

In this work, we deal with composite distributions that can be used to model loss sizes in some specific classes of non-life insurance. The first part contains definition of the general composite model and its special features. The second part describes models that are made up by piecing together Weibull distribution and distributions belonging to a family of transformed beta distributions. The third part describes algorithm that computes the maximum likelihood estimators for parameters of composite distribution and criteria of the relative quality of statistical models. In the last part we apply composite models to two real data sets.