

Stochastically Ordered Models for Credit Rating Dynamics

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Credit ratings play nowadays a very important role in financial and risk management. Dynamics of credit ratings significantly influence investment flows at finance, insurance, energy, and other markets. At present, it becomes common to use Markov chains and related models to describe the dynamics of credit ratings as an indicator of the likelihood of rating defaults and other risk rating events. New stochastically ordered Markov and semi-Markov models for stochastic modelling of credit rating dynamics are introduced. Simulation, numerical, and statistical aspects of using such models in credit rating calculations connected with default time type distributions and their moment characteristics are discussed.