Absolute ruin in the compound Poisson risk model with constant dividend barrier

Haili YUAN *Wuhan University, China.* E-mail: hailiyuan@gmail.com
Yijun HU *Wuhan University, China.* E-mail: yjhu.math@whu.edu.cn

Abstract: In this talk, we investigate the absolute ruin in the compound Poisson risk model with constant dividend barrier. An integro-differential equation satisfied by the absolute ruin probability, the distribution and moments of deficit at the absolute ruin time is derived. In the case of exponential individual claim, the explicit expressions are given. It turns out that some existing results in the literature can be re-deduced out from the results obtained in the present paper. Finally, by a "renewal" argument, which is different from the martingale approach, an integro-differential equation satisfied by the conditional probability of recovery, based on which the probability of recovery is formulated. In the case of exponential individual claim, the explicit expression for the probability of recovery is also given.