

Coefficient of Rarity and its Variance

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Abstract: In property and casualty insurance, one comes across the term “once-in-a-k-years” loss, where the loss may be an earthquake, flood etc. and k (called coefficient of rarity) denotes expected number of years for the next loss. In this paper, we describe the method of obtaining k , by listing the underlying assumptions following Hogg and Klugman(1984). Then we calculate the variance of the estimator of k . We also present an alternative formula which will be suitable in other cases along with its variance. This formula is then used in the pricing of a catastrophe bond and its volatility using simulation.