

“Beta and Return” paper summary

Beta, the sole variable explaining returns on stocks, is dead. The average relationship between average return and beta is completely flat, said by Fama. However, from 1931 to 1965, several authors found that low-beta stocks in the US did better than the CAPM predicts while high-beta did worse. Fama and French claim to find evidence against that the slope of the line relating expected return and beta is positive. However, this paper says that beta is a valuable investment tools regard less of how steep the line is. Beta is alive and well.

Fama and French find that there is no size effect at all, whether or not they control for beta. But they claim that size is one of the variables that capture the cross-sectional variation in average stock returns. They find that the ratio of the market value of the firm's equity helps capture the cross-sectional variation in average stock returns. This paper believes that the book-to-market effect results from data mining, and it may result in part from irrational pricing. Thus, the past success of this ratio may due to market inefficiencies than priced factors. Fama and French do not discuss about the beta factor at all. Black (1972) showed that borrowing restriction might cause low-beta stocks to have higher expected return than the CAPM predicts. Moreover, investors who can borrow and can deduct the interest they pay are reluctant to borrow. Those who want lots of market risk will bid up the prices of high-beta stocks. This makes low-beta stocks attractive and high-beta stocks unattractive to investors who have low-risk portfolios.

BJS (1972) discuss another possible reason for beta factor pricing: mismeasurement of the market portfolio. The market portfolio may be mismeasured due to our neglect of foreign stocks. World markets are integrating all the time. In a fully integrated capital market, what counts is a stock's beta with the world market, not its beta with the issuer country market. This my cause low-beta stocks to underpriced. The author's view is that the exist of data mining and estimate error and changing risk premiums, no methods add enough accuracy to warrant its complexity.

The author follows the BJS procedure, except that at the very end he adopts the Black-Scholes method of estimating portfolio beta, alpha, and residual risk at the same time. He uses monthly data because the portfolio method is useful when analyzing data over such a long period. It shows that a standard statistical measure of the significance of the intercept. But the data mining he did invalidates the test. Since means, correlations, and standard deviations are all changing, these are estimates of their averages through the period. Everything is expressed in annual terms, though BJS gave their figures in monthly terms. The results shows that low-beta stocks did better than the CAPM predicts, and high did worse. He took the excess returns from the ten portfolios and weighted them. Then, he applies positive weights on low-beta and negative weights on high-beta. Thus, the beta factor is a portfolio that is long in low-beta stocks and short in high-beta stocks. Since low-beta stocks tend to do well or poor at the same time, and high-beta stocks tend to do badly when low-beta stocks are doing well, this portfolio is not perfectly diversified. It is called beta factor because it has substantial variance.

Any corporation that is free to borrow and that wants to maximize its stock price should use the ordinary CAPM to value its investments and lots of leverage. Low-beta investments will look attractive because they have positive alphas. Thus, the corporation will emphasize low risk assets and high-risk liabilities. Even if the line is flat corporations, beta is an essential tool for making investment decisions. Therefore, announcements of the death of beta seem premature. The evidence that prompts such statements implies more uses for beta than ever.