

Portfolio Optimization: Part 2

Available Data

We are given the following information about a collection of assets:

- μ_i : the average return for the i -th asset
- σ_i^2 : the variance of the return for the i -th asset
- σ_{ij} : the covariance between the returns of the i -th and j -th asset. Note that $\sigma_{ii} = \sigma_i^2$.

Model Variables

- r_i : random variable representing the return on the i -th asset
- w_i : weight (fraction) of i -th asset in a portfolio

Problem 4

Generate a plot of the optimal portfolio return vs risk tolerance τ .

Problem 5

Write a function that compute the optimal portfolio weights for a specified risk tolerance τ .