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Asymptotic Confidence Intervals for the Haezendonck Risk Measure

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Haezendonck risk measures is a class of risk measures which includes, as its minimal member, the Tail Value-at-Risk (T-VaR) – T-VaR arguably the most popular risk measure in global insurance regulation. In applications often one has to estimate the risk measure given a random sample from an unknown distribution. The distribution could either be truly unknown or could be the distribution of a complex function of economic and idiosyncratic variables with the complexity of the function rendering indeterminable its distribution. Hence statistical procedures for the estimation of Haezendonck risk measures is a key requirement for its use in practice. A natural estimator of the Haezendonck risk measure is the Haezendonck risk measure of the empirical distribution, and recently it was shown that this estimator is both strongly consistent and converges to a weak limit at the square-root n rate. In this talk we will study the performance of asymptotic confidence intervals for the risk measure constructed by using the above asymptotic weak limit and estimators for its asymptotic variance.