Portfolio Optimization with Expectiles

Fabio Bellini[1] Christian Colombo[1] Mustafa Pinar[2]
[1]Department of Statistics and Quantitative Methods,
University of Milano-Bicocca, Italy.
[2]Department of Industrial Engineering,
Bilkent University, Ankara Turkey.
fabio.bellini@unimib.it , c.colombo54@campus.unimib.it,
mustafap@bilkent.edu.tr

The expectiles have been introduced in the statistical literature by Newey and Powell (1987) as the minimizers of an asymmetric quadratic loss function. Expectiles are coherent risk measures, and it has been shown in a series of recent papers that they are actually the only coherent risk measures which can be defined by means of an expected loss minimization, a propriety that is called elicitability. In this work we study mean-expectiles optimal portfolios applying the techniques and results of Ruszczynski and Shapiro (2006) and Rockafellar, Uryasev and Zabarankin (2006). We investigate numerically optimal portfolios and compare them with other mean-risk approaches and with other related approaches based on gain-loss ratios or on piecewise linear utilities.

References

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