

## **ABSTRACT**

*In the financial market, Free Cash Flow (FCF) is part of the financial statements and is obtained from the company's ability to generate cash after deducting capital expenditures from operating cash flow. This is an indicator for assessing the company's financial health and provides valuable information for all stakeholders in evaluating the financial stability and value of a company. This study aims to predict Free Cash Flow (FCF) using the Long Short-Term Memory (LSTM) method by applying the Greedy Forward Selection technique to identify the optimal features of Free Cash Flow (FCF), Earnings per Share (EPS), Return on Assets (ROA), and Return on Equity (ROE), which are divided into 1-4 lags. This financial data is collected from four companies on the Stockbit platform and using three metrics for model evaluation: Mean Absolute Error (MAE), Mean Absolute Percentage Error (MAPE), Root Mean Square Error (RMSE). The LSTM model showed the highest predictive accuracy, using the Free Cash Flow (FCF) feature, especially when using the FCF\_lag4 and FCF\_lag2 features combination, and the feature importance is FCF\_lag4. The model's performance evaluation shows FCF\_lag4 and FCF\_lag2 a Root Mean Square Error (RMSE) of 0.1187. Furthermore, the Mean Absolute Error (MAE) is 0.0823, and Mean Absolute Percentage Error (MAPE) is 16.07%.*

**Keywords:** Long Short-Term Memory (LSTM), Greedy Forward Selection, Free Cash Flow (FCF), Earnings per Share (EPS), Return on Asset (ROA).