

ZONE-ADAPTIVE CONTROL STRATEGY FOR A MULTIPERIODIC MODEL OF RISK

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Abstract

In this paper intended to illustrate the adaptive control approach in insurance, a zone-adaptive control strategy harmonizing the requirements of principles of solvency and equity is considered in the simplistic framework of diffusion multiperiodic risk model. The adjacent works by the author set the similar adaptive control strategies in more realistic Poisson-exponential multiperiodic risk model. The room for further generalizations is large. In particular, it is the risk theory insight into the problem of asset-liability and solvency adaptive management in insurance under deficient information. The latter means that the intensities of the successive annual claim arrival processes are the random variables which comply with a certain scenario.

Keywords: Multiperiodic insurance process, equity, solvency, zone-adaptive control, diffusion risk model