

2 Abstract

The main purpose of investing is to get maximum profit with a certain level of risk therefore required risk management when investing. In this paper we discuss the problem of portfolio optimization to maximize the Geometric Mean Return Portfolio with Semivariance not exceeding the size of the risk that has been established as a measure of risk in financial engineering. The determination of the proportion of each share is calculated using Solver Optimization in matlab using the Interior Point algorithm, Monte Carlo Simulation and numerical experiments conducted to determine the optimal conditions and show that the method is efficient.

Keywords: portfolio optimization, monte carlo simulation, numerical eksperimen.