Time Varying Copula Model for claims reserving in Non life insurance

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Abstract

In this paper, we have proposed a time varying copula models to understand the behaviour of claims amounts of two lines of business. Time varying copula functions with a Generalized Autoregressive Conditional Sinistrality model are used to analyse the evolution in time of dependence between two lines and the temporal dependence between claims of each line. Simulation study is performed to highlight the impact on reserves and Solvency Capital Requirement. Results show that our approach provides a diversification effect between claims amounts and can avoid a cost of capital.

Keywords: Claims reserving, Time varying copula models, Generalized Autoregressive Conditional Sinistrality model, Simulation method , Solvency Capital Requirement.

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