Conditional Value-at-Risk, Spectral Risk Measures and (Non-)Diversification in Portfolio Selection Problems –A Comparison with Mean-Variance Analysis

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Conditional Value-at-Risk, Spectral Risk Measures, and (Non-)Diversification in Portfolio Selection Problems – A Comparison with Mean-Variance Analysis

We study portfolio selection under Conditional Value-at-Risk and, as its natural extension, spectral risk measures, and compare it with traditional mean-variance analysis. Unlike the previous literature that considers an investor's mean-spectral risk preferences for the choice of optimal portfolios only implicitly, we explicitly model these preferences in the form of a so-called spectral utility function. Within this more general framework, spectral risk measures tend towards corner solutions. If a risk free asset exists, diversification is never optimal. Similarly, without a risk free asset, only limited diversification is obtained. The reason is that spectral risk measures are based on a regulatory concept of diversification that differs fundamentally from the reward-risk tradeoff underlying the mean-variance framework.

JEL-classification: G11, G21, D81

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