
MARIE-PIER CÔTÉ, McGill University
Copula-based Model for Risk Aggregation

A flexible approach is proposed for risk aggregation. The model consists of a tree structure, bivariate copulas, and marginal distributions. The construction relies on a conditional independence assumption whose implications are studied. A procedure for selecting the tree structure is developed using hierarchical clustering techniques, along with a distance metric based on Kendall's tau. Estimation, simulation, and model validation are also discussed. The approach is illustrated using data from a Canadian property and casualty insurance company.