

Abstract

Portfolio is a how to determine proportions of money into financial assets such as stocks, deposits, bonds and such which can bring can give us the best return or less risk. The kind of portfolio in this final project is stocks. Generally, Mean-Variance method used to form optimal portfolio by considering two parameters which are expected return and variance (risk). These parameters value is uncertain and usually can be obtained by estimating the historical data which will result in estimation error and poor performance. To solve poor portfolio performance in this Final Project the expected return and variance values will be find by involving Ellipsoidal Uncertainty Set. Based on the result, portfolio involving Ellipsoidal Uncertainty Set leads to better portfolio performance according to the value of average portfolio return and sharpe ratio.

Keywords – Markowitz mean-variance, portfolio, ellipsoidal uncertainty set, portfolio return