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Multivariate Smooth Transition Ar Model with Aggregation Operators and Application to Exchange Rates

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Abstract: An overview of multivariate modelling based on logistic and exponential smooth transition models with transition variable generated by aggregation operators and orders of auto and exogenous regression selected by information criterion separately for each regime is given. Model specification procedure is demonstrated on trivariate exchange rates time series. The application results show satisfactory improvement in fit when particular aggregation operators are used. Source code in the form of Mathematica package is provided.

Keywords: multivariate STAR; aggregation operator; information criterion; exchange rates;

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