APPLICATION OF COPULA-BASED BINAR MODELS IN LOAN MODELLING

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A bivariate integer-valued autoregressive process of order 1 (BINAR(1)) with copula-joint innovations is studied. We analyse different parameter estimation methods and compare them via Monte Carlo simulations with emphasis on estimation of the copula dependence parameter. An empirical application on defaulted and non-defaulted loan data is carried out using different combinations of copula functions and marginal distribution functions covering the cases where both marginal distributions are from the same family, as well as the case where they are from different distribution families.