

ABSTRACT

The stock of PT. Bank Rakyat Indonesia (Persero) Tbk. occupy the second position as the stocks with the biggest market capitalization based on market capitalization on the Indonesia Stock Exchange (IDX). Volatility in stock returns refers to the occurrence of stock price fluctuations over time, reflecting the market risk and uncertainty faced by investors. Volatility in stock return indicates the occurrence of heteroscedasticity problems in the residual or error part of the model, namely in the residuals of stock returns. The ARIMA model is used to capture the linear pattern of stock returns, while the Autoregressive Conditional Heteroscedasticity (ARCH) and Generalized Autoregressive Conditional Heteroscedasticity (GARCH) volatility models are applied to the residuals of stock returns to model volatility that reflects volatile market price fluctuations. ARCH and GARCH models are used in this study to handle heteroscedasticity caused by the volatility of Bank BRI stock data in the period 1th July 2019 to 27th June 2023. The result of the analysis concluded that there is a heteroscedasticity effect in Bank BRI stock data. The best model found for BRI Bank stock data is the ARIMA(0,0,[2,3])-GARCH(2,2) model with the smallest AIC value obtained is -3,7656 with 95% confidence level.

Keywords: Stock, Return, ARIMA, Heteroscedasticity, ARCH, GARCH.