

Assessing Artificial Neural Network Models on Forecasting the Return of Stock Market Index

Authors : Hamid Rostami Jaz, Kamran Ameri Siahooei

Abstract : Up to now different methods have been used to forecast the index returns and the index rate. Artificial intelligence and artificial neural networks have been one of the methods of index returns forecasting. This study attempts to carry out a comparative study on the performance of different Radial Base Neural Network and Feed-Forward Perceptron Neural Network to forecast investment returns on the index. To achieve this goal, the return on investment in Tehran Stock Exchange index is evaluated and the performance of Radial Base Neural Network and Feed-Forward Perceptron Neural Network are compared. Neural networks performance test is applied based on the least square error in two approaches of in-sample and out-of-sample. The research results show the superiority of the radial base neural network in the in-sample approach and the superiority of perceptron neural network in the out-of-sample approach.

Keywords : exchange index, forecasting, perceptron neural network, Tehran stock exchange

Conference Title : ICAFE 2016 : International Conference on Accounting, Finance and Economics

Conference Location : Copenhagen, Denmark

Conference Dates : June 27-28, 2016