عنوان مقاله:

Financial Reporting Fraud Detection: An Analysis of Data Mining Algorithms

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خلاصه مقاله:

In the last decade, high profile financial frauds committed by large companies in both developed and developing countries were discovered and reported. This study compares the performance of five popular statistical and machine learning models in detecting financial statement fraud. The research objects are companies which experienced both fraudulent and non-fraudulent financial statements between the years ۲۰۱۱ and ۲۰۱۶. The results show, that artificial neural network perform well relative to a Bayesian network, Discriminant Analysis, logistic regression and Support vector machine. The results also reveal some diversity in predictors used across the classification algorithms. Out of ۱۹ predictors examined, only nine are consistently selected and used by different classification algorithms: Employee Productivity, Accounts Receivable to Sales, Debt-to-Equity, Inventory to Sales, Sales to Total Assets, Return On Equity, Return on Sales, Liabilities to Interest Expenses, and Assets to Liabilities. These findings extend financial statement fraud research and can be used by practitioners and regulators to improve fraud risk models.

کلمات کلیدی:

financial reporting fraud, Fraud detection, fraud predictors, classification algorithms