Portfolio Optimization, Regression and Conic Programming

Thomas Schmelzer

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Jobs you might be interested in (from LinkedIn):

Quantitative Trader

… - Zurich Area, Switzerland

Candidates should possess:

Most utterly humble brief personal history within portfolio optimization

Warning

Be **careful** when you mention Optimization… the term is just too ambigious.

Today

- we render problems arising in quantitative finance as conic programs.
- we solve such programs using 3rd party software (Mosek).
- we illustrate common mistakes made in practice.

Challenges

- underestimated?
- modelling (implicit constraints, reverse engineering, politics etc).
- complex maths, flexibility to formulate problems

User feedback

If the answer is highly sensitive to perturbations, you have probably asked the wrong question.

Lloyd N. Trefethen, FRS

MAXIMS ABOUT NUMERICAL MATHEMATICS, SCIENCE, COMPUTERS, AND LIFE ON EARTH.

Literature

- Stephen Boyd, Convex Optimization, http://stanford.edu/~boyd/cvxbook/
- Mosek Modeling Manual, http://docs.mosek.com/generic/modeling-letter.pdf
- Mosek Tutorials, https://github.com/MOSEK/Tutorials
- Thomas Schmelzer and Raphael Hauser, Seven Sins in Portfolio Optimization, http://arxiv.org/abs/1310.3396
- Thomas Schmelzer et al., Regression techniques for Portfolio Optimization using MOSEK, http://arxiv.org/abs/1310.3397