# A new benchmark for high-performance investment

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## Recent studies on U.S. equity portfolios indicate that superior returns can be obtained by basing index composition on fundamental values.

Equity indices play an important role in passive and active portfolio management. In the vast majority of cases, the assets in these benchmarks are weighted by market capitalization.

There have been many attempts to improve on the use of simple cap-weighted indices, with most following one of two strategies.

The first would restrict stock selection to focus investments by groups (e.g., high-tech), region (e.g., emerging markets) or size of company (e.g., small-cap).

A second strategy is to weigh assets using a different measure than market cap. One such method is fundamental indexation, where portfolio weight is determined using price-insensitive measures of value, such as dividends or cash flow.

Recent research on U.S. equity markets has demonstrated that indices weighted by price-insensitive fundamentals - such as book value, income, revenue, sales, dividends and employment - outperformed cap-weighted indices significantly between the period of 1962 and 2004.

This presents an opportunity, but also raises an important question, which IESE Prof. Javier Estrada explores in his paper, "Fundamental Indexation and International Diversification": How can investors apply this approach using an internationally diversified portfolio?

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## Changing investment landscape

The logic behind passive index investment is to buy and hold the market portfolio, because it is believed to provide the optimal combination of risk and return, and represents the most efficient investment strategy. This approach, known as the "efficient market hypothesis," is one of the cornerstones of modern financial theory. Any attempts to outperform the market - through more frequent position trading, for instance - should increase transaction costs without providing sufficient additional gains to justify them.

Over the past two decades, many changes have opened up new investment opportunities. First, a greater variety of index products has been introduced, providing investors with more affordable investment options. Second, academic sentiment has also changed, as some have argued that cap-weighted indices are suboptimal, as they favor overvalued stocks, and hold proportionally less of strong value investment candidates because they are underpriced.

Here, real-world conditions create a discrepancy between value and market price, a phenomenon referred to as the "noisy market hypothesis," i.e., markets are subject to unpredictable, temporary shocks that prevent prices from always reflecting true value.

In theory, indices based on less volatile, price-insensitive weights should deliver better performance than cap-weighted indices (such as the S&P 500), an idea that finds support in historical market performance.

However, irrespective of performance, critics have questioned whether a portfolio following a fundamental index strategy qualifies as a proper benchmark or index, and even whether it represents a passive or active investment strategy.

## Indices in disguise

Since a fundamental index portfolio needs to be periodically rebalanced and does not reflect the returns of the average investor, it is, by definition, neither a proper benchmark nor an index.

More interestingly, because rebalancing is necessary, many prominent voices in the asset management community maintain that, despite wide availability to investors as exchange traded funds (ETF), "fundamental indices" are actually actively managed products masquerading as indices.

The problem here is one of misrepresentation. Or, in the words of Tom Coyne of *The Index*

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*Investor*, these products are "nothing more than a relatively low-cost quantitative active management strategy cleverly placed in an index 'wrapper' to enhance [their] appeal."

## Higher returns but also higher costs

As an investment strategy, fundamental indices have a number of pros and cons.

On the positive side, they have higher returns than cap-weighted indices, in part because they are not subject to a performance "drag" that results from giving greater weight to overpriced stocks.

This added performance benefit is available while retaining many of the attractive aspects of traditional index funds, including broad participation in equity markets, liquidity and a high correlation to equity market performance.

Negatives tend to focus on whether it is accurate to refer to these portfolios as an index product. Semantics and academic debates aside, this is a very real problem for investors, as one could easily assume these funds are safe and inexpensive index products when, in reality, they have higher turnover, transaction costs and taxes, in addition to a different risk profile from index products.

While this can still be an attractive investment option, it is important that investors are able to make informed decisions, knowing all of the pros and cons.

## Evaluating three global equity portfolios

To evaluate fundamental indices in terms of performance, this study observed three global equity portfolios over the period of 1973-2005: a cap-weighted index (CWI); a dividend-weighted fundamental index (DWI), which was rebalanced monthly; and Datastream's world market index (WOR) to serve as a benchmark.

These indices comprised equity positions (country benchmarks) from 16 countries, representing an average market cap of 93.4 percent of global market capitalization throughout the period.

DWI performed best, with the initial $100 investment growing to $6,812 by the end of 2005. By comparison, the CWI grew to $4,007, while WOR grew to $3,637, reflecting mean monthly compound returns of 1.11 percent, 0.97 percent and 0.94 percent respectively.

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DWI was slightly more risky than CWI when measured by monthly standard deviations (4.53 percent versus 4.11 percent). But the story changes if Betas are used, with DWI being less risky (0.94 versus 0.96).

Looking at mean annual compound returns, DWI outperformed CWI by a substantial 1.9 percent margin per year (14.1 percent versus 12.2 percent), indicating a clear advantage for DWI, even on a risk-adjusted basis.

However, a detailed examination of shorter periods demonstrates this advantage was not consistent. In fact, the CWI outperformed DWI in two of the six five-year periods in the sample.

In short, the DWI outperformed the CWI over the whole sample period by a substantial margin. But it did not do so consistently over shorter periods of time.

## Two other schemes tested

Since fundamental indices based on dividends performed so well, it raises the question of whether using other weighting schemes for fundamental indices might perform even better.

Two variations were tested: a portfolio with all positions weighted equally (EWI) and one balanced on the basis of dividend yields (DYWI).

Both of these variations outperformed all of the previously mentioned indices (15.8 percent and 14.6 percent respectively), including the dividend-weighted index, which had annualized gains of 14.1 percent.

The global fundamental strategy considered here, based on price-insensitive, objective and transparent fundamental variable dividends per share, outperforms a global cap-weighted strategy in terms of returns (by 1.9 percent a year) and risk-adjusted returns. But this strategy is outperformed by a simple, low-cost value strategy also in terms of returns (by 1.7 percent a year) and risk-adjusted returns.

This study suggests that if investors are willing to abandon cap-weighted portfolios, there may be better alternatives than fundamental indexation. The simple value strategy considered in this article, based on dividend yields, is not only superior but also easy to implement with index funds and ETFs.

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