

Abstract

The traditional risk measurements are usually based on the classical assumption of normal distribution of risk factors, however many literature have shown that the marginal distribution of asset log-return has fatter tail than normal. The Copula-EVT model which can handle the non-normality is suggested as an alternative. The main objective of this paper is to compare the performance of the Copula-EVT model and the traditional model in estimating the Value-at-Risk (VaR). Monte-Carlo simulation is used to simulate scenarios for log-returns of portfolio generated from multivariate distribution with Gaussian Copula and marginal distributed as normal in the center and Extreme Value Theory (EVT) in the tails. In this paper, I apply this method to estimate VaR over a one-day horizon for a portfolio containing twenty-nine Thai equities. The empirical result indicates that Copula-EVT VaR outperforms multivariate normal model. For hedging purpose, the study shows that minimum-VaR hedging provides the higher percentage of reduction in VaR by taking smaller short position in futures than the minimum variance hedge strategy.