MODELLING OF CONSUMER PRICE INDEX OF SURABAYA’S HOUSING WITH AUTOREGRESSIVE STRUCTURAL CHANGE AND GENERALIZED AUTOREGRESSIVE CONDITIONAL HETEROSKEDASTICITY (GARCH)

Name : Lutfiana Maryetin
NRP : 1306100074
Department : Statistika
Supervisor : Dr. Irhamah, S.Si., M.Si

ABSTRACT
Consumer Price Index (CPI) of Surabaya’s housing is one of the national index used by the government to show the development of housing commodities around Surabaya. Surabaya’s housings and properties significantly grew up in a few years ago, the growth continuously increases after monetary crisis in 1997, but actually the break points happened contextually not in July 1997. Break points of datas caused by establishment of Tax Issues at December 1997 and the agreement with IMF about $5 Billions at January 2000. The detection of structural change of CPI we use Autoregressive Structural Change test, eventually in some econometrical researches we found that residuals of model was not normal, caused by outliers. The effect of fuel price rising is the most influenced outlier at March and October 2005. Homogenity assumption of residuals should accomplished by structural change model, if there was not homogeneity residual, modeling of error’s variance using GARCH was needed. Forecasting using intervention and GARCH model show that the CPI will rise slightly until the end of 2010.

Keywords : Consumer Price Index (CPI) of Surabaya’s housing, Autoregressive Structural Change, and GARCH.