

## Finance Management

*Elixir Fin. Mgmt.* 92 (2016) 39150-39155

**Elixir**  
ISSN: 2229-712X

# Examining the impact of market uncertainty, investments and the quality of information in the investment authorities in Tehran Stock Exchange listed companies

Hamid Reza Vakili fard and Ardeshtir Salari

Department of Financial Management, Kish international Branch, Islamic Azad University, Kish, Iran.

### ARTICLE INFO

#### Article history:

Received: 4 February 2016;

Received in revised form:

16 March 2016;

Accepted: 22 March 2016;

#### Keywords

Investment authority,  
Environmental  
uncertainty,  
The quality of the  
information available,  
Riskless interest rate,  
Cost of investment.

### ABSTRACT

The main aim of present study is to examine the impact of environmental uncertainty (market), the investments and the quality of information available to the authority of the investments of accepted Tehran Stock Exchange listed companies, as well as the increasing introduction of a new theory named the actual authority. The investment authority in asset capital also like authority is on financial assets with the difference that these authorities appear on the real assets such as the land, building, machinery and other physical assets. By using the traditional methods of assessing projects such as the method of cash flow reduction (net present value and internal rate of return). With regard to the elements of environmental uncertainty, managerial authority and flexibility in projects and investments lead unrealistic assessment. So with regard to these drawbacks to use theory of investment authority and its effects in the value of the company and determining its value could be a great help to the better and more real assessment of projects and investments. So in case this question arises that with regard to this point that managers have such authority, how they regard the structure and the logic of investments authority in the analysis and designing their projects with a view to environmental uncertainty, the cost of investment, riskless interest rate and the quality of the information available for the company?. For this purpose by using public formula of Cochrane a sample including 163 financial directors of the corporate (manufacturing) of Tehran Stock Exchange reviewed their views and opinions about the investments authorities. And also to analyze the data the linear regression was used. By regarding the conducted surveys it become clear that based on the above - mentioned managers points of view the independent variables (environmental uncertainty, riskless interest rate, cost of investment and the quality of the information available) have a significant impact on investment authority.

© 2016 Elixir All rights reserved.

### Introduction

Many investments and projects are in a way that the major authorities are hidden in them. In this regard the new methods and new assessment are of great help to explore and to use of these authorities. So that the daily various aspects of the inadequacy of the old methods of assessment of investments and administrative decisions appear. The traditional method of projects evaluation such as the net present value and internal rate of return and other traditional techniques don't consider the managerial flexibility in decision making on changing market conditions.

This method of cash flow reduction is on this basis that as soon as being accepted a project or investment should it maintain until the end of its effective life. Investment uncertainties and economic changing circumstances leads to a new look at the financial issues. That new logic and view is a model that applies in almost all managerial decisions. This new logic and assessment procedure is called "logic of investment authority". According to this logic, new information removes part of the initial uncertainty of the market so forcing the management so to re-view in its original decisions. By using the traditional methods of

assessing projects such as the method of cash flow reduction (net present value and internal rate of return and...) with regard to the elements of environmental uncertainty, managerial authority and flexibility in projects and investments lead unrealistic assessment. So with regard to these drawbacks, using theory of investment authority in capital funds can help to better and more real assessment of projects assets regarding determining the value of these authorities, managerial flexibility and its effects on the value of the assets and naturally in company's value. Investment budgeting methods being called investment authorities analysis is able to value the project's flexibility. Many investments and projects are in a way that important authority lies in them. The new methods and new assessment techniques help to discover and use these authorities. In a way that daily different aspects of traditional assessment drawbacks of investments and managerial decisions revealed. The traditional methods of projects evaluation such as net present value and internal rate of return and other traditional assessment techniques, don't consider the managerial flexibility in decision making on changing market conditions.

This method of cash flow reduction is on this basis that as

Tele:

E-mail address: [emamemostafa@gmail.com](mailto:emamemostafa@gmail.com)

© 2016 Elixir All rights reserved

soon as being accepted a project or investment should it maintain until the end of its effective life. Investment uncertainties and economic changing circumstances leads to a new look at the financial issues. That new logic and view is a model that applies in almost all managerial decisions. This new logic and assessment procedure is called "logic of investment authority". According to this logic, new information removes part of the initial uncertainty of the market so forcing the management so to re-view in its original decisions.

While traditional analyses managerial flexible and underestimate the value of these projects and strategies. Reply to evaluate such projects in the analysis of investment authorities that can be used in a dynamic environment such as the discovery of a new drug, oil and gas section, manufacturing, e-business, evaluating entry into new markets, joint investment of research and development, integration of electronic markets, developing intellectual assets (people), development of technology, the development of equipment and other items. More, the base of our work in investment budgeting is that cash flow for each investment project is predicted until a specific time in future, then with the appropriate discount rate, their present value is obtained. Usually investment projects, after the selection and the beginning of the investment in them, aren't sustainable and unchanging. Managers sometimes may make some revolutions, with the acquisition of new data and the new time conditions influencing the cash flow of future investments. The freedom of Directors (or the authority of investment) is hidden in the center of investment. Authority of investment is an approach considering a positive reason from the valuation and risk and identification to promote investment. Unfortunately, In Iran investment authority does not apply for some reasons. The study examines the impact of market uncertainty, the quality of information available to managers and the investment costs on investment authorities introducing methods and concepts for the expansion of investment authority in Iran by this way. This study searches this point that, whether financial managers of exchange companies accepted these changes in Iran and taking some steps in line with other leading countries in accordance with the methods and techniques of investment or not?.

### **Research purpose**

According to the present study regarding analysis of the effect of uncertainty in the market, investments and quality of information on investment authorities, the main and secondary objectives should be the following:

### **The main objective**

1- Helping professional managers regarding general use of authority for investment and using this authority by executives.

### **Secondary objectives**

- 1-To explain the relationship between environmental uncertainty and investment authority.
- 2-To explain the relationship between risk-free interest rates and investment authority.
- 3-To explain the relationship between quality of available information and investment authority
- 4-To explain the relationship between cost of investment and investment authority

This research will lead present findings about investment authorities. The results of which can cause financial managers to become familiar with investment matters.

### **Background of research**

The term of investment authority was developed and applied first by Stuart Mayer's the lecturer of MIT. It is noteworthy that in 1930, Irving Fisher clearly expressed some points regarding business section accessibility to authority. The concept of investment authority got popularized by Columbia Business School Professor Michael Mabvyn. Applied investment authority to describe the gap between the stock market prices of some firms and the intrinsic value of those firms using the traditional assessment methods specially discounted cash flow techniques. Eduardo Schwartz was kind of pioneer in science research in this area. George is also contemporary scholars having conducted many studies in connection with the investment authority and many of his books and articles have been published.

In this section we summarized the findings of the foreign scholars and then to research conducted in our country.

### **Foreign research**

Kullberg Larynx (1998) in an article entitled "The authorities of investment in capital budgeting, cost of research and development" by using Balk- Scholes' formulas presented a specific model to value growth authority and authorities of the transfer of a project from P&U comparing the present valuation by using Black Sholes method with the results of valuation with the traditional net present value and found that the value of a project using the authority of investment is higher than the net present value method. , but the difference is small.

Jag (1998) in an article is assessing the investment authorities in different industrial companies of British. In this research being a case study has asked managers look into the authorities for investment, the test showed that there is lots of relationship between manager's intuition and theory of investment authorities.

Moscowitz (2001) in a study entitled "Analysis of investment authorities and decisions strategy" in USA expresses that investment authorities approach lead to know investments correctly and reduce risk in decision making and finally considers the investment authorities as a factor for flexibility in decision making. Terry George (2005) in a study entitled "The environmental uncertainty of market" in the United Kingdom considers the lack of reliability and flexibility as the most important factors of valuation. He believes that the uncertainty caused by the company's internal and external resources have some subsections for each of them and eventually an important aspect of the authority and its relationship to the uncertainty is that the more the higher is the value of authority. Therefore their severity holds, has high impact on value of authority directly and both are interdependent. Flexibility consists of authority that is used to respond to uncertainty.

Bachylvrz (2007) in a study entitled "Analysis of investment authorities," stated that the capital-budgeting methods being called as of analysis of investment authorities is as a tool to measure investment, if there is any investment problem like possibility of loss it stops that and eventually he came to the conclusion that the investment authority is as a tool for management in investment planning and management. Sebastian J. (2011) in a study entitled "The management structure of information on investment authorities valuation," said the analysis of the investment as a superior method for projects with management flexibility are recognized but still due to various problems it has caused

limited performance. He says that the approach of authorities of investment by using the estimated cash flow approach acknowledges the assessment of the investment project.

With the introduction of this method, we were able to level the value of the project, the distribution of cash in management flow. This context that can be named as the value of managerial flexibility can be helpful in more easier types of investment authorities including authority of transferring, stoppage authority and .....Also investment authorities analysis to match with financial theory needs to parametric models mental accumulation and connecting with analysis framework accompanied with continuous practice.

#### **Domestic research**

Ali Nejad Sarvklavy in A study (2009) entitled "investment authorities" described that in projects that investment authorities are measured properly, the project value is higher rather it uses authorities, and the reason is the right that management enjoys by considering the investment authority for himself reacting better regarding the unknown conditions being accompanied with better future risk. And eventually since investment authorities don't calculate the uncertainty in the project, its value investment authority is always greater than the net present value, especially in projects faced with high uncertainty.

Sinai (2007) conducted a research including 117 corporate directors (productive) of Tehran Stock Exchange and surveyed the managers look to investment authorities and in this study it was determined that based on managers' perspective the independent variables n of "cost of investment", "risk free interest rate", "environmental uncertainty", "The cost of research and development are effective in the application of investment authorities.

Dastgir (2004), in a study called "evaluation of investments in uncertainty conditions" pointed out that the traditional method of discounted cash flow, is not appropriate for the evaluation of investment projects when investment authority exists. He stated that the authorities of investment ensures the companies that to remove undesirable returns underestimating the real value of investment based on the net present value. Investment authorities may have a considerable value disturbing the balance between accepting and rejecting the projects.

#### **Research hypotheses**

To answer the questions research the following hypothesis were designed:

##### **The first hypothesis**

There is significant relationship between the amount of environmental uncertainty (the market) and the use of investment authorities by the executives of adopted companies in the stock exchange.

##### **The second hypothesis**

There is significant relationship between risk free interest rate and the use of investment authorities by the executives of adopted companies in the stock exchange.

##### **The third hypothesis**

There is significant relationship between quality of the information available to managers and the use of investment authorities by the executives of adopted companies in the stock exchange.

##### **Fourth hypothesis**

There is significant relationship between cost of capital and the use of investment authorities by the executives of adopted companies in the stock exchange in which this main

hypothesis includes three following sub-hypotheses:

1-There is significant relationship between investments of research and development and the use of investment authorities by the executives of adopted companies in the stock exchange.

2- There is significant relationship between investments timing and the use of investment authorities by the executives of adopted companies in the stock exchange.

3- There is significant relationship between investments costs irreversibility and the use of investment authorities by the executives of adopted companies in the stock exchange.

#### **Research variables**

As it clarified in hypotheses the nature of the study is in a way that measures the relations between the eight variables. In following at first variables are defined and then a chart is presented for the research conceptual model.

#### **Defining variables**

##### **Investment authorities**

Investment authorities is a right that investor can carry out a practice now or future, in case it doesn't make a commitment for him if not doing it.

Investment authority in the capital assets is an important factor in the decision - making of investments that are techniques cash flows ignored them. In the absence of evaluation explicit model of investment authority in practice; it will be interesting to know how the financial managers value of such authorities in their decisions. Speech evidence suggests that the decision – makers of investments with an increase rate of basis to more than the cost of capital in company in order to consider the investment authorities in the capital assets.

##### **Environmental uncertainty**

Environmental uncertainty is a key concept in the literature and design theory. Especially in theories determine some factors such as the nature and Interactions organization and environment. An important part of experimental and theoretical activities are done with the aim of measurement the environmental uncertainty. Most of these efforts and measures suggests this implicit default that uncertainty to maintain the institutional balance and section's satisfactory performance is non - functional and harmful. So to identify and approval procedure and strategies that managers can reduce the negative consequences of uncertainty and or eliminate them is focused. In spite of the fact that the concept of environmental uncertainty producing strong and important theory ,the carried out empirical research have conflict and most of the problems in the interpretation of results , the main question is that how effective and successful organizations match themselves with environmental uncertainty conditions.

##### **Risk-free interest rate**

The interest rate when prices change, the nominal rates of investment return to the capital , is a weak indicator of the real return rate being obtained by the investors since a part of part of the additional proceeds resulting from the investments can be used to compensate for a reduction in the purchasing power of investors due to inflation during the investments made can be needed .As a result in order to remove the inflation rate to determine the real interest , the nominal rates of return of moderation should be established also generally of the consumer price index is used for this purpose.

##### **The quality of the information available**

Users of the financial statements for quality information available are seeking whether the auditor approved desirability

of financial statements and have compliance and reliance.

### Investment cost

The concept of the cost of capital is based on the assumption that a company's goal is to maximize shareholders wealth, abiding by the principle will cause the cost of capital (according to the type of its application) other concepts will be presented. By presenting a definition of the capital, the company has its own risk and return (of course we mean a company with the aim of interest) each group of investors for example, holders of the bonds, stocks and common stock wants the extent of the rate of return in which is pertinent to its risk. The investment cost is the minimum rate of return that the company should get so that the expected return of investors in the company will be provided. The term of "investment cost" in fact is "the expected rate of return" and the equivalent of "expected returns". The average weighted method of investment cost is the technique measuring the expected returns based on individual constituents of investment structure. In this way, the cost of each item of debt and the efficiency of each item of shareholder rights is computed separately.

### Research and development investments

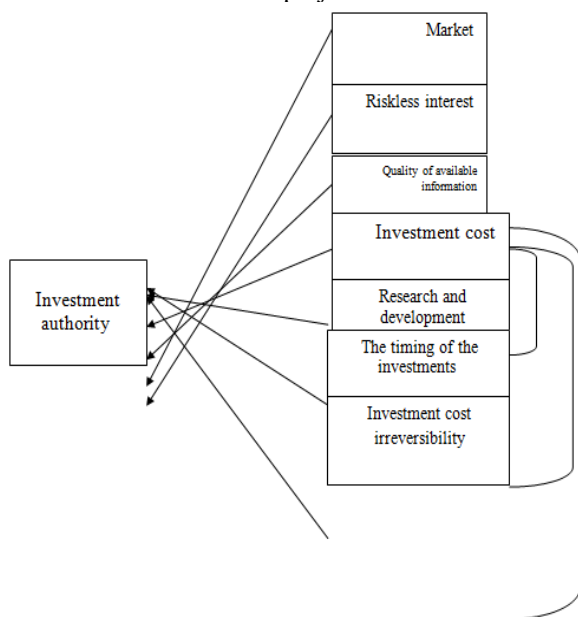
To maintain and gain a competitive advantage is extremely difficult in the future, to stay in the race companies should have investments in research and development activities, although in short term these costs won't be economical. Due to the presence of the tight competition, companies must be constantly changing their production and be update with the latest technology, because the benefits of competition are obtained by innovations. So, without the investments of research and development to achieve fame and profit would be impossible.

### The timing of the investments

The timing of the investments relates to select time of investment, investor can determine his arbitrary investment.

### Investment cost irreversibility

People are seeking to compensate for the cost of investment to use in their own projects.



### Research Methodology

The present study is to determine the relationship between a few variable of environmental uncertainty, riskless of interest rate, the rate of investment costs, the investments in

research and development, irrevocably capital costs, the choice of the appropriate timing of the investments and the quality of the information available (independent variables) and the application of investment authorities based on company executives of adopted companies in Tehran Stock Exchange (dependent variable). According to view of the investments authorities there is significant relationship between the variables abovementioned. Hence, it can be said that the results of this research can have applicability for the above managers. Meaning that logically application of authorities' investments tests in the condition that each of the independent variables exists. Inferential Statistics will be used to receive and infer from the results in a society based on the findings of the sample, and will be field research, because it is supposed to collect the data through questionnaire. Modus operandi follows that, with reference to the companies that their shares in Tehran Stock Exchange, the questionnaires distributed randomly between financial managers (accountant, the auditor, ...) and after the completion of the questionnaire by them, the questionnaire were gathered and registered them. Means of gathering information:

Information in this research gather as follows:  
A) library method: to collect information in the field of theoretical foundations and literature, the library resources, articles, related books, and also of the World Wide Web were used.

B) Field research: In order to collect data and information for analysis of the questionnaire was used, the questionnaire also included 28 questions in two parts being distinguished and classified.

### Information analysis methods

In this study of the Likert spectrum scale was used to check answering the questions of the questionnaire and Pearson correlation coefficient to determine the relationship between the variables Research (to accept or reject the hypothesis of research) is used and in continue to submit a linear relationship between the under study variables we have used Linear regression, and in the end, we have used tolerance to measure the linear relationship between the independent variable.

### Community and statistical population

The statistical population is 281 managers of manufacturing joint stock companies adopted in Tehran Stock Exchange. And statistical sample of study is 163 people, in a way that after distributing questionnaire between the community and gathering and controlling the number of collected questionnaires is 195, in which 24 of were deleted due to incompleteness and 171 questionnaires remained which for conforms with general formula of Cochran, the number of 8 questionnaire was laid down and 163 remaining questionnaire by using SPSS software 16, the needed information bank were established and then data were processed.

### Testing regression model assumptions

In this test we used linear regression, therefore, we have to assume that a linear regression model have been observed. In any linear regression model we have some components that if true, the regression results will be true. Reminders are difference between the observed value of dependent variable and an amount being predicted by regression line, an important part of the regression analysis is examining components of regression, that is normality, being fixed variance and being independent observation.

By residual distribution and its relations with the other variables honesty of the regression assumptions can be determined.

#### Reviewing the normality

To check whether a sample belongs to the normal society, one can use diagrams being available by the normal probability diagrams option in SPSS software. If the data related to an example of a normal society, we expect that more or less points are on a direct line. Figure 1 shows diagram P-P. The trend isn't observed in the diagram, so let's normality model is accepted.

Also by using observed standardized reminder frequency diagram (fig 2) data distribution normality can be observed as well as.

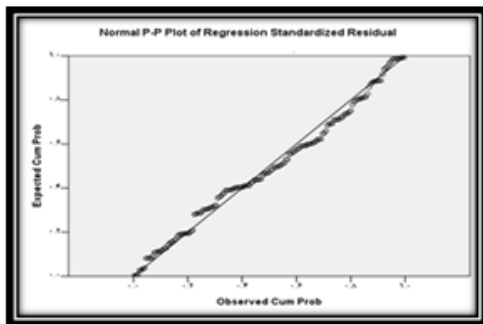


Figure 1. p-p diagram pertinent to model

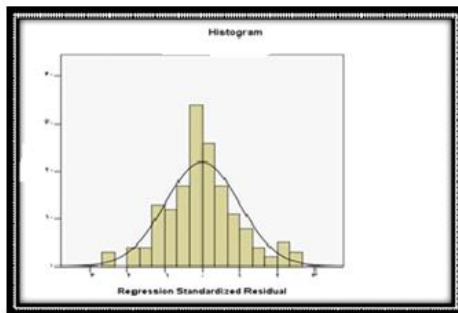


Figure 2. histogram diagram pertinent to model

To check being fixed dependent variable variance for all the independent variable, one can use the standardized remaining diagram in front of the predicted values. If the variance in the model is constant, a pattern related to the data on the points won't be observed. It would seem that the majority of the residuals scatter randomly around zero horizontal line.

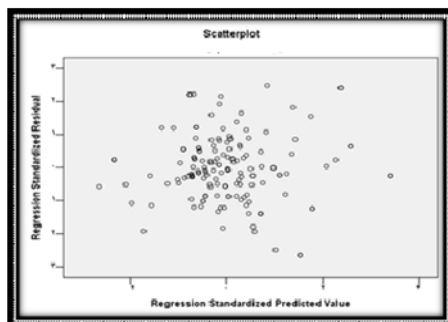


Figure 3. The model being fixed (radiation dependent variable)

#### Examining linearity

The first step in the regression analysis, is drawing a diagram of the dependent variable radiation patterns in front of the independent variable. Only when a linear - regression

model must be processed at this point to be gathered around a straight line, in Fig. 4 this is clear.

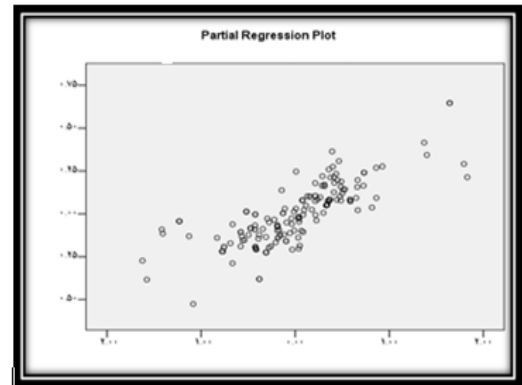


Figure 4. Variance linearity pertinent to model

#### - Reviewing independency

Table 4 - 12, shows regression coefficients as well as the statistics related to the credibility of the regression.

The amount of statistics of the camera - Watson in Table 4 - 12, obtained 1.955, which is close to 2, then we have the independence observations default. And also determining factor model is equivalent to .859.

Also in Table statistics of the F, 923/876 and P - subtotal according to the 000 / 0 is achieved, according to a significance level in Table as its value is .05, indicating that there is linear relationship between the variables the application of investments authorities and the other four independent variables and regression is significant.

That the regression tests will be as follows:

$$\begin{cases} H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = 0 \\ H_1 : \text{not } H_0 \end{cases}$$

$\beta_i$  shows the regression coefficients and  $H_0$  meaningful regression is not meaningful, and all the regression coefficients are zero and  $H_1$  rejects  $H_0$  that is at least one of the coefficients is against zero and regression is significant.

In Table 1 we have the regression coefficients and also constants. Given the p - value computed in Table for the regression coefficients less than a significant level .05 obtained, so at this level of significance all four of

$$Y = 0/232 \times X_1 + 0/351 \times X_2 + 0/215 \times X_3 + 0/186 \times X_4$$

The regression coefficients are significant but constant factor given that p - value computed the equivalent is more than .05, then the constant isn't meaningful factor and regression equation is as follows: in which  $Y$  is the application of authorities investments variable,  $X_1$  is the variable uncertainty,  $X_2$  is the riskless interest rate variable,  $X_3$  variable quality available information and  $X_4$  is investment costs available.

#### Multiple linear relationship and joint

Authority linear relationship between the independent variable - related to the model with an indicator measured called. For each independent variable proportion of dispersion is variable by the linear relationship with other existing independent variables in the model is not justified. Circuit between 0 - 1. Close to a means that an independent variable in a small part of it is justified by other independent variables.

**Table 1. results from a regression**

durbin - Watson statistics	determining factor adjusted one	determining factor	significance level	Fischer ( F ) statistics
1/955	0/858	0/859	0/000	923/876
significance level	t - statistics	standard deviation	The value of the coefficients	coefficients
0/373	0/893	0/046	0/041	constant
0/000	15/993	0/015	0/232	uncertainty
0/000	17/023	0/021	0/351	Riskless interest rate
0/000	16/325	0/013	0/215	the quality of the information available
0/000	9/278	0/020	0/186	investment costs

Close to zero means that a nearly linear combination of other independent variables and data have multiple common linear relationship. One study linear relationship between the variables - Independent, calculate the VIF index is calculated that if this indicator for less than five, the assumption of independence is accepted. Table 2 represents the index values, all of these values are less than five.

The regression coefficient significant but constant factor that p - value computed the equivalent of 05 / 0 is more meaningful constant factor and regression equation is as follows:

In which the application of authorities variable investments, variable uncertainty, interest rate risk variable without variable quality available information and investment costs.

#### **Multiple linear relationship and joint**

Authority linear relationship between the independent variable - related to the model with an indicator measured called. For each independent variable proportion of dispersion is variable by the linear relationship with other existing independent variables in the model is not justified. Circuit between 0 - 1. Close to a means that an independent variable in a small part of it is justified by other independent variables. Close to zero means that nearly linear combinations of other independent variables and data have multiple common linear relationship. One study linear relationship between the variables - Independent, calculate the VIF index is calculated that if this indicator for less than five, the assumption of

independence is accepted. Table 2 represents the index values, all of these values are less than five.

#### **Conclusion**

With the deliberations are being observed that the cost of capital interest rates, without the risk of uncertainty, environmental and information quality of the authority of the investments affect this means that with the increase in the cost of capital company executives of adopted in the bourse theoretically willing to greater use of investments and authorities are due to the interest rate without the risk of managers and investment projects in the election - - which has a greater authorities . Of Directors of the public enterprise companies production, environmental uncertainty in the selection of investments. So, with a view to ensure their capital - market bombing - and the project - the - authorities, starting at them more investments.

#### **Suggestions for future research**

Since the results of the present study can be used for other - research in this field is used, so it is recommended that researchers consider the following:

Offered another investigation with other factors investment authority.

Other researchers have also to examine the models used in from outside Iran - model the localization has to use them. It is recommended that the mandate of research approach to investment and capital structure or study authorities in Iran. Offered the role of each one of the factors capital authorities - - the authority of the investments.

#### **References**

- 1.Bazar et al. (2005), Research Methods in behavioral sciences, publishing, printing the fifteenth.
- 2.M.,W. (2011), the financial management, the Press, the fifteenth.
- 3.Khaki. (2010), research approach to thesis writing, publishing, printing the seventh.
- 4.Astir M. (2004), foundations of financial management, first published.
- 5.Dastgir , M. ( 2008 ), assessment investments in uncertainty ,the fourth international conference.
- 6.F., and Jalili , M. ( 2010 ), of target costing , based on value creation , publishing , printing
- 7.7-Sinai, H., W. (2010), the managers use investment authority theory, Quarterly Financial Accountant 79 number.
- 8.Ali, M. (2010)," investment authority" accountant magazine, twenty - four years, 213 number.
9. Valid, H. (2010), decision - making in the financial issues, the Press, the second edition.