

## A Study of Knowledge Management Desirability Rate, Influential Factors on Stock Selection and Risk Management in Stock Market

Shermineh jamali<sup>1</sup>, Amir Houshang Tajfar<sup>2</sup>, Behrouz Lari Semnani<sup>3</sup>

<sup>1</sup>Master Student, Information Technology Management, Payame Noor University,

<sup>2</sup>Assistant Professor, Department of Engineering (Information Technology), Payame Noor University, Tehran, Iran

<sup>3</sup>Assistant Professor, Department of Business Administration, Payame Noor University, Tehran, Iran

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### ABSTRACT

Nowadays one of the major concern of shareholders and brokers is choosing top –stocks and increase of investment return. Therefore, attention to the factor risks of investment is necessary. As the result, Knowledge Management (KM) is of great importance. In this research, KM's technics (creating, sharing, preserving and application of knowledge), influential factors on choosing shares (EPS, net profit margin, ROA, the growth rate of EPS, the growth rate of net profit margin, the price-to-earnings ratio and the ratio of market value to book value) and risk management (systematic risk and unsystematic risk) have been considered significant factors when it comes to investment. The purpose of this research is to, review the efficiency rate of these factors (KM, Important factors in selecting stocks and risk management) in stock market. In order to achieve this, 210 survey papers have been handed out among shareholders and stockbrokers. In this research, Cronbach's alpha has been employed to measure stability, Kolmogorov-Smirnov has been employed to measure data normality, one-sample t-test has been employed to measure the desirability of variables and SPSS 20 software has been employed to analyze the survey papers. Successfulness of this research, considering the result, has been remarkable. KM's variables and influential factors of stock selection are reasonably taken into account by stockholder and brokers, and only risk management variables is of low desirability.

**KEYWORDS:** Knowledge Management, Influential factors on choosing shares, Risk Management.

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### 1. INTRODUCTION

Capital market is one of the active and dynamic markets that is attractive for investors with any capital, because return of investment in this market is in sectional, medium and long terms. When other markets such as housing, money, coin and currency go into recession, liquidity movement from the mentioned markets descends to this market and the liquidity entered into the market is confined until rival markets do not become active that can contribute to control liquidity and reduce inflation dramatically and be effective in aiding production sector, but since movement and success in this market depend on particular factors such as identification of market and industries and their analysis, therefore, it has its particular risks so that investors will decide to purchase the intended share while considering the afore-mentioned factors and analyzing political and economic conditions. Unfortunately, in recent years, a great number of investors have entered into the market and sustained heavy losses without familiarity with capital market, with emotion, and without informative background and merely with advertising. Thus, regarding important factors, using knowledge management techniques and risk management are indispensable to select stock and reduce investment risk.

Different authors have presented different definitions of KM. At the same time, definitions are not completely accurate and wrong. The accurate definition of KM changes according to the structure and objectives of each organization. The objective of KM in organizations is assuring of performance growth and continuance through protecting knowledge at all levels, using existing knowledge in all conditions, combining knowledge, acquiring knowledge continually and developing new knowledge through continuous learning made based on internal experience and external knowledge [1].

In addition, the systematic management of knowledge contributes to continuous development, implicit knowledge sharing, rapider response to customers, publication the best methods and reduction of duplication [2].

Knowledge concerning markets, customers, processes, products, organizations, technologies etc. that each business have or should have and the knowledge creating value and return are called “assets of knowledge”. KM is not only concerned with management of these assets, but it concerns the processes conducting on the assets and forming the life cycle of knowledge in organizations. Identifying and analyzing accessible and necessary knowledge, processes relevant to assets of knowledge and planning and controlling all of these activities to achieve organizational objectives and gain competitive advantage are extremely important [3].

In various researches, the relation between KM and risk management in organizations and projects is regarded as the key factor. Effective and efficient risk management requires an appropriate method and more importantly knowledge and experience. Knowledge and information management is the main part of successful risk management. Therefore, the approach of KM can be an attractive and efficient framework to improve the deficiencies of the process of risk

**Corresponding author:** Shermineh Jamali, Information Technology Management, Payame Noor university, Tehran, Iran.  
sherminehjamali@gmail.com

management [4]. Risk is defined as the possibility of the occurrence of a destructive event [5,6]. Nevertheless, it is not always pertinent to negative results. Risk may create opportunities, but in reality, it brings negative results in many cases [5,7].

Management risk is defined as the process of identifying and evaluating risk and applying methods to reduce it [8]. Generally, risk management includes these main phases namely risk planning, risk identification, risk evaluation (quantitative and qualitative), risk response, risk supervision and record of the process of risk management [5,9].

One of the organizations that can benefit from the advantages of KM and risk management is stock exchange. In addition, other factors are also involved in investment affairs that the factors are investigated in different researches. Lee et al. in their paper titled “combined MCDM techniques for exploring stock selection based on Gordon model” extracted criteria effective on three main elements of Gordon model (predicted dividend, discount rate and growth rate). These criteria include industry perspective, earnings, ratio of interest payment, beta-market, riskless return, growth rate of earnings and growth rate of dividend [10]. Squyres analyzed the selection of top stocks from shareholders’ view. In this research, earnings of each share, book value of each share, rate of interest coverage, cash flow to liability, price-to-earnings ratio and ratio of price to book value were selected [11]. Beckwith studied stock market in six countries (Australia, Canada, France, Germany, Japan and England) and used the criteria of ratio of price to cash flow, ratio of price-to-earnings of each share, market price to book value, reinvestment rate and return on equity [12].

## 2. MATERIALS AND METHODS

This research is an applied and descriptive-survey one in terms of objective or tendency and implementation or strategy. The statistical population in this research includes stockbrokers of Maskan Bank, Sahm Ashena and neo-thinkers of capital market. Since the statistical population namely stockbrokers of capital market and shareholders is an unlimited subpopulation and accessibility to their number is impossible, the sampling method in this research is simple random. Data collection method in this research is questionnaire that questionnaires were distributed and collected in 2 months face-to-face. The mentioned stockbrokers were 310 personnel and small investors that 200 persons of them were able to fill out the questionnaire. The questionnaire had 22 questions that the coefficient of Cronbach’s Alpha was employed to measure its reliability. To obtain reliability, the questionnaire was distributed among 18 persons of the samples and the reliability was calculated 0.871. The reliability results of each of the research variables are presented in Table 1. In all cases, significance value was obtained greater than 0.05. In other words, the distribution of measurement data of each of dimensions is normal. Thus, parametric test can be used. Furthermore, one-sample t-test was used to measure the desirability in one population.

**Table 1.** Calculation of the coefficient of Cronbach’s Alpha

Variables	Number of questions	Coefficient of Cronbach’s Alpha	Result
KM	9	0.704	Confirmed
Stock selection	7	0.872	Confirmed
Risk management	6	0.863	Confirmed

## 3. RESULTS AND DISCUSSION

Respondents’ view on the status of variables is analyzed using one-sample t-test. In this test, hypotheses were defined as follows and null hypothesis is the suggestion of the test. Since data are collected with Likert five-point scale, the mean of 3 namely the middle point of Likert scale is considered. Therefore, the statistical statement of the research hypothesis is as follows:

$$\begin{cases} H_0: \mu = 3 \\ H_1: \mu \neq 3 \end{cases}$$

Since the study is analyzed at 95% confidence level. Therefore, if in calculating the mean of each dimension, significance is smaller than the error level 5%, the null hypothesis is rejected and the suggestion of the test is confirmed. It is evident that in these conditions, the statistic of test would be greater than the critical value  $t_{0,05}$  namely 1.96. Moreover, both bounds of confidence interval would be also positive. The results relevant to the performed calculations of one-sample t-test is presented as follows. The summary of the results of one-sample t-test are presented in Table 2 based on individuals’ view. The mean of respondents’ view in KM is obtained 3.6317 that is greater than the average of Likert scale. The obtained significance is also smaller than the error level 0.05. Thus, the observed mean is significant. The value of t-statistic is obtained 10.833, greater than the critical value 1.96. In addition, both upper and lower bounds of confidence interval are greater than zero (positive) and the suggestion of the test is confirmed. According to each of the statistical findings, it can be mentioned with 95% confidence level that KM is in desirable status. The mean of respondents’ view in the dimension of stock selection is obtained 3.0023 that is approximately equal to the average of Likert scale. The obtained significance is obtained 0.972 that is greater than the error level 0.05. The value of t-statistic is obtained 0.035, smaller than the critical value 1.96. Thus, the observed mean is insignificant. Furthermore, the upper bound of confidence interval is greater than zero (positive) and the lower bound of confidence interval is smaller than zero (negative). Therefore, the suggestion of the test is not confirmed. According to each of the statistical findings, H1 is rejected and H0 is accepted. The mean of respondents’ view in the dimension of risk management is obtained 2.8360 that is smaller than the average of Likert scale. The obtained significance is 0.014 that is smaller than the error level 0.05. Thus, the observed mean is significant. Moreover, both upper and lower bounds of confidence interval are smaller than

zero (negative). Therefore, the mean is smaller than the testing value. According to each of the statistical findings, it can be mentioned with 95% confidence level that risk management is not in desirable status.

**Table 2.** Summary of the results of one-sample t-test for the research variables

Hypotheses	Mean	T-value	Sig	Confidence interval 95%	
				Lower limit	Upper limit
<b>KM of high or low desirability.</b>	3.6317	10.833	0.000	0.5163	0.7471
<b>Factors affecting stock selection of high or low desirability.</b>	3.0023	0.035	0.972	-0.1296	0.1342
<b>Risk management of high or low desirability</b>	2.8360	-2.493	0.014	-0.2942	-0.0338

#### 4. CONCLUSION

In this research, the variables of KM, important factors in selecting stock and risk management were investigated. KM includes the techniques of creating, preserving, sharing and application of knowledge. In addition, the important factors in stock selection include EPS, net profit margin, ROA, the growth rate of EPS, the growth rate of net profit margin, the price-to-earnings ratio and the ratio of market value to book value and risk management including systematic risk (inflation, market and interest rate) and unsystematic risk (commercial, financial and liquidity). These variables were mentioned in the questionnaire separately and were tested generally. The results indicate that KM is of high desirability. In other words, investors and stockbrokers use the variable at high level in their investment affairs. In addition, the factors of stock selection are used at an acceptable level. Unlike the two variables, risk management is of low desirability. It means that investors and stockbrokers do not use the variable at an acceptable level. Stockbrokers and shareholders should identify the effective factors in stock selection and risk management and use the factors in their investment affairs using techniques of creating, preserving, sharing and application of knowledge to be successful in their investment affairs.

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