Abstract: The tail behaviour of stationary Rd-valued Markov-Switching ARMA processes driven by a regularly varying noise is analysed. It is shown that under appropriate summability conditions the MS-ARMA process is again regularly varying as a sequence. Moreover, the feasible stationarity condition given in Stelzer (2006) is extended to a criterion for regular variation. Our results complement in particular those of Saporta (2005) where regularly varying tails of one-dimensional MS-AR(1) processes coming from consecutive large parameters were studied.

Stichworte: heavy tails, regular variation, non-linear time series models, stochastic difference equation

Zeitschriftentitel: Journal of Multivariate Analysis

Jahr: 2008

Band: 99

Heft / Issue: 6

Seiten: 1177-1190

Reviewed: ja

Sprache: en