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Vine Copula in Risk Measurement

Abstract

Copulas are of crucial importance to the development of financial econometrics. The quantile curves of conditional copulas play a crucial role in financial applications – for instance in quantile regression. Many applications such as value-at-risk measurement, portfolio optimization and risk aggregation are based on simulation with copulas. The main goal of the study is to improve risk measurement methods for effective capital management by a financial institution. Due to the fact that modeling the dependency structure in portfolios composed of multiple instruments is still a challenge for financial econometrics, I have focused my research on a *vine copula* to estimate the risk measures. The study is a continuation of previous author's research about the influence of the estimation method on risk measures.