Asymmetric COGARCH processes

Abstract:
Financial data are as a rule asymmetric, although most econometric models are symmetric. This applies also to continuous-time models for high-frequency and irregularly spaced data. We discuss some asymmetric Versions of the continuous-time GARCH model, concentrating then on the GJR-COGARCH. We calculate higher order moments and extend the first jump Approximation. These results are prerequisites for Moment estimation and pseudo Maximum likelihood estimation of the GJR-COGARCH Parameters, respectively, which we derive in detail.

Stichworte:
APCOGARCH, Asymmetric Power COGARCH; COGARCH; Continuous-time GARCH; First-Jump Approximation; GJR-GARCH; GJR_COGARCH; High-frequency Data; Maximum-Likelihood Estimation; Method of Moments, Stochastic Volatility