



Dokumenttyp:

Zeitschriftenaufsatz

Autor(en) des Beitrags:

Brechmann, E.C., and Czado, C.

Titel des Beitrags:

COPAR - Multivariate time series modeling using the COPula AutoRegressive model

Abstract:

Analysis of multivariate time series is a common problem in areas like finance and economics. The classical tool for this purpose are vector autoregressive models. These however are limited to the modeling of linear and symmetric dependence. We propose a novel copula-based model which allows for non-linear and asymmetric modeling of serial as well as between-series dependencies. The model exploits the flexibility of vine copulas which are built up by bivariate copulas only. We describe statistical inference techniques for the new model and demonstrate its usefulness in three relevant applications: We analyze time series of macroeconomic indicators, of electricity load demands and of bond portfolio returns.

Stichworte:

multivariate time series, copula autoregression, vector autoregression, vine copula

Dewey Dezimalklassifikation neu:

510 Mathematik

Zeitschriftentitel:

Applied Stochastic Models in Business and Industry

Jahr:

2015

Band:

31

Heft / Issue: 4

Seiten: 495-514

Reviewed: ja

Sprache: en

Volltext / DOI: doi:10.1002/asmb.2043

WWW: Applied Stochastic Models in Business and Industry

Verlag / Institution: John Wiley and Sons Ltd.

Verlagsort: Chichester, UK

Status: Verlagsversion / published

Semester (für SAP-Datenerfassung): SS 15

TUM Einrichtung: Lehrstuhl für Mathematische Statistik

Format: Text

Occurences:

- Einrichtungen > Fakultäten > Fakultät für Mathematik > Zentrum Mathematik > Arbeitsgruppe Mathematische Statistik > Angewandte Mathematische Statistik (Prof. Czado) > 2015

Entries: