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Default Probability Estimation from Historical Data

Over the last few years, different methods using the assumption of time homogeneity of rating transition matrices have been proposed. However, most of the methods do not use the actual information provided in the data, for example, time a firm spends in a rating, the tendency for a firms rating to drop, and etc. In my poster, I will address the well known methods (naive approaches and Baum-Welch learning) to estimate the credit rating transition probability matrix, as well as propose a particle filtering approach to incorporate time inhomogeneity and the tendency to go downwards into the estimation process.