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Default forecast with auxiliary information using a logarithmic transformation model.
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Summary: This paper studies how to integrate auxiliary information into the estimation procedure to improve the stability and efficiency of estimators for default forecast and introduces a log-transformation logic model to characterize different default probability curves. In this paper, we establish the consistency and asymptotic normality of the estimators and prove the efficiency of the proposed estimators with auxiliary information. Simulation results show that the proposed method can improve the efficiency of estimation and the influence of auxiliary information is discussed. We apply the proposed method to the data of ST (special treatment) stocks, and the empirical results show that the parameter estimation with auxiliary information is more effective.

MSC:
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62P05 Applications of statistics to actuarial sciences and financial mathematics

Keywords:
default; auxiliary information; credit risk; empirical likelihood; log-transformation

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