Coherent estimation of risk measures

Marcin Pitera

Institute of Mathematics, Jagiellonian University, Poland

Abstract

We develop a statistical framework for risk estimation inspired by the axiomatic theory of risk measures and show that coherent risk estimators are characterized through robust dual representations linked to L-statistics. We also show on simulated and market data that theoretical coherence of a risk measure need not carry over to its estimator unless the proper weighting structure on estimation level in maintained.

The talk is based on a joint work with D. Jelito (UJ, Krakow), I. Cialenco (IIT, Chicago), and M. Aichele (ECB, Frankfurt).

Keywords

estimation of risk measures, coherent risk measure, coherent risk estimator, expected shortfall, value at risk, L-estimator

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References

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