we differ from fundamental indexers. We believe the best allocation methodologies are those based upon multiple risk factors, such as market, size and value risks. We believe this for the simple reason that this approach is best supported by the data. We are wary of the approach taken by fundamental indexers given that the historical outperformance of fundamental indices appears to be better explained by other theories (at least so far).

Does this mean we reject fundamental indexing? No. First, we fully recognize that this is still an open and serious debate, and that ultimately the data may be shown to be more supportive of fundamental indexing than the early indications. We are not interested in winning any arguments. We are only interested in doing what is best for our clients.

Second, even if we are correct, we recognize that there may be good reasons to use different fundamental index funds in different client portfolios, depending upon the unique characteristics of the client's goals and needs.

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