

عنوان مقاله:

Financial Performance Evaluation of Companies Using Decision Trees Algorithm and Multi-Criteria Decision-Making Techniques with an Emphasis on Investor's Risk-Taking Behavior

محل انتشار:

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خلاصه مقاله:

Evaluating the performance of companies using their financial ratios is a challenging task that is expected to become more straightforward by reducing the dimensionality of the data. The purpose of this study is to evaluate the performance of companies using a hybrid model for investment-related decision making through which the mean value of various financial ratios are calculated based on the investor's risk-taking behavior so that the number of all criteria is reduced to one single value for each alternative. To do so, a sample of ۱۷۲ companies listed in Tehran Stock Ex-change was selected from ۲۰۰۸ to ۲۰۱۸. Firstly, the financial ratios were prioritized using decision trees regression analysis (type CART) and TOPSIS Technique. The results showed that Gross Profit Margin and Debt to Equity Ratio are the most and the least important factors, respectively. Then, using OWA (Ordered Weighted Averaging Aggregation) operator, the role of investor's risk-taking behavior was investigated, and the results showed that investor's risk-taking behavior changes the outcome of the decision-making process significantly.

کلمات کلیدی:

Financial ratios, TOPSIS technique, OWA operator

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