ABSTRACT

The secondary market where shares are traded is one of them capital market instruments where investment enters. Investors decide to buy or sell shares with various considerations and analysis. This study aims to forecast the LQ45 Index Price from macroeconomic variables for the period January 2010 - December 2019.

With the use of Artificial Intelligence technology, the cyber physical system may produce algorithmic models with difficult-to-predict stock values that are highly helpful for investors. The Long Short-Term Memory model is one that Machine Learning employs to forecast stock values with reasonable accuracy.

The results show that the most optimal model achieves an RMSE value of 0.739555398, demonstrating its ability to make fairly accurate LQ45 index price predictions based on the selected macroeconomic index factors and the smaller the RMSE value is more robust because the value is close to 0.

Academicians can look at how these findings might be used in business and investment settings, giving industry specialists useful information. This might result in more precise forecasts and a better comprehension of the behavior of the LQ45 Index Price.

Keywords: lq45 index Price, forecasting, exchange rate, interest rate, credit volume ,gold price, industrial production index, money supply, internal debt stock, long -term memory