Robert D. Coleman, PhD © 2006 rcoleman@mba1971.hbs.edu

Comments on: Turn on a Paradigm?
By John C. Bogle and Burton G. Malkiel

The Wall Street Journal, Tuesday, June 27, 2006,
Opinion, page A14 (three columns, above the fold)

The first three paragraphs and the last paragraph of this op-ed article are quoted below with each paragraph followed by comments.

Quotation 1: 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 stocks.

Comment 1: This argument about weighting is made by behavioralists who believe the stock market is not rational and not efficient. Over-reaction is irrational, whether it is over-pricing or under-pricing relative to fundamental economic value. In contrast, the rationalists believe that the market-pricing process is rational and efficient, and therefore, stock market prices reflect fundamental economic values based on risk.

Quotation 2: Eugene Fama and Kenneth French have suggested that higher returns can be generated by indexed portfolios of stocks with small capitalization 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.

Comment 2: Fama and French (1992, *Journal of Finance*) and Fama and French (1993, *Journal of Financial Economics*) introduce what became known as the Three-Factor Model of expected total return for stock-portfolio pricing. The three explanatory factors in this causal, inferential, econometric model are (1) market, which is measured by stock equity return minus a risk-free bond rate, (2) size, which is measured by market capitalization of equity, and (3) value, which is measured by book-to-market equity ratio. In these two articles, Messrs. Fama and French address the issue of stock selection and portfolio construction, in contrast to stock weighting; and their explanatory portfolios and dependent portfolios are reportedly value-weighted, i.e., weighted by market value or market capitalization.

The FTSE RAFI 1000 Index is based on a metric called "fundamental value", which is measured as the average of 5-year average sales, 5-year average cash flow, current book equity and 5-year average cash dividends, but not earnings.

A factor may be valid in one type of model but not in another type. Cash dividends or more generally, free cash flow to equity, is the valid basis of the formulaic, deterministic model to calculate the economic "fundamental value" or fair value of individual stocks,

as measured by the present value of forecasted future free cash flows to equity. Yet dividends are a fallacious circular simultaneity in a causal, inferential, stochastic, econometric model of expected total return for stock-portfolio pricing.

Quotation 3: Are they correct? We think not. … 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.

Comment 3: Messrs. Bogle and Malkiel are basically correct in their conclusion to their argument, but for the wrong reason. Their focus on stock weighting to the exclusion of stock selection is too narrow, and their analysis is incomplete. More to the point, they are silent about stock-selection criteria and equivalent explanatory factors that entail fallacious circular simultaneity. The highest-priority question in stock portfolio construction is whether a stock selection criterion or equivalent econometric model factor is logically valid and scientifically valid. If it is found to be valid, then the second-highest-priority question is whether the valid stock selection criterion or equivalent econometric model factor is statistically significant at conventional levels of probability, i.e., whether the valid criterion or factor is "priced" and therefore is proven in a scientific sense.

Quotation 4: While we have witnessed many "new paradigms" over the years, none have persisted. … 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.

Comment 4: The fervently heralded mini-revolution in investment asset pricing theory and practice is part of a grand design that ends in the Fama-French Three-Factor Model of expected total return for stock-portfolio pricing. The new paradigm of the Three-Factor Model, the new paradigm of the contrarian counterpart of the Three-Factor Model, the new paradigm of the behavioral analogue of the Three-Factor Model and the new paradigm of size-class (small-, mid- and large-cap) and style-class (value-style and growth-style) equity-asset allocation are fatal fallacies due to vicious circular reasoning in the form of econometric circular simultaneities.

These so-called new paradigms are not only fallacies, but also a hoax, in the sense that the authors either knew or had reason to know that the Three-Factor Model and related circular-simultaneity factors were neither logically valid nor scientifically valid. The cost of the harmful hoax to investors alone is quite conservatively estimated to be more than $1 billion each year, and a more realistic estimate is between $4 and $5 billion each year and growing.

What is needed is fair, open debate among the persons who have contributed to the discussion of this matter. All bias-inducing ties and conflicts of interest need to be disclosed by such persons, as shown in the Table below.

Table. Affiliations of the Named Protagonists

Protagonist	Affiliation(s)
Robert D. Arnott	Chairman of Research Affiliates, LLC Editor of the *Financial Analysts Journal*
John C. Bogle	Founder of the Vanguard Group Inc.
Robert D. Coleman	No affiliation
Eugene F. Fama	Professor of finance, Graduate School of Business, University of Chicago Head of Center for Research in Security Prices, Graduate School of Business, University of Chicago Director of Research for Dimensional Fund Advisors Inc. (DFA) Effective co-founder of DFA Co-owner of privately-held DFA Revenue-sharing, new-product designer of DFA index funds Member of DFA-affiliated group of academic consultants
Kenneth R. French	Professor of finance, Amos Tuck School of Business, Dartmouth College Director of Investment Strategy for Dimensional Fund Advisors Inc. Revenue-sharing, new-product designer of DFA index funds Member of DFA-affiliated group of academic consultants
Burton G. Malkiel	Professor of economics, Princeton University Author of *A Random Walk Down Wall Street*
Jeremy J. Siegel	Professor of finance, Wharton School, University of Pennsylvania Member of Board of Directors of WisdomTree Investments, Inc. Senior Investment Strategy Advisor at WisdomTree Asset Management, Inc., a company that develops and sponsors dividend-based indexes and products Author of *Stocks for the Long Run: The Definitive Guide to Financial Market Returns and Long-Term Investment Strategies*