Research Summary: Capitalizing on the Greatest Anomaly in Finance with Mutual Funds

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Research Summary: Capitalizing on the Greatest Anomaly in Finance with Mutual Funds

by David Nanigian, Ph.D.

Explaining the benefits of investing in low-risk mutual funds.

**THE CAPITAL ASSET PRICING**

Model (CAPM), a cornerstone of asset pricing theory, states that, because company-specific risks (such as a fire in a region where a property and casualty insurance company insures a lot of properties) can be eliminated through diversification, investors should only be compensated for bearing market risk, which affects the entire financial system. While theoretically sound, numerous empirical studies have found that the CAPM fails to predict stock returns. Many practitioners consider this to be the greatest anomaly in finance.

Investors can capitalize on the anomaly through holding a portfolio of stocks with low exposure to market risk, which is measured by beta. However, many investors prefer to indirectly hold stocks through mutual funds, as mutual funds offer professional management and low-cost diversification. This led me to explore whether or not individuals can capitalize on the anomaly through simply investing in low beta mutual funds.

*My findings imply that mutual fund investors can indeed improve their portfolio performance through simply tilting their portfolios towards low beta funds.*

**FIGURE 1: EMPIRICAL VERSUS THEORETICAL SECURITY MARKET LINE - 12-MONTH ESTIMATION PERIOD RESULTS**

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In a working paper, *Capitalizing on the Greatest Anomaly in Finance with Mutual Funds*, I sort U.S. Stock mutual funds into five portfolios based on quintile (20 percent) rank of beta derived over the prior 12 months. Portfolio allocations to each mutual fund are determined based on each fund’s total net assets. The time period of the study spans January 1991 to September 2012 and the portfolios are reconstituted each month.

As illustrated in Figure 1, there is little difference in the average excess returns on the five portfolios. However, their out-of-sample betas are steadily increasing from 0.77 for the bottom quintile portfolio to 1.28 for the top quintile portfolio. Sharpe ratios, which measure return per unit of risk, are decreasing across the portfolios from 0.47 for the bottom quintile portfolio to 0.24 for the top quintile portfolio.

Another commonly used measure of portfolio performance is CAPM alpha, which measures return that cannot be explained by exposure to market risk. The CAPM alpha is decreasing across the portfolios from 1.13 percent for the bottom quintile portfolio to -3.09 percent for the top quintile portfolio. Similar results were derived through the use of a 60-month estimation period. My findings imply that mutual fund investors can indeed improve their portfolio performance through simply tilting their portfolios towards low beta funds.

One concern about the strategy of investing in low beta mutual funds is that it may entail a high exposure to cash. However, the range of average cash holdings among the five portfolios is less than 3 percent, assuaging concerns of a cash drag. Another potential concern is that the performance of the strategy may deteriorate if the portfolios are reconstituted less frequently than once a month. However, as illustrated in Figures 2 and 3, the strategy still performs well even when the portfolios are reconstituted as infrequently as once every 4 years. This is largely because mutual fund beta exposures tend to be stable over time.