AN EMPIRICAL ILLUSTRATION OF OUT OF SAMPLE FORECAST PERFORMANCE OF LOGISTIC SMOOTH TRANSITION AUTOREGRESSIVE-GARCH (LSTAR-GARCH) AND GARCH MODELS

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Abstract

Economic and financial time series literature has shown that the task of estimating the parameters of nonlinear models may be solved by using the models that are nonlinear in nature. This paper considers logistic smooth transition autoregressive-GARCH and GARCH models. Theoretical frame were examined and their parameter estimated, the estimated parameters were used to determine the out-of – sample forecast performances of LSTAR-GARCH and GARCH models. The established theories were applied to Nigeria Naira and Botswana Pula against United States of American dollar from 1975 to 2012. From the analysis the model that produced the better out-of – sample forecast performance was LSTAR-GARCH as its outperformed classical GARCH model.