

Abstract

To improve the traditional human judgmental methods in the credit industry, a number of credit scoring models have been developed to evaluate consumer loan applications in the past decades. They can accurately classify the consumer loan applications into the groups of acceptance or rejection. In this thesis, we apply the discriminant analysis method and the neural network method to construct a corresponding model used to classify whether a mortgage loan applicant is a potential good one or bad one. Then we compare the respective performance of the discriminant analysis and neural networks in their discriminating power. The dataset was collected from one of the leading banks that has been operating in Macau for more than ten years. The range of dataset was issued from 1989 to 1999. The information about the mortgage loan applicants can be obtained from the application forms. This thesis will divide the dataset into two groups, namely 'Single' group and 'Couple' group. To ensure the objectivity and robustness of the models in each group, we replicate the training and testing procedures with randomly selected sub-samples by ten times in both discriminant analysis method and neural network method. The results of this thesis show that the discriminant analysis method performs better than the neural network method in this classification problem.