The probability of ruin in a reinsurance risk model with m-dependence assumptions

HOANG NGUYEN HUY¹ and NGUYEN CHUNG²

¹University of Finance and Marketing

²University of Technical Education in Hung Yen

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Abstract

In this article, we investigate a discrete-time risk model. The risk model includes the quota- (α, β) reinsurance contract effect on the surplus process. The premium process and claim process are assumed to be m-dependent sequences of i.i.d. non-negative random variables. Using Martingale and inductive methods, we obtain upper bounds for ultimate ruin probability of an insurance company. Finally, we present a numerical example to show the efficiency of the methods.

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