

Exercise 3

Consider the problem of building an optimal mean-variance portfolio when investing only in the 15 risky assets (stocks) included in the BerndInvest dataset.

- Derive the optimal portfolio weights (i.e. the weights in the tangency portfolio) in (i) the minimum variance portfolio, (ii) the tangency portfolio.
- Graphs the value over-time of 1 dollar invested in 1978:1 until the end of the available sample in the two alternative portfolios and in the market portfolio.
- Compare means and standard deviation values for the three portfolios over the entire available sample.