Abstract

Predicting stock trends is a complex problem because their movements constantly fluctuate and are affected by many factors such as political elements, world economic situation, investor expectations, and psychological factors. One way to analyze stock prices is Technical Analysis. This method focuses on stock indicators and patterns formed. Elliott Wave is one of the Technical Analysis methods. This study suggests an approach based on the combination of Neural Networks and Elliott Wave theory which will predict the possible direction of future trends. This model uses Fast Fourier Transform (FFT) coefficients to look for similarities with Elliott Wave patterns. When the dataset is similar to Elliott Wave patterns, the Neural Network will predict the direction of the stock trend. This study was conducted to confirm that the Elliott Wave-based Neural Network method helps predict stock trends. Experimentation is being carried out in some stocks on the Indonesian Stock Exchange, with profits exceeding 90%.

Keywords: Stock Market, Prediction, Neural Network, Elliot Wave, Fast Fourier Transform