

Peters, Gareth W.; Shevchenko, Pavel V.; Wüthrich, Mario V.

Model uncertainty in claims reserving within Tweedie's compound Poisson models. (English)

Zbl 1203.91114

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Summary: We examine the claims reserving problem using Tweedie's compound Poisson model. We develop the maximum likelihood and Bayesian Markov chain Monte Carlo simulation approaches to fit the model and then compare the estimated models under different scenarios. The key point we demonstrate relates to the comparison of reserving quantities with and without model uncertainty incorporated into the prediction. We consider both the model selection problem and the model averaging solutions for the predicted reserves. As a part of this process we also consider the sub problem of variable selection to obtain a parsimonious representation of the model being fitted.

MSC:

91B30 Risk theory, insurance (MSC2010)

62P05 Applications of statistics to actuarial sciences and financial mathematics

Cited in **26** Documents

Full Text: [DOI](#) [arXiv](#)

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