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The joint distribution of surplus immediately before ruin and the deficit at ruin under interest force. (English) [Zbl 1083.62547](#)

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Summary: We consider a compound Poisson risk model with a constant interest force. We investigate the joint distribution of the surplus immediately before and after ruin. By adapting the techniques of *B. Sundt* and *J. L. Teugels* [*Insur. Math. Econ.* 16, 7–22 (1995; [Zbl 0838.62098](#))], we obtain integral equations satisfied by the joint distribution function and a Lundberg-type inequality. In the case of zero initial reserve and the case of exponential claim sizes, we obtain explicit expressions for the joint distribution function.

MSC:

[62P05](#) Applications of statistics to actuarial sciences and financial mathematics

Cited in **9** Documents

[62E15](#) Exact distribution theory in statistics

[91B30](#) Risk theory, insurance (MSC2010)

Full Text: [DOI](#)

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