

ABSTRACT

COMPARISON OF ARIMA AND DOUBLE EXPONENTIAL SMOOTHING HOLT METHODS FOR GOLD PRICE PREDICTION

By

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When the Covid-19 pandemic took place, the world economy experienced an unstable condition. This makes investors move to invest their assets in both gold and shares. During the pandemic, gold investment was the most popular investment and could produce more value because it was safe, more profitable, easy to liquidate, low risk, small funds, easy to move and manage yourself. From 2019 to the end of 2021, the price of gold experienced a fairly high increase until then it experienced fluctuations up and down again after the pandemic, but it was still significant, which means that the current fluctuations are not as big as the fluctuations during the pandemic. This research aims to predict the price of gold in US Dollars using the best model built from the ARIMA and Double Exponential Smoothing Holt methods. To measure the level of model accuracy in this research, the evaluation metrics MAE, RMSE, and MAPE were used. This research resulted in an ARIMA(6,1,0) model accuracy of 99.36% and a Holt Double Exponential Smoothing model accuracy level (alpha = 0.9, beta = 0.1) of 86.64% so that the model chosen to predict gold prices for 30 days in the future, namely the ARIMA(6,1,0) model. The results of this prediction can provide a contribution in the form of understanding regarding the effectiveness of the resulting model in predicting gold prices.

Keywords : Gold price, predictions, ARIMA, Double Exponential Smoothing Holt