

## Beta and Return

Fama and French conclude about the slope of the line connecting expected return and beta is positive or completely flat, but they think it is misstating and misinterpreting. When researchers want to conduct a study, they will use a variety of methods. This process is known as data mining and involves the use of explanatory elements, time periods, and models. Data mining is not limited to single research studies. Fama and French continue to study the impact of small businesses and discover similar outcomes on a largely overlapping data sample. According to the Banz study, beta or adjusted beta has no size effect at all. They claim that size is one of the variables which captures the cross-sectional variation in average stock returns. Moreover, Fama and French find that the ratio of book value to the market value of the firm's equity helps capture the cross-sectional variation in average stock return. But Fama and French provide no explanations for the relationship between size and expected returns. They may claim that small businesses are constantly underpriced because they are overlooked in a market dominated by large institutional investors. However, they provide no rationale for this claim. The beta component appears to be the most valuable. Create the beta factor by building a diversified portfolio that is long in low-beta stocks and short in smaller amounts of high-beta stocks, resulting in a beta of around zero. The empirical evidence for excess returns in the beta component is stronger than for the small-stock factor or the book-to-market equity factor. Black stated that borrowing restrictions might lead low-beta stocks to have expected returns higher than the CAPM predicts. BJS discuss another possible reason for beta factor pricing. By the time we have a reasonable estimate of how a factor was priced on average, it will be priced in a different option. If we want to use stock return to distinguish among these explanations, we run a heavy risk of data mining. The portfolio method is simple and intuitive. The strategy can use any data for constructing the portfolio each year that are available to investors at the start of the year. So, we can incorporate into our selection method any cross-sectional effects that important. While the more complex portfolio selection method has more risk bringing in a data mining bias. To minimize the data mining problem, we chose securities using historical estimates of beta, but it has flaws. According to BJS study and updates, I use monthly data from Center for Research in Security Price between 1926-1991. When analyzing data over such a long period, the portfolio method is useful because the stocks in the portfolio are constantly

changing. This portfolio captures the relative behavior of stocks with various betas. Since stocks which differ in beta also tend to differ in other ways, it combines the effects of all the characteristics correlated with beta. BSJ clarify the portfolio method to eliminate the possible source of bias. They select stocks and weight them using only information that would have been available at the time.

## The Equity Premium a Puzzle

The equity premium puzzle refers to the excessively high historical outperformance of short-term virtually default-free debt. This paper study to see that whether the large differential in average yields can be accounted for by models that abstract from transactions costs, liquidity constraints and other frictions absent. They explored a type of competitive pure exchange economy in which the equilibrium growth rate process on consumption and the equilibrium asset returns are stationary and found that the average real annual yield on equity is a four-tenths of a percent greater than that on short-term debt. Moreover, the results are potent to non-stationarities in mean and variance. The real per capita consumption increases every year about two percent on average, so they assume the growth rate of the endowment follows a Markov process. There is one productive unit producing the perishable consumption good and one equity share that is competitively traded. They showed in 1984 that if both necessary and sufficient for expected utility to exist, the stand-in household consumes  $Y$  ever period. The nature of the test is to explore for parameters  $\alpha$  (model's averaged risk-free rate) and  $\beta$  (model's equity risk premium) match those observed for the U.S. economy over this ninety-year period. In 1971, Arrow concluded that relative risk aversion with respect to wealth is almost constant and argued that  $\alpha$  should be approximately one. Tobin and Dolde studied and concluded that the using a value of 1.5 fit with life cycle savings patterns with borrowing constraints. Moreover, there is study that  $\alpha$  should not be greater than ten. The significant restriction can be obtained by making little changes in consumption process for with large  $\alpha$  virtually pair of average equity and risk-free returns. They summed up with the results were basically similar for different consumption process with mean and variances of growth rate equaled the historically observed values. Errors, in measuring inflation rate, do not affect the computed risk premium because it affected the real risk-free rate and the equity rate in the same number. The first serious issue occurs when errors effect the estimates of growth rate of consumption and the real risk-free rate, measuring the inflation rate tests should be taken seriously. The second issue appears because effective after-tax returns are considered in various income classes. The low real rate and sizable equity risk premium hold for after-tax returns for every income classes in recent period. According to their model, the security priced does not correspond to the common stocks traded in U.S. economy but there is just one type of capital in real economy which basically a perpetuity of capital types with extensively differing risk characteristics. Traded stock of a typical firm entitles its owner to the residual claim

on output after other claims. The share of output accumulating to stockholders is much more changeable than that accumulating to holders of other claims against the firm.