Bankruptcy prediction for accepted companies in securities and exchange organization using artificial neural networks

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Being informed of capital market's companies financial situation is one of the shareholders and economic analysts' perturbation. Thus, financial market analysts and researchers were looking for methods to predict capital market's companies future conditions. This research is finding a model to predict bankruptcy of stock exchanges market's companies with using the artificial neural network (ANN). In this research we used Zemijewski financial ratios with one macro – economic variable to predict companies bankruptcy. Population of study was ed the eccepted companies in iran's stock and exchanges organization. Financial ratios have been extracted companies financial statement in a five years period between 2010 and 2014, finally we choose 84 companies that divided to salubrious and bankrupt equal number in each. We used multi layer percepteron (MLP) with back propagation algorithm to create predictor model and data analysis. The network have been trained once with financial ratios and again with additional macro – economic variable to confirm that the accuracy of network model will increase by additional macro – economic variable. Ultimately te designed model in total mode has 92.95 percent of accuracy and 85 percent correct prediction of bankrupted companies for one year earlier of bankruptcy.

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