

Market Volatility's Relationship with Pairwise Correlation of Stocks and Portfolio Manager's Performance

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Abstract

The objective of this article is to deal with two questions. First, what is the relationship between market volatility and pairwise correlations of stocks? Second, how portfolio managers' performances vary during turbulent periods and stable periods? Two parts are employed to answer those questions separately via empirical data. In Part I, a data set consisting of OMXS30 Index and five stocks is investigated and the relationship between market volatility and pairwise correlations of the stocks is quantified by a linear regression model. The slope of linear model represents the strength of market volatility's influence on the pairwise correlation of the stocks. Therefore, we conclude that there exists significantly positive relationship between the market volatility and pairwise correlations of the stocks. In part II, we investigate a data set consisting of OMXS30 Return Index and 69 funds. The excess return of the funds is measured by \bar{A} and Jensen's \bar{A} respectively. Four portfolios, Average Portfolio, T5, M5 and B5 which represent the average performance of all the 69 funds, top 5 funds, median 5 funds and bottom 5 funds respectively are set up for comparison. Two conclusions are derived. First, considering the magnitude of the excess return, Average Portfolio, M5 and B5 in times of high market volatility are inferior to those during periods with low market volatility, whereas T5 is superior. Second, in times of high market volatility T5 is superior to the other three portfolios while M5 performs better than B5. In times of low market volatility B5 is inferior to the other three portfolios. Besides, based on the other intercomparisons of the four portfolios, no significant difference is observed.

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