

**OPTIMAL PARISIAN-TYPE DIVIDEND PAYMENTS PENALIZED BY THE  
NUMBER OF CLAIMS FOR THE CLASSICAL AND PERTURBED  
CLASSICAL RISK PROCESS**

BY

**IRMINA CZARNA (WROCLAW), YANHONG LI (CHENGDU),  
ZBIGNIEW PALMOWSKI (WROCLAW), AND CHUNMING ZHAO (CHENGDU)**

**Abstract.** We consider the classical risk process (the case  $\sigma = 0$ ) and the classical risk process perturbed by a Brownian motion (the case  $\sigma > 0$ ). We analyze the expected NPV describing the mean of the cumulative discounted dividend payments paid up to the Parisian or classical ruin time and further penalized by the number of claims that appeared up to that time. We identify this function for a constant barrier strategy and we find sufficient conditions for this strategy to be optimal. We also analyze a numerical example of exponential claim sizes.

**2020 Mathematics Subject Classification:** Primary 60J99; Secondary 93E20, 60G51.

**Key words and phrases:** classical risk model, diffusion process, number of claims, Parisian ruin, dividend.

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