Neural networks in credit risk evaluation of construction sector

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Summary

This paper empirically investigates the credit scoring accuracy of two class of artificial neural network (ANN) models. Using two groups of credit applicants: a "good credit" group and a "bad credit" group classified by a bank's scoring system and 25 financial indices ANN models are built. The prediction from ANN models of being in each group is compared with the real credit decision-making system.

Comments & Questions (1)

1. Response variable

In the paper the level of credit scoring (dichotomy variable with values: "good", "bad") is considered as a response variable. To capture and explain the credit risk (eg. default probability), which appears in the title, maybe it is better to consider default event as a dependent variable.

(see Atiya A. F., 2001, Bankruptcy prediction for credit risk using neural networks: A survey and new results and reference therein)

2. Selection/identification algorithm of explanatory variables for ANN models

What is the stopping condition in the algorithm?

Why the set of explanatory variables for two ANN models are different?

Comments & Questions (2)

3. Shape of activation functions and the number of neurons

How the shape of activation function and the number of neurons affect the performance of the models?

How the number of neurons in hidden layer is found?

4. Comparison of the result with benchamrk models

I suggest to benchmark the results against more traditional methods under consideration for commercial applications eg. linear discriminant analysis, logistic regression.