On some extensions to classical chain ladder method

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Abstract

Accurate loss reserves are essential for insurance companies to meet and administer their contractual obligations to policyholders and to efficiently price their insurance products. Many claims reserving methods have now been established and in the actuarial literature the focus has mainly been on aggregate reserving techniques. In recent years, there have been many proposals of reserving models that are based on individual level claims data. Martinez-Miranda et al. (2013) extend the traditional chain ladder framework towards the continuous use of individual claims data, where data is gathered monthly in run-off triangle and reserves are estimated with non-parametric estimation of the underlying density. The question arises whether estimations based on monthly data substantially outperform results obtained by, say, quarterly data. We consider simulated data and evaluate the impact of chosen data level (monthly, quarterly and yearly) on the predictive distribution of the outstanding reserve.

Keywords: Chain ladder, Claims reserves, Individual claims data

References

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