

Abstract

In the current era of digitalization, there are many choices for people to invest their funds. One way is by buying and selling shares. The digital banking industry has become a trend for people to invest because it has bright prospects in the future. For this reason, forecasting is needed to predict stock prices so that people can plan their financial decisions carefully. In this research PT. Bank Raya Indonesia Tbk (AGRO.JK) was chosen as the predicted stock index because this bank is the pioneer of digital banks among state-owned banks in Indonesia. Time series analysis can be used to forecast stock prices in the future. There are two time series models used, namely the Autoregressive Integrated Moving Average (ARIMA) model which is univariate with closed price variables and the Vector Autoregressive Moving Average (VARMA) which is multivariate with closed and lowest price variables. With a ratio of 80% train data and 20% test data, the ARIMA(17,1,17) model produces an RMSE value of 0.0206 and the VARIMA(9,1,1) model produces an RMSE value of 0.5707.

Keywords: prediction, stocks, time series, ARIMA, VARIMA, RMSE