Abstract

Stock index is an indicator to determine the stock price changes at any time of the year the price basically . Stock price indexes tend to be unstable and always change so prediction is necessary so an investor can invest appropriately . Many methods can be applied to predict stock index , one of which is the method used in this thesis, namely the ARIMA and Genetic Programming.

In the ARIMA method, stock price index data do differencing so that the data stationary, then the results can be obtained by differencing p and q its order by plotting the ACF and PACF. Order p and q is a range of models that may be used. The best model obtained in ARIMA is used to predict the stock price index so that the residue can be obtained. In Genetic Programming, carried out the process of evolution in which the process is used to find a function that can estimate the residual values generated by the ARIMA method. The search function using residual values based on the results of prediction using ARIMA.

The results of ARIMA + GP method is better than ARIMA method alone. This is shown by the percentage error average in ARIMA method of 1.207618 % while the mixed methods ARIMA + GP of 1.181192667 %.

***Keywords** : Stock Indices , ARIMA , GP*