



## Introducing a strategic pattern for selecting financial assessment with a higher expected return based on liquidity and multi-criteria decision-making<sup>1</sup>

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### Introduction

This study aims to introduce a multicriteria decision-making pattern based on quantitative and qualitative indexes to explain expected returns based on stock resilience and liquidity measures.

The central purpose, which has the top priority in this study, is to weigh and prioritize decision options (stock resilience and thirteen liquidity measures) and then present a pattern based on the gained weights. This pattern is used in selecting the most suitable financial asset to attain a higher expected return.

### MATERIALS AND METHODS

The objective is to weigh and prioritize decision options (liquidity measures) and introduce patterns based on obtained weights. This goal is the first level of the Analytical Hierarchy Process (AHP) of decision-making.

The fourteen liquidity measures are used as decision options. To set priority, we used four quantitative and qualitative indexes, including "users" competence, reliability, forecast value, and coefficient of determinant. In order to evaluate each

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decision option based on the qualitative indexes, the first questionnaire and paired comparisons were used. For evaluating each decision option based on qualitative indexes, the second questionnaire and correlation coefficients were used. In correlation relationship, by considering Fama and French's control variables, among 151 companies listed on the Tehran Stock Exchange from 1392 to 1397, the explanatory power of options of the decision was evaluated.

## RESULTS AND DISCUSSION

According to the experts, supervisor, and consulting advisor's point of view, three qualitative indexes, including users' competence, reliability, forecast value, and coefficient of determination, which were suitable options in the capital market, were chosen. Then these indexes and a coefficient of determination were used to prioritize the decision options.

The first questionnaire enables us to measure the weight vector of these indexes by pairwise comparison and the judgment of the experts in the stock market. The results were respectively as follows: 0.3105, 0.2911, 0.2061 and 0.1923

Based on three main qualitative indexes, the user's competence, reliability, and predictive value of each fourteen indexes were ranked by the second questionnaire. The average scores of each index were calculated based on the opinion of forty experts, and each index's priority coefficient was obtained.

Also, the coefficient of determination was evaluated using the correlation coefficient between expected returns and liquidity measures. After that, the normalized matrix for decision options was measured based on the four qualitative and quantitative indexes. Finally, this matrix was multiplied by the weighted vector of main indexes, which were mentioned above, and the result was the final score of decision options.

## CONCLUSION

The fourteen criteria based on the final scores were ranked and prioritized. The result shows that the exchange volume stands at the first rank, and the other indexes' rank is as follows: liquidity power, the number of exchanged stocks, days without transaction, trading days, the percentage of free float stocks, stock turnover rate, number of transactions, market depth, Amihud illiquidity measure, Amivest liquidity measure, absolute spread, relative spread, and stock resilience. At last, the final pattern was introduced based on calculated weight for decision-making options.

**Key words:** Expected Returns; Multi-criteria; Decision-making; Liquidity Measures; Stock Resilience; Fama & French Factors.

**JEL:** G11, G17.

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