

Fourier--type Estimation of the Power GARCH Model with Stable--Paretian Innovations

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Abstract

We consider estimation for general power GARCH models under stable--Paretian innovations. Exploiting the simple structure of the conditional characteristic function of the observations driven by these models we propose minimum distance estimation based on the empirical characteristic function of corresponding residuals. Consistency of the estimators is proved, and we obtain a singular asymptotic distribution which is concentrated on a hyperplane. Efficiency issues are explored and finite--sample results are presented as well as applications of the proposed procedures to real data from the financial markets. A multivariate extension is also considered.

This is a joint work with Simos Meintanis.