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PREMIUM EVALUATION FOR DIFFERENT LOSS DISTRIBUTIONS USING UTILITY THEORY

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Abstract

For any insurance contract to be mutually advantageous to the insurer and the insured, premium setting is an important task for an actuary. The maximum premium (P_{max}) that an insured is willing to pay can be determined using utility theory. The main focus of this paper is to determine P_{max} by considering different forms of the utility function. The loss random variable is assumed to follow different Statistical distributions viz Gamma, Beta, Exponential, Pareto, Weibull, Lognormal and Burr. The theoretical expressions have been derived and the results have also been depicted graphically for some values of distribution parameters.

Keywords: utility function, insurance, premium, loss distribution.

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