THE MEAN SQUARE ERROR OF PREDICTION IN THE CHAIN LADDER RESERVING METHOD – FINAL REMARK

BY

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It seems to us that the discussion with Thomas Mack, Gerhard Quarg and Christian Braun illustrates how important it is to clearly define the understanding of the estimation error: Basically the estimation error derives from the fact that the true parameters of the underlying stochastic model are unknown and need to be estimated from the observed data. But the outcome of these observed figures in the claims trapezoid could also have been different. How to interpret this "being different"?

In our paper we have described three possible answers to this question (approaches in formulae (4.15)-(4.17)), namely complete resampling and conditional resampling as the extreme cases plus a compromise between these extremes. We have chosen to write our paper on the understanding of conditional resampling because we wanted our measure of estimation error to depend on the actual observed data which lead us to work with the conditional probability distributions given the observed trapezoid.

The question of the "right form of resampling" is indeed a fundamental one. It is not a chain ladder specific question, but needs to be answered for all methods of stochastic claims reserving, in particular for all approaches using bootstrapping techniques. In the latter case the bootstrapping technique directly follows from this understanding.

Finally, we acknowledge that the discussions with Thomas Mack, Gerhard Quarg and Christian Braun have been a great stimulus to us, firstly to better understand our own ideas and secondly to learn that other interpretations of the estimation error may also be important. We hope to continue learning from continuing discussions with them on a private basis.

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