ENDY JERI SUSWONO. The Effect of Macroeconomic Variables on Return of Jakarta Composite Index. Supervised by DEDI BUDIMAN HAKIM dan TONI BAKHTIAR.

Jakarta Composite Index (JCI) is an index that represents Indonesia’s stock market condition. Positive movement of the index means growth of the market and if the movement is negative, it means that the market is weakening. This index is influenced by many variables. The objective of this research was to modeled JCI's return based on the variables that influenced it. These variables includes domestic and global macroeconomic variables. Changes in macroeconomic conditions would affect most of the entities in the capital market.

The macroeconomic variables used in this study were Indonesian real interest rate, real exchange rate of US dollar against Indonesia rupiah, US real interest rate, and WTI crude oil prices. Data used in this research were monthly time series data from January 2003 to December 2017. Then, the time series data were analyzed by descriptive and quantitative econometrics approach.

The analysis model used in this study were a vector error correction model (VECM) and an adaptive network-based fuzzy inference system (ANFIS). In the VECM method, an impulse response function (IRF) test were used to show the JCI’s response if there is a shock in the macroeconomic variables and a forecast error variance decomposition (FEVD) test to show the contribution of each macroeconomic variable to the JCI movement. The ANFIS model was used to construct the JCI’s return prediction model in various macroeconomic conditions.

The result of VECM equation showed that in the long-term, both Indonesia real interest rate and US real interest rate significantly and positively influenced the JCI. The IRF and FEVD results indicated that changes in US real interest rate has the greatest influence on the JCI return compared than the other three macroeconomic variables. The ANFIS model exhibited the direct impact of changes in macroeconomic variables on JCI’s return. The model also showed that real exchange rate is the most significant variable in JCI’s return. Accuracy rate of the prediction model is 83.33 percent in terms of predicting the direction of the JCI movement. The model has better performance then the VECM model.

Keywords: ANFIS, JCI, macroeconomics, stock markets, VAR/VECM.