

COMPOUND BIRTH PROCESSES IN RISK MODELS

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Abstract

In this note the compound birth process is defined. The particular cases of Pólya - Aepli process, I - Pólya process and I - Binomial process are given. We consider the insurance risk model in which the counting process is the compound birth process. Some basic properties are given. The joint probability distribution of the time to ruin and the deficit after ruin occurs is studied. The case of exponentially distributed claims is given.

Key words: Birth process, Pólya - Aepli process, ruin probability, I - Pólya process.

AMS subject classifications: 60K10; 62P05.

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