

Some remarks for a copula-based Conditional Value at Risk

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April 23rd, 2024

Abstract

Conditional Value at Risk (CVaR), which is usually defined for a single random variable, is one of well employed risk measures due to its properties of coherence. In this work, a new definition of copula-based conditional Value at Risk (CCVaR) is introduced, which is defined on multivariate random variables through copula and is real-valued. Copula functions provide flexible tools to model possible nonlinear relations among several risk factors; the combination of CVaR and copula gives a natural procedure to estimate risk of multivariate risk factors with potential different dependence structure. Some properties of this new copula-based risk measure are discussed. Empirical studies are also implemented, which verifies the usefulness of this new definition of CCVaR.