

In this thesis we study policy-level models for unreported claim counts. We assume that the total number of claims on a policy follows a Poisson or negative binomial distribution. The parameters of these distributions depend on the risk exposure introduced in the thesis, we also describe possible methods of calculating the risk exposure. We derive distributions for the number of reported and unreported claims, both of which are dependent on the report lag time of a claim. To estimate the parameters of these distributions, we use the maximum likelihood method. We demonstrate the performance of the models via a simulation study.