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June 28, 2006

Letters to the Editor The Wall Street Journal 200 Liberty Street New York, NY 10281 Email: wsj.ltrs@wsj.com

## Dear Editor:

This is in response to the op-ed article entitled "Turn on a Paradigm?" by John C. Bogle and Burton G. Malkiel, page A14, June 27, 2006. It is noteworthy that Mr. Malkiel is a professor of economics at Princeton University.

John Bogle and Burton Malkiel are silent about the main point concerning stock equity index funds. Eugene Fama, Kenneth French, Robert Arnott and Jeremy Siegel also are silent about this point. All of these academic researchers and/or practitioner analysts and many others ignore theory and focus exclusively on data. The main point is that in scientific research, theory is the soundest basis for building hypotheses and interpreting test results, and data are used to test hypotheses about the relationships between variables. Like all scientific inquiries, economics is a combination of logic, causality and experimentation. Whether or not the field of study known as economics is deemed to be one of the officially recognized sciences is a matter of social and political convention.

Historic data is ultimately anecdotal, regardless of how large the sample in terms of number of stocks and number of years. Atheoretic variables and hypotheses often lack even face validity. You can select a sample of stocks, a measurement interval, a time period and an operational definition of return to support any factor that is alleged to determine stock returns. The concepts of "value", "growth" and "style" are ambiguous, and must be accompanied with operational definition to avoid misleading statements. The evidence based on numbers compiled by Ibbotson Associates, by the Center for Research in Security Prices at the Graduate School of Business at the University of Chicago, or by any other financial database provider, that long-run excess returns have been earned from dividend-paying, "value" (high book-to-market equity ratio) in contrast to "growth" (low book-to-market equity ratio) and small-cap stocks is logically meaningless, regardless of whether returns are defined as total, capital, after expenses or after tax. What is needed is not a longer sense of history but rather the common sense of theory.

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Econometrics is a method of causal inference applied to economics. Econometrics is used to prove the validity and significance of factors that are alleged to determine stock returns. Size and value are two of the best-known such factors. Size is also known as cap, and value is also known as style. Size as measured by market capitalization of equity and value as measured by book-to-market equity ratio, price-earnings ratio or dividend yield, are not logically valid and therefore are not scientifically valid when specified as explanatory factors in a causal, inferential, econometric model of expected total return for stock-portfolio pricing. Genuine method proceeds from the better known to the lesser known, not from the known to the equally known. Any price-, dividends- or shares-entailing factor is neither logically nor scientifically valid as a return factor because it violates genuine method in the form of a fatal fallacy known as vicious circular reasoning caused by something in introductory econometrics called circular simultaneity. In essence, a circular simultaneity fails to algebraically isolate the unknown variable.

This irremediable, material, fatal fallacy is explained in greater detail in two articles available online: "Asset Pricing Simultaneity, Three-Factor Model and Cost Analysis", *Indian Journal of Economics and Business*, June, 2005, and "Asset Pricing Simultaneity: Phases and Patterns", *Annals of Economics and Finance*, May 2006. In addition, circular simultaneities in popular investment strategies are explained in another article entitled "Demise of an Investment Revolution and Its New Paradigms" that has been in review by an academic journal since May 2006.

The question of fundamental weighting versus market capitalization weighting is rightly distinguished from the question of capital markets efficiency in the informational sense of reflecting all data that impact the market prices of securities. In stable, efficient markets, the prices of securities tend toward their fundamental values. Yet the question of market efficiency can never be separated from the question of market equilibrium in the sense of a market-clearing pricing process. And the question of market equilibrium is ultimately based on theory. The leading scientific, theory-based, capital asset pricing model (CAPM) is the conventional, univariate, monocausal CAPM with its market-beta risk factor. Unfortunately, the conventional CAPM does not have high explanatory power; and thus it does not offer many profitable trading opportunities.

There are two aspects of portfolio construction: first, the eligible securities; second, the weighting of these securities. In the methodology for the management of the FTSE Research Affiliates Fundamental Index (RAFI) Index Series, December 2005, the universe of eligible constituents is the FTSE Global Equity Index Series (GEIS), and the constituents of the FTSE GEIS US Index are the selection universe for FTSE RAFI 1000 Index. The FTSE RAFI 1000 comprises the 1,000 U.S.-listed companies with the largest fundamental value (based on the average of four factors), selected from the constituents of the FTSE USA All-Cap Index. The FTSE RAFI Index Series is reviewed annually in March for changes in constituents and for calculation of the fundamental weighting of each company using four factors: sales average for five years, cash flow average for five years, book value at review date, and cash dividends average for five years.

So-called fundamental factors are not all alike in terms of validity. As explained above, a dividends-entailing factor is neither logically nor scientifically valid, being an instance of vicious circular reasoning. Unlike the dividends, size, book-to-market equity ratio and price-earnings ratio factors, the fundamental sales, cash flow and book equity factors are neither logically nor scientifically invalid; but they have not been found to be statistically significant at conventional levels of probability in econometric models of return, i.e., they are not scientifically proven.

Sincerely,

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---- Original Message -----

From: BC

To: wsj.ltrs@wsj.com

Sent: Wednesday, June 28, 2006 6:38 AM

Subject: Letter to the Editor

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