A Cross-Sectional Survival Analysis Regression Model with Applications to Consumer Credit Risk

When performing long-range survival estimations, longitudinal survival analysis methods such as Cox Proportional Hazards (PH) and accelerated lifetime models may produce estimates that are outdated. This paper introduces a cross-sectional survival analysis regression model for discrete-time survival analysis. The paper describes a number of variations to the model, including how the model can be used to model competing risks. The model is applied to a portfolio of defaulted loans, to estimate the probability of loss. The model’s performance is benchmarked against the Cox PH model. Results show that cross-sectional survival analysis performs better than the conventional methods of survival. This is attributable to the fact that the cross-sectional survival method is able to use only the most recent survival information to inform predictions.