# Aristotle as Finance Journalist

Personal Investing

# Mutual Funds

- Dimensional Fund Advisors (DFA) claims that its stock equity index funds are scientific and based on the Fama-French Three-Factor Model of return and its Size and Value risk factors.
- Size is also known as Cap, and Value is also known as Style.

# Cap and Style

- The Size or Cap factor is related to market capitalization, equal to share price multiplied by shares outstanding: small-cap, mid-cap, large-cap.
- The Value or Style factor is related to book equity-to-market equity ratio: value-style, blend-style, growth-style.

# Returns

- Return on investment, whether expected or historic, is typically measured in percent per year.
- Returns and expenses also can be measured in basis points per year.
- A basis point (bp) is 1/100 of 1%.

# Premium Returns

- DFA claims that its funds are designed to earn expected returns of 100 bp to 200 bp above the market average.
- Thus, DFA claims that if the market average is 10% per year, then most of its funds can earn 11% to 12% per year.
- For access to DFA premium returns, investors must pay premium fees.

# Premium Fees

- Investments in DFA funds are made in employer-sponsored retirement-savings plans. The DFA excess premium fee can be 100 bp per year or more.
- DFA funds can be bought and sold by individuals through affiliated Registered Investment Advisors. The additional RIA fee may be 100 bp per year or more.

# Compound Growth

- A $10,000 investment earning **11%** per year for 25 years grows to $135,855.
- A $10,000 investment earning **10%** per year for 25 years grows to $108,347.
- A difference of **1%** (100 bp) per year, due to excess fees, grows $27,508 *less*.
- The loss is proportional to the investment, e.g., due to the same **1%** excess fees, $100,000 grows $275,080 *less*.

# Fatal Fallacy and Hoax

- Premium investment fees of 100 bp to 200 bp per year can not be offset by fallacious premium expected returns of 100 bp to 200 bp per year.
- The Three-Factor Model is a hoax, and its pseudo-scientific Size and Value risk factors are fatal fallacies.

# Logic and Econometrics

- The fatal fallacy is due to vicious circular reasoning, called “begging the question” by Aristotle, in the form of something known in econometrics as circular single-equation simultaneity.
- It is a hoax because Fama and French knew or had reason to know that the Three-Factor Model was not valid.

# Academic Entrepreneurs

- DFA is pioneer and leader in this hoax. Fama and French published fallacious research findings to justify the DFA investment products they designed.
- Six other author-entrepreneurs have financial interests in four other firms using their own fallacious research.
- Their imitators and followers are many.

# Contagion

- The Three-Factor Model hoax is vast, long-running, widespread, harmful and costly.
- It is the biggest hoax in stock market history by each of six major criteria.
- It is conservatively estimated to cost investors alone more than $1 billion worldwide in a year, and it is growing.

# Verification

- These surprising findings are explained further in related presentations and are verified in scientific research papers.
- Two articles about the costly fatal fallacy and hoax are published in two international scientific economics and finance journals.

# Sources


Coleman, Robert D., 2005, Asset Pricing Simultaneity, Three-Factor Model and Cost Analysis, *Indian Journal of Economics and Business*, Vol. 4, No. 1 (June), 73-94. The theme of this issue is finance and financial reform. *IJEB*

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