上市公司之財務危機的機率能估計嗎？

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摘要

This research aimed at comparisons of six data mining methods for the financial distress of company in the stock market. Based on the area ratio of the CAP curve, the results showed that logistic regression, discriminant analysis and artificial neural networks are more accurate; naïve Bayes classifier and classification tree are less accurate, and k-nearest-neighbor is the least accurate. But based on viewpoint of risk management, whether the forecast probability estimated by the predict model can represent the financial distress probability is more important than the classification error rate. Using the regression analysis ( ) of forecast probability (x) and financial distress probability (y), the predict model produced by artificial neural network has the highest determination coefficient, and the regression coefficient " " of regression formula based on forecast probability estimated by artificial neural network is close to 1, and " " to 0. Therefore, in these six data mining methods, artificial neural network is the only method which can accurately estimate the financial distress probability.

關鍵字： data mining, financial distress, probability, k-nearest-neighbor classification, logistic regression, discriminant analysis, naïve Bayes classifier, artificial neural network, classification tree.