ABSTRACT

Predicting bankruptcy as an early warning for a company's condition is very helpful for companies experiencing financial distress to improve their performance before bankruptcy occurs. This study aims to predict financial distress in transportation and logistics sector companies before, during, and after the Covid-19 pandemic.

The research objects are 23 companies using an artificial neural network model. The study uses financial ratios, including the Debt to Asset Ratio (DAR), Current Ratio (CR), and Return on Assets (ROA), as input variables in the artificial neural network architecture.

The research objectives are to calculate the three ratios used as test data, to determine the differences in financial ratios between companies reported as financially distressed and those not experiencing financial distress in the training data, to identify the artificial neural network model architecture that produces good performance on the training data sample for use in testing predictions, and to predict financial distress using an artificial neural network on transportation and logistics companies listed on the Indonesia Stock Exchange that are part of the research sample. The research sample consists of twenty transportation and logistics companies listed on the Indonesia Stock Exchange from 2019 to 2023.

The results show that companies reported as financially distressed have lower average values for the three ratios compared to companies not experiencing financial distress, making them suitable input variables. The best artificial neural network architecture in this study uses an input layer with 60 neurons, a hidden layer with 20 neurons, and an output layer with one neuron, achieving a training performance mean square error (MSE) of 0,000000209 or 2E-06 and an R value of 0,99999. The results indicate that ten companies are predicted to experience financial distress.

Keywords: *Financial Distress, Financial Ratio, Artificial Neural Network*