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RUIN ESTIMATES UNDER INTEREST FORCE

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Risk theory considers stochastic models that may be used to study the risk of a risk enterprise, where the nature of the operation is such that expenditures may exceed receipts during some accounting periods in the normal course of operation. This study investigates in detail the surplus process of an insurance portfolio which involves the time of ruin, the surplus immediately prior to the time of ruin, and the deficit at the time of ruin. A numerical technique has been developed that allows the accurate and effective computation of the joint probability of ruin and the size of the claim that caused the ruin. Specific examples have been shown on how the programming language Fortran can be used to compute the probability of ruin for various claim distributions.

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