Abstract

This thesis deals with multi-stage stochastic linear programming and its applictions in the portfolio selection problem. It presents several models of investment planning, the emphasis is on the basic model with transaction costs and risk adjusted model for every investment level. Random returns entering the above models are modelled by the scenario trees which are generated using the moment-matching method. The thesis presents the optimal investment strategy for each model. It then examines distance of optimal values of objective functions in dependence on the nested distance of these generated trees. All calculations were performed using Mathematica software version 9.