

Autoregressive Conditional Heteroskedasticity Models and the Dynamic Structure of the Athens Stock Exchange

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Abstract

ARCH (Autoregressive Conditional Heteroskedasticity) models have been applied in modelling the relation between conditional variance and asset risk premium. The most important theoretical regularities that govern the dynamic structure of financial time series are presented. A model named Exponential E-GARCH in Mean tests their validity in Athens Stock Exchange. The model fits well in Greek Stock Market, from 31 July 1987 to 30 July 1999, and provides empirical evidence on theoretical regularities. We find evidence for the existence of a positive trade-off (possible non-linear) between stock returns and volatility, the absence of 'leverage effects', the thick tailed stock returns distribution, the slower rate information accumulation when the market is closed than when it is open, the existence of positive non-synchronous trading effects and the existence of a long-term memory pattern in stock returns.