COMPARING TRADITIONAL STATISTICS, DECISION TREE CLASSIFICATION AND SUPPORT VECTOR MACHINE TECHNIQUES FOR FINANCIAL BANKRUPTCY PREDICTION

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ABSTRACT—Recently, several spectacular bankruptcies, including Fannie Mae, Freddie Mac, Washington Mutual, Merrill Lynch, and Lehman Brothers, have caught the world by surprise. To improve the accuracy of financial distress predictions, this research compares traditional statistical methods (i.e., linear discriminant analysis, logistic regression), decision tree classification methods (i.e., C5.0, CART, CHAID, QUEST) and artificial neural network techniques (i.e., multi-layer perceptron, support vector machine) to distinguish their respective capabilities for predicting financial distress. The experimental results showed that the support vector machine (SVM) technique could be a more suitable method for predicting financial distress than traditional statistical or DT techniques.