

Beta and Return

" Announcements of the 'death' of beta seem premature. "

Fischer Black

The study attempts to refute Fama's claim that "beta as the sole variable explaining stock returns is dead." In addition, Fama claims that the relationship between average return and beta is completely flat. Based on these statements, the author believes Fama is misrepresenting the results and misinterpreting their own data.

Furthermore, several authors discover that low-beta stocks outperformed the capital asset pricing model (CAPM), while high-beta stocks underperformed. These authors also discover that the estimated slope of the line relating average return and risk is lower than the slope of the line relating expected return and risk, as stated by the CAPM.

In this study, some questions must be answered, including Why is the line so flat? Why have low-beta stocks performed so well in comparison to their expected returns under the CAPM? Will low-beta stocks perform well in the future? Some of the predictions are borrowing restrictions may cause low-beta stocks to perform relatively well, and low-beta stocks will continue to perform better than the CAPM predicts.

The methods that were used , for example, Fama and MacBeth [1973] begin with cross-sectional regressions of return on beta and examine the time series of regression intercepts. Furthermore, Stambaugh [1982] extends the analysis through 1976 and considers broader market portfolio definitions. In addition, Lakonishok and Shapiro [1986] extend the analysis to 1981 and include firm size to help explain average portfolio return. They conclude that the risk measures had no relationship with the average return. Furthermore, Kandel and Stambaugh [1989] provide a general mean-variance framework for likelihood ratio tests of asset pricing models that takes estimated error in both means and covariances into account. Moreover, size and book-to-market equity are the variables that were used. It was combined to capture the cross-sectional variation in average stock returns due to market size, leverage, and book-to-market equity.

From the updating of the study, he closely follows the BJS procedure, with the exception that he uses the Black-Scholes method to estimate portfolio beta, alpha, and residual risk all at the same time. Based on the data used, it is possible to conclude that low-beta stocks performed better after the BJS study period than during it. Furthermore, Black and Scholes [1974] refine the portfolio method to eliminate potential sources of bias. They choose stocks and weight them based on information that was available at the time. This removes any bias and makes the results easier to understand and interpret.

Limitation : The portfolio method is simple and straightforward. However, the more complex our portfolio selection method, the more likely we are to introduce a data mining bias. BJS used a simple portfolio strategy to diversify out the factors unrelated to beta in order to minimize the data mining problem. However, this method is not without flaws. For example, across stocks, beta is closely linked with both total risk and residual risk.

The application of beta : since beta is an important tool for making investment decisions. In fact , beta is more useful when the line is flat than when it is steep, as predicted by the CAPM. A rational corporation will evaluate an investment using the betas of that investment's cash flows, regardless of the slope of the line. Also, rational investors, who can borrow freely, should continue to use the CAPM and beta to value investments and select portfolio strategies.