Project: Practical implementation of optimal reinsurance under distortion risk measures

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Abstract: Reinsurance has been one of the trendy research areas in actuarial science over the past decade. Its popularity can be attributed to its versatility in achieving various strategic objectives of an insurer. Recently, the distortion-risk-measure-based optimal reinsurance design problem has been solved in Cheung and Lo (2017), Cui et al. (2013), Lo (2017), Zheng and Cui (2014), and Zhuang et al. (2016). On one hand, the distortion-risk-measure-based problem includes many existing and contemporary optimal reinsurance design problems as interesting examples being prevalent in the literature; on the other hand, the optimal indemnity function is very general due to the universality of the optimization problem. Therefore, this project aims to implement the optimality result into practice, via specifying the objective of the insurer and the reinsurance premium principle, and investigating the impact on the optimal indemnity function by different external forces.

References:


