ABSTRACT

VECTOR AUTOREGRESSIVE MODELING AND ANALYSIS OF DETERMINING FACTORS IN IDR-USD EXCHANGE RATE PREDICTION

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The fluctuation of the Indonesian Rupiah (IDR) against the United States Dollar (USD) can significantly impact Indonesia's economy. Therefore, it is necessary to analyze the influencing factors of exchange rate changes and provide forecasts. This study analyzes the relationships among economic variables and predicts exchange rates based on their interactions using the Vector Autoregressive (VAR) model. The data used are monthly secondary data from 2000 to 2024, covering variables such as exports, imports, inflation, BI Rate, and exchange rate. Based on the AIC, the optimal lag selected is lag 12. The Granger causality test results indicate bidirectional relationships between the exchange rate and export, import, and BI Rate, while the relationship between the exchange rate and inflation is not statistically significant. The constructed VAR model demonstrates strong performance, with a MAPE of 2,59%, RMSE of 527,97, and MAE of 407,25. The IDR/USD exchange rate forecast for 2025 shows fluctuations, with the highest value expected in April at 16.443,44 and the lowest in August at 16.036,14. This research is expected to serve as a reference for macroeconomic analysis and more targeted monetary policy planning.

Keywords: *Exchange Rates, Granger Causality, IDR, Optimal Lag, USD, Vector Autoregressive (VAR)*