Higher Moments Portfolio by Dr. Supakorn soontornkit

Abstract

This paper investigates characteristics of return distribution of the Thai stock market during 1975 and 1997. The evidence indicates that the return distribution of the Thai stock market is not normally distributed and has been changing over time since its establishment. Moreover, skewness and kurtosis are founded to be important to investor's investment decision. Based on the evidence of non-normality of return distribution and that higher moments of return distribution are relevant to investor's decision, this paper utilizes Polynomial Goal Programming method to incorporate the preference for skewness and the avoidance of kurtosis to determine the optimal portfolio solution consisting of 20 sectorial indices. The evidence indicates that incorporation of higher moments into investor decision causes a major change in the allocation of optimal portfolio, and that investor trades expected portfolio return for skewness ex-ante. Moreover, when short sales are allowed, the evidence indicates that investor will be benefited from incorporating higher moments into portfolio selection. For portfolio performance ranking the performance measurements based on two-moment, higher-moment, and stochastic dominance rules indicate that for weekly investment horizon, the optimal portfolios incorporating higher moments do not outperform the standard mean-variance efficient portfolio. However, for monthly investment horizon, the mean-variance-kurtosis outperforms the mean-variance portfolio. Finally, there are some evidences indicating that the optimal portfolios derived by standard mean-variance framework and by incorporating higher moments outperform most of the sectorial and also the SET indices especially when short sales are allowed.