

Pinporn Maikaew 2013: Multi-Criteria Stock Ranking Model under Risk. Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering, Department of Industrial Engineering. Thesis Advisor: Associate Professor Patcharaporn Yanpirat, D.Tech.Sc. 263 pages.

In the Stock Exchange of Thailand (SET), the SET100 index is a composite index serving as a benchmark for making financial investment decisions in the stock market. The index is ranked using the single criterion in terms of market capitalization that represents the common stock price movement for the top 100 listed companies on SET. Because of the insufficient information obtained from the provided single criterion based on the SET100 to judge the overall performance of stocks, the objective of this paper was to propose a multiple criteria stock ranking model. With the risk and the uncertainty resulting from complex global market environments, the qualitative criteria and quantitative criteria in terms of financial criteria and non-financial criteria were considered with the weight determination by employing the Analytical Hierarchy Process (AHP) and Volting Analytic Hierarchy Process (VAHP). The stocks were ranked with respect to the following criteria; reputation of company, type of industry, benefit of shareholder, risk perceptions, and investor receptions, dividend yield, net profit, return on Equity, earning per share, price-book value, price-earning per share, book value, market capitalization, listed share, debt ratio and total debt to common equity. The ranking methods were based on the Technique of Ordering Performance by Similarity to Ideal Solutions (TOPSIS) and the Stochastic Data Envelopment Analysis (SDEA). The result revealed the 11 stocks were included in the top 20 ranks for those three methods which ensured the proposed ranking model could be considered as the supplement information for making the decision in financial investment.

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