

## عنوان مقاله:

ROBUSTNESS IN MEAN-VARIANCE PORTFOLIO OPTIMIZATION

## محل انتشار:

مجله ریاضیات و مدل سازی در امور مالی، دوره 2، شماره 2 (سال: 1402)

تعداد صفحات اصل مقاله: 10

## نویسنده:

Shokouh Shahbeyk - *Department of Statistics, Mathematics, and Computer Science, Allameh Tabataba'i University, Tehran, Iran*

## خلاصه مقاله:

In this paper, we discuss some of the concepts of robustness for uncertain multi-objective optimization problem. An important factor involved with multi-objective optimization problems is uncertainty. The uncertainty may arise from estimation of parameters in the model, error of computation, structure of problem and so on. Indeed, some parameters are often unknown at the beginning of solving a multi-objective optimization problem. One of the most important and popular approaches for dealing with uncertainty is robust optimization. Markowitz's portfolio optimization problem is strongly sensitive to the perturbations of input parameters. We consider Markowitz's portfolio optimization problem with ellipsoid uncertainty set, and apply set-based minmax and lower robust efficiency to this problem. The concepts of robust efficiency are used in the real stock market and compared to each other. Finally, the increase and decrease effects of uncertainty set parameters on these robust efficient solutions are verified.

## کلمات کلیدی:

Portfolio Optimization, robustness, Ellipsoid Uncertainty Set

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1600320>

