Formulating vectors of random sums for applications of actuarial thinking in enterprise risk management

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Abstract

Vectors of two random sums are generally recognized as stochastic models of particular theoretical and practical importance. The theoretical contribution of the paper consists of formulating and establishing properties of a vector incorporating two random sums. Moreover, the practical contribution of the paper consists of providing an interpretation of the formulated vector as an actuarial tool of enterprise risk management.

Keywords and phrases: Random sum, actuarial tool, enterprise risk management.

1. Introduction

Enterprise risk management is defined as the discipline concentrating on the systematic and integrated approach to the management of risks threatening an organization [4]. Moreover, enterprise risk management can be considered as the wide conceptual structure that combines the many different areas of the actuarial discipline. It can be said that enterprise risk management develops a logical frame to connect these subject areas together in a forceful manner to create a totality. In this way, enterprise risk management approaches fundamental business matters such as growth, return, consistency and value creation. It considers risk not just as threat, but an opportunity. By means of enterprise risk management, the explicit relationship between business principles and actuarial theory and practice should employ researchers and practitioners with different qualification in the investigation of actuarial problems [6, 7].

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