

Title: Semi-infinite programming: theory and portfolio efficiency application

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Abstract:

The thesis deals with application of semi-infinite programming to a portfolio efficiency testing. The summary of semi-infinite programming, first and second order optimality conditions and duality in linear semi-infinite programming is presented. The optimization problem for a portfolio efficiency testing with respect to the second order stochastic dominance under assumption of discrete, normal, Students and general elliptical distribution is formulated. Conditional value at risk(CVaR) is used as the risk measure, because of its consistency with the second order stochastic dominance relation. Efficiency of index PX with respect to the second order stochastic dominance is tested. The tests are performed using the program GAMS.