

Statistical estimate of the proportional hazard premium of loss

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Abstract

The well known Proportional Hazard Premium Principle, introduced by Wang (1996), depends upon the survival function of the insured risk and a risk aversion index. Using this premium principle, we propose an asymptotically normal semi-parametric estimator for the net-premium of a high-excess loss layer of heavy-tailed claim amounts. An algorithm to compute confidence bounds is given. Moreover, a comparison between this estimator and the non-parametric estimator, proposed by Necir & Boukhetala (2004), is carried out.

Keywords : Extreme values, Heavy tails, Proportional Hazard Premium Principle, Risk theory, Reinsurance treaty.

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