Explicit Solution for Position Constrained Minimum Variance Portfolios

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This talk (part I).

History of Quadratic Programming and Harry Markowitz.

Our main result is a semi-explicit solution to the program

$$\min_{x \in \mathbb{R}^p} \langle x, \mathbf{\Sigma} x \rangle$$
$$\mathbf{A} x = b$$
$$x \geq 0$$

under some assumptions on $\mathbf{\Sigma}$ and $\mathbf{A}$.

We will illustrate the proofs on a single-factor model.

References i

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