عنوان مقاله:

Value at Risk Estimation using the Kappa Distribution with Application to Insurance Data

نویسنده:

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خلاصه مقاله:

The heavy tailed distributions have mostly been used for modeling the financial data. The kappa distribution has higher peak and heavier tail than the normal distribution. In this paper, we consider the estimation of the three unknown parameters of a Kappa distribution for evaluating the value at risk measure. The value at risk (VaR) as a quantile of a distribution is one of the important criteria for financial institution risk management. The maximum likelihood, moment, percentiles and maximum product of spacing methods are considered to estimate the unknown parameters. The data of the insurance stock prices is analyzed for comparing the proposed methods in VaR evaluation. An important implication of the present study is that the Kappa distribution can be considered as a loss distribution for the VaR estimation. Also, it is observed that the maximum likelihood estimator, in contrast to other estimators, provides smallest VaR in the proposed stock prices data.

کلمات کلیدی:

Insurance Stock Price, Kappa distribution, Maximum Product of Spacing, Percentile Estimator, Value at risk

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