

# Turn on a Paradigm?

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As index funds gain an increasing share of the portfolios of mutual funds, institutional equity and bond funds, academics and practitioners are hotly debating how these portfolios should be composed. Capitalization-weighted indexing, until now the dominant approach, has come under fire for overweighting portfolios with (temporarily) overvalued stocks and underweighting them with undervalued ones.

Eugene Fama and Kenneth French have suggested that higher returns can be generated by indexed portfolios of stocks with small capitalizations and low price-to-book-value ratios. Robert Arnott has argued that a better method for indexing is to weight the stocks in the index not by their total capitalization, but rather by certain "fundamental" factors such as sales, earnings or book values. Jeremy Siegel has proposed that the "fundamental factor" should be the dividends that companies pay. These analysts have all argued that fundamentally weighted indexes represent the "new paradigm" for index-fund investing.

Are they correct? We think not. There is no doubt that fundamentally weighted indexes have outperformed capitalization-weighted indexes during the past six years, which witnessed the collapse of the "new economy" bubble and partial recovery. But we need to be cautious before accepting any "new paradigm" that implicitly suggests that the "old paradigm" -- reflected in more than \$3 trillion of capitalization-weighted index investment funds -- is in error. During the three-plus decades that such passively managed funds have been available, they have provided for their investors returns substantially superior to the returns achieved by actively managed equity funds. We need to understand why capitalization-weighted indexes make sense -- even if market prices are "noisy" and can fluctuate above or below the values they would have in a perfectly efficient market.

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First let us put to rest the canard that the remarkable success of traditional market-weighted indexing rests on the notion that markets must be efficient. Even if our stock markets were inefficient, capitalization-weighted indexing would still be -- must be -- an optimal investment strategy. All the stocks in the market must be held by someone. Thus, investors as a whole must earn the market return when that return is measured by a capitalization-weighted total stock market index. We can not live in Garrison Keillor's Lake Wobegon, where all the children are above average. For every investor who outperforms the market, there must be another investor who underperforms. Beating the market, in principle, must be a zero-sum game.

But only before the deduction of investment management costs. In practice, investors as a group will fail to earn the market return after these costs, and as a group, they will fall far short of the low-expense index funds. For the typical actively managed equity mutual fund, annual operating expense ratios are well over 100 basis points (one percentage

point). Add in the hidden costs of portfolio turnover and sales loads, where applicable, and effective annual costs are undoubtedly considerably higher, perhaps as much as 200 to 250 basis points. In total, simply because the average actively managed fund must underperform the capitalization-weighted market as a whole by the amount of financial intermediation costs that are deducted from the gross return achieved, active investing must be, and is, a loser's game.

Purveyors of fundamentally weighted indexes also tend to charge management fees well above the typical index fund. While index funds also incur expenses, they are available at costs below 10 basis points. The expense ratios of publicly available fundamental index funds range from an average of 0.49% (plus brokerage commissions) to 1.14% (plus a 3.75% sales load), plus an undisclosed amount of portfolio turnover costs.

The portfolios of market-weighted index funds are automatically adjusted for changes in the market caps of their portfolio holdings, and they require no turnover. But fundamentally weighted indexes gain no such advantage. Suppose, for example, we use a fundamental index based on dividends. If one company doubles its dividend, the portfolio manager then needs to buy enough of the stock (and sell enough of the other stocks) to double the weight of the stock in his fundamentally weighted portfolios. All fundamentally weighted indexes must incur turnover costs to align the weights of the portfolio with changing fundamental factors and changes in the market price of different securities.

Fundamental weighting also fails to provide the tax efficiency of market weighting. If a stock doubles in price and its fundamental weighting factor (be it dividends, book value or anything else) remains unchanged, the portfolio manager must sell enough of the stock to bring its weight back into balance. Thus, a fundamental index fund will tend to realize capital gains (and highly taxed short-term gains if adjustments are made frequently). Taxes are a crucially important financial consideration because the premature realization of capital gains will substantially reduce net returns.

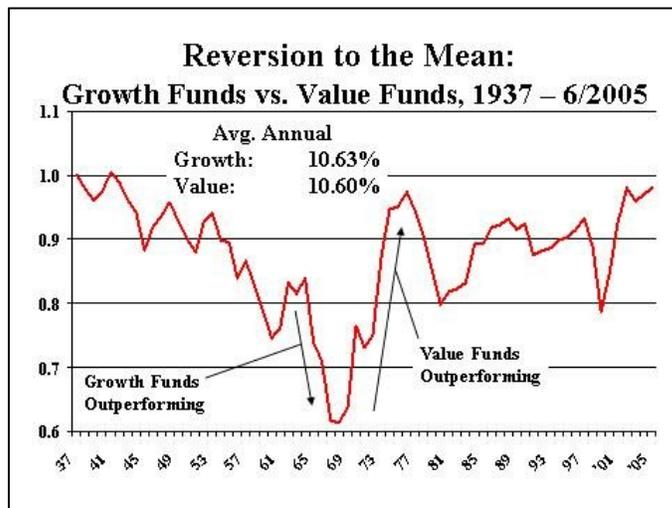
One important characteristic of fundamental indexing needs to be emphasized, for it explains why such indexing can often appear to produce outperformance. Every method of fundamental indexing tends to overweight smaller capitalization stocks and so-called value stocks. Consider the rationale for fundamental indexing. If, during some speculative bubble, money pours into high-tech stocks, their weight in a cap-weighted index increases. Since their price rise generally exceeds any fundamental measures of value, such as dividends or book value, such stocks will tend to have increased cap weights versus fundamental weights.

Consequently, fundamental weighting will tend to produce portfolios that give more weight to companies that are smaller in size (capitalization) and that have "value" characteristics such as low prices relative to earnings, dividends, sales and book values. Fundamental indexing will tend to do well in periods when small-cap stocks and "value" stocks tend to outperform. Thus it is not surprising that most of the long-term excess return attributed to fundamentally weighted portfolios was achieved between 2000 and

2005 alone, one of the best periods in history for the relative returns of dividend-paying stocks, "value" stocks and small-cap stocks.

We concede that there is some evidence, based on numbers compiled by Ibbotson Associates, that long-run excess returns have been earned from dividend-paying, "value" and small-cap stocks -- albeit returns that are overstated by not taking into account management fees, operating expenses, turnover costs and taxes. But to the extent that investors are persuaded by these data, the premiums offered by such stocks may well now have been "arbitraged away" in the stock market, as price-earnings multiples have become extremely compressed.

We are impressed by the inexorable tendency for reversion to the mean in security returns. Consider the chart showing the difference between mutual funds with a "value" mandate and those with a "growth" mandate. Since the late 1960s, "value" funds have generally outperformed growth funds. But since 1977 -- indeed since 1937 -- there is little to choose between the two. Indeed, for the first 30 years, growth funds rather consistently trumped value funds. Never think you know more than the markets. Nobody does.



We never know when reversion to the mean will come to the various sectors of the stock market, but we do know that such changes in style invariably occur. Before we too easily accept that fundamental indexing -- relying on style tilts toward dividends, "value" and smallness -- is the "new paradigm," we need a longer sense of history, as well as an appreciation that capitalization-weighted indexing does not depend on efficient markets for its usefulness.

While we have witnessed many "new paradigms" over the years, none have persisted. The "concept" stocks of the Go-Go years in the 1960s came, and went. So did the "Nifty Fifty" era that soon followed. The "January Effect" of small-cap superiority came, and went. Option-income funds and "Government Plus" funds came, and went. High-tech

stocks and "new economy" funds came as well, and the survivors remain far below their peaks. Intelligent investors should approach with extreme caution any claim that a "new paradigm" is here to stay. That's not the way financial markets work.

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