

ABSTRACT

Stock price index is an indicator or reflection stock price movements. Index is a guideline for investors to invest capital investment in the capital markets in particular stocks. This study predicts the closing price of the stock price index on day $(t + 1)$, $(t + 5)$, $(t + 10)$, $(t + 20)$, and $(t + 30)$ using Support Vector Regression (SVR) - Random Forest (RF) and then compare it with using Support Vector Regression and Random Forest. The data used in this study is Indonesia Composite Index (IDX Composite) data for five years (2011-2015). The results obtained in this study is the value of MAPE for SVR is smaller for the prediction of day $(t + 1)$ and $(t + 5)$ with a value of 1.9119% and 4.5691%, while for the prediction of day $(t + 10)$, $(t + 20)$, and $(t + 30)$ the method that has the smallest MAPE value is SVR-RF with MAPE value of 4.1173%, 8.6391% and 9.1708%. From these results it can be concluded that the SVR method is good for short-term prediction while SVR-RF good method for long-term predictions.

Keyword : Prediction Indices, IDX Composite, Support Vector Regreession, Random Forest