UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

TIME SERIES FORECASTING OF GOLD PRICES WITH MISSING VALUE ANALYSIS

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ABSTRACT

During Covid-19, the trend of investing has kept on increasing especially among male and older investors (Ortmann et al., 2020). Investors have invested in various platforms and gold prices have been one of the platforms used to invest. Using past data as a starting point, forecasting is a method that produces well-informed, predictive estimations for future trend direction. This study focuses research on forecasting gold prices. It aims to solve problems for investors in predicting future values. Time series forecasting is mainly used in this study and Box Jenkins is the chosen model used. This study aims to apply missing value analysis in the missing data; to use the Box Jenkins model in actual gold price data from September 2022 until February 2023; to select the best ARIMA model and to forecast the gold prices data in a year using ARIMA model. The method used in this study is time series forecasting, Box Jenkins model. The applications used in this study are statistical packages for social science (SPSS) and econometric views (EViews). The best ARIMA model that has been selected by comparing Akaike Information Criterion (AIC), Bayes Information Criterion (BIC) and Durbin Watson measures error is ARIMA (2,1,1) for buy and sell of gold price. The forecasting result in EViews shows a positive increase in both buy and sell of gold prices. The result forecast is for one year ahead of time from February 2023 until February 2024. Therefore, all this study objective has been achieved. Accurate gold price projections increase confidence and stability in the financial system overall, which benefits both individual investors and entire economies.