Joint Statistics Seminar

The Hong Kong University of Science and Technology

GARCH Model with Ergodic and Stationary Rescaled Errors

by

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Time: 3:00 p.m. – 4:15 p.m.
Venue: Room 4379 (Conference Room, Lift 17/18)

Abstract

Various kinds of time series such as asset returns in financial markets have time-varying variance, and the generalized autoregressive conditional heteroscedasticity (GARCH) model has been widely used to estimate the variance. While rescaled (standardized) time series are conventionally assumed to be IID in most existing studies, the iidness is not always satisfied in practice. This work gives empirical evidence that the rescaled errors have dependence structure in foreign exchange data by utilizing a test based on the extreme value theory. Then the asymptotics of GARCH estimator is proved with only assuming the rescaled errors are ergodic and stationary. The efficiency of the estimator is illustrated using a simulated example.

❖ ***All interested are welcome!*** ❖

For details, please contact ISOM Department.