

## **ABSTRACT**

*The exchange rate is one of the macroeconomic components that have a distinctive characteristic of fluctuation and heteroskedasticity pattern. From early of 2008 to the end of 2017, the rupiah has been depreciated toward US dollar as much as 44,59% were during those periods it consists of high fluctuation periods especially between 2008-2009 and 2014-2016 but interspersed by a more stable period during 2010-2013. Consequently, it is paramount important to perform research regarding the projection model for rupiah to the US dollar exchange rate that fits with its distinctive characteristic.*

*This research will focus on the projection performance comparison of ARIMA-GARCH time series method and Backpropagation Artificial Neural Network (BP-ANN) method for rupiah to the US dollar exchange rate. From Mean Squared Error (MSE) measurement method and level of accuracy measurement, BP-ANN shows a better performance compared to ARIMA GARCH. Another conclusion from this research is the decreasing performance along with the projection time duration that happened to both models.*

**Keywords:** *ARIMA, Artificial Neural Network, Backpropagation, GARCH, Proyeksi, Time series.*