Stochastic Orders and Risk Measures: Consistency and Bounds

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Abstract

We investigate the problem of consistency of risk measures with respect to usual stochastic order or stop-loss order. It is shown that under weak regularity conditions coherent risk measures are consistent with these stochastic orders. This result is used to derive bounds for risk measures of portfolios.

Keywords: coherent risk measure, convex risk measure, convex order, copula, comonotonicity.