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*On a perturbed dual risk model with dependence between inter-gain times and gain sizes*

Dual risk models may be used to model the revenue process of a company with constant expense rate and occasional gains. In this paper, we consider a dual risk model with both inter-gain distribution and expense rate depending on the size of the previous gain. Also, we assume that the surplus process is perturbed by a Brownian motion. Exact solutions for the Laplace transform and the first moment of the time to ruin with an arbitrary gain-size distribution are obtained. Applications with numerical illustrations are provided to examine the impact of the dependence structure and the perturbation.