

In non-life insurance, the independence between the number and size of claims is usually assumed. However, this thesis shows that the assumption of independence can be omitted. We deal with the dependency modeling between frequency and severity of claims. For including the dependence to the total claims model, we consider two methods. The first method uses generalized linear models and the second method used in the thesis is based on dependence modeling by copulas. We also perform a model with independent frequency and severity of claims. This model is compared with the described methods in the simulation part of the thesis. We include dependency on explanatory (rating) variables in all of these models.