ABSTRACT

This study focuses on detecting indications of major events that influence fluctuations in the Jakarta Composite Index (IHSG) on the Indonesia Stock Exchange using the power law model. This method is utilized to analyze extreme patterns in IHSG time-series data and identify the relationship between major events and stock price changes. The data used in this study consists of daily closing prices of IHSG from 1993 to 2022. After processing and analysis using the power law model, it was found that several major events in Indonesia, such as the 1999 economic reform and the 2020 COVID-19 pandemic, correlated with significant changes in IHSG. The analysis results indicate that the power law method is more accurate in detecting extreme events compared to conventional statistical approaches such as standard deviation, with a determination coefficient (R-squared) value reaching 0.98. The conclusions of this study suggest that the power law model can be used as an alternative approach in analyzing stock market fluctuations. Further development can be carried out by integrating machine learning technology and improving data quality for more accurate results.

***Keywords**: IHSG, major events, stock price fluctuations, power law, time-series data analysis*