

The finite-time ruin probability of a discrete-time risk model with subexponential and dependent insurance and financial risks

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Abstract: Consider a discrete-time risk model with insurance and financial risks in a stochastic economic environment. Assume that the insurance and financial risks form a sequence of independent and identically distributed random vectors with a generic random vector following a wide type of dependence structure. An asymptotic formula for the finite-time ruin probability with subexponential insurance risks is derived. In doing so, the subexponentiality of the product of two dependent random variables is investigated simultaneously.