Abstract

This study demonstrates effectiveness of ANFIS in bankruptcy prediction which has received a few attentions in the previous bankruptcy studies. A data set consisting of financial ratios of 136 matched bankrupt and non-bankrupt firms in Tehran Stock Exchange (TSE) during 1997-2008. Moreover, two different procedures are used for selecting the predictive variables. The first
Applying Adaptive Neuro-Fuzzy Model for Bankruptcy Prediction

procedure is using T-statistic feature selection method. Another one is not using any feature selection method. In second procedure, just examination of former researches is used for selecting the predictive variables. The resulting models are estimated with three different data set partitioning patterns. Analysis of empirical results indicates: (1) The ANFIS model outperforms Logistic Regression (LR) model in both training and testing samples. (2) The subset of frequent variables in the former literature yields better prediction models rather than variables are selected based on T-statistic feature selection method.

Reference

- P. Ravi Kumar, V. Ravi, Bankruptcy prediction in banks and firms via statistical and
Applying Adaptive Neuro-Fuzzy Model for Bankruptcy Prediction

- C.F. Tsai, Feature selection bankruptcy prediction, Knowledge-Based Systems 22(2) (2009), pp. 120–127.

**Index Terms**

Computer Science

Algorithms

**Key words**

Bankruptcy Prediction

ANFIS

Logistic Regression

Tehran Stock Exchange (TSE)

Feature selection