VOLATILITY MODELLING OF FOREIGN EXCHANGE RATE :

DISCRETE GARCH FAMILY VERSUS CONTINUOUS GARCH

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Abstract Non-linearity is the general characteristic of financial series. Thus, common non-linear models such as GARCH, EGARCH and TGARCH are used to obtain the volatility of data. In addition , continuous time GARCH (COGARCH) model that is the extansion and analogue of the discrete time GARCH process, is the new approach for volatility and derivative pricing. COGARCH has a single source variability like GARCH, but also it is constructed on driving Levy Process since increments of Levy Process is replaced with the innovations in the discrete time. In this study, the proper model for the volatility is shown to represent foreign exchange rate of USD versus TRY for different period of time from January 2009 to December 2011.

Keywords : volatility, Levy Process, COGARCH