

عنوان مقاله:

Using MODEA and MODM with Different Risk Measures for Portfolio Optimization

محل انتشار:

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خلاصه مقاله:

The purpose of this study is to develop portfolio optimization and assets allocation using our proposed models. The study is based on a non-parametric efficiency analysis tool, namely Data Envelopment Analysis (DEA). Conventional DEA models assume non-negative data for inputs and outputs. However, many of these data take the negative value, therefore we propose the MeanSharp- β Risk (MSh β R) model and the Multi-Objective MeanSharp- β Risk (MOMSh β R) model base on Range Directional Measure (RDM) that can take positive and negative values. We utilize different risk measures in these models consist of variance, semivariance, Value at Risk (VaR) and Conditional Value at Risk (CVaR) to find the best one as input. After using our proposed models, the efficient stock companies will be selected for making the portfolio. Then, by using Multi-Objective Decision Making (MODM) model we specified the capital allocation to the stock companies that selected for the portfolio. Finally, a numerical example of the Iranian stock companies is presented to demonstrate the usefulness and effectiveness of our models, and compare different risk measures together in our models and allocate assets

کلمات کلیدی:

Portfolio optimization, Data envelopment analysis, Multi-Objective Decision Making, Negative data, Conditional Value at Risk

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