

Modelling the Claims Development Result for Solvency Purposes

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Abstract

We assume that the claims liability process satisfies the distribution-free chain-ladder model assumptions. For claims reserving at time I we predict the total ultimate claim with the information available at time I and, similarly, at time $I + 1$ we predict the same total ultimate claim with the (updated) information available at time $I + 1$. The claims development result at time $I + 1$ for accounting year $(I, I + 1]$ is then defined to be the difference between these two successive predictions for the total ultimate claim. In [4, 8] we have analyzed this claims development result and we have quantified its prediction uncertainty. Here, we simplify and illustrate the results obtained in [4, 8]. We emphasize that these results have direct consequences for solvency considerations and were (under the new risk-adjusted solvency regulation) already implemented in industry.

Keywords: Stochastic Claims Reserving, Chain Ladder Method, Claims Development Result, Loss Experience, Incurred Losses Prior Accident Years, Solvency, Mean Square Error of Prediction.

References:

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