ABSTRACT

NIRAWITA UNTARI. Time Series Data Analysis with Heterogen and Asymmetry Error Variance : Jakarta Composite Index Study for 1999-2008. Under the direction of AHMAD ANSORI MATTJIK and ASEP SAUFUDIN.

Time series data at financial area has value experiencing fluctuate from time to time. This fluctuation results its conditional variance is becoming not constant. So modelling with model ARIMA cannot be applied by assumption of homogeneity of variance is not fulfilled. One of way of overcome it is with simultaneously modeling mean function and variance function. The model is recognized as Generalized Autoregressive Conditional Heteroscedasticity (GARCH). Some data financial shows existence of negative relationship between value changes return with movement of its volatility. Existence of impairment return has influence larger ones to movement of its volatility. Exponential-GARCH (EGARCH) model can overcome the asymmetric problem with modeling conditional variance as function of log-linear. So conditional variance value predicted negativity will never.

Jakarta Composite Index (JCI or IHSG) be one of indicators applied by government in taking policy in the field of chartered investment counsel. Besides government assumes the importance of stock market alternatively defrayal besides banking. A real big fluctuation happened in stock exchange, because every transaction is noted with small time scale so that value change happened so quickly. At this case assumption of homogeneity of variance is not fulfilled. At stock exchange also shows existence of asymmetric influence. Hence applied model EGARCH in modeling daily value of JCI (IHSG). Chosen EGARCH model is MA(1)-EGARCH(1,1). EGARCH Model very good in modeling daily value of JCI (IHSG), but have not yet enough good to forecasting value JCI (IHSG ) which will come. Besides forecast to daily value of JCI (IHSG), modelling of variance function also yields forecasting to its conditional variance. Forecast of conditional variance hardly good for asset holder in seeing behavior of movement of JCI (IHSG ) and calculate level of risk holds a leg asset in the future.