

# A comparison of stochastic claims reserving methods

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## Abstract

In order to preserve their solvency, it is very important for insurance companies to estimate accurately their outstanding claims (incurred but not reported (IBNR) claims and reported but not settled (RBNS) claims) and then their future required reserves. The aim of this article is to determine IBNR and reserves by using different stochastic models: 1) Mack's model (distribution-free model), 2) probability distribution based models (Normal, Poisson, Gamma and Inverse Gaussian distributions), and 3) these latter probability based models combined with bootstrapping. To implement these models we used data on life-insurance and non-life insurance. Life-insurance dataset comprises data on the Austrian claims numbers and claims amounts used by Kulikov and Dixon (2014) in the discussion notes. Regarding the non-life insurance, dataset used by England and Verrall (2002) is considered.

*JEL Classification:* E4; E5; G1

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