ABSTRACT

Foreign exchange trading is the most liquid trade in the world. One of the most influential currencies in the world is the US Dollar. In this study what will be examined is the exchange rate of the US Dollar against the Rupiah whose volatility recorded the highest average of 1.98% and the lowest of 1.98% during the period 2009 to 2018. This shows the existence of uncertainty or risk for economic actors. According to economists, the thing to do in protecting the asset value is to use derivative products, such as options.

The Well-known model used for forecasting and determining option values is the Black-Scholes Model using historical volatility and others are using the GARCH model in determining volatility. In this study, the object of the exchange rate of US Dollar with Rupiah will be compared between the two models using the average mean square error, which is to see how small the error results obtained. The results of the comparison of the two models are known that it turns out that for 1 month, the Black Scholes model has smaller errors for call and put values with a percentage of profits using a short strangle strategy of 83.75%. For 2 months the GARCH model is better for call and put values with a percentage of profits using a short strangle strategy of 71.62%. For 3 months the Black-Scholes model is better for call and put price with a percentage of profits using a short strange strategy of 72.04%.

Keywords*: Black-Scholes, Derivatives, Exchange Rate, GARCH, Options, Strangle Strategy.*