Risk measures and portfolio optimization in the Kenyan stock market

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Abstract

This study seeks to establish optimal stock portfolios to be held by investors in The Nairobi Securities Exchange (NSE) from 1998 – 2016 using the Mean Variance and Threshold Accepting optimization mod- els.A comparison is done among the two models by measuring their performance using the following performance ratios: Sharpe Ratio, Sortino Ratio and Information Ratio. The Mean Variance model being a risk-reward model is compared against the Threshold Accepting model which is a general optimization model. The most appropriate model for the Kenyan stock market in portfolio selection is then considered. The study concludes that the Threshold Accepting model out performs the Mean Variance model but the latter is established as a more consistent model.

Keywords: Portfolio optimization, Mean-Variance Optimization, risk measure, Threshold Accepting (TA).