

Evaluating the effect of financing methods and individual characteristics on the behavior of investors

Mohsen Hamidian^a, Reza Nemati Koshteli^{b*}, Ali Akbar Mohsenzadeh Ganji^c

^aDepartment of Accounting, South Tehran Branch, Islamic Azad University, Tehran, Iran

²Department of Accounting, Islamshahr Branch, Islamic Azad University, Islamshahr, Iran

³Department of Accounting, Roudehen Branch, Islamic Azad University, Roudehen, Iran

Abstract

The present study has evaluated the effects of financing methods including issue of shares, retained earnings, loans and the sale of assets and investor's individual characteristics such as age, gender, level of education and investment experience on the behavior of investors. Data collection in this study has been done by questionnaires, in a way that the sample size has been obtained according to Cochran formula and 100 questionnaires have been evaluated and analyzed. Cronbach's alpha test was used to test reliability. The information contained in the questionnaires was evaluated using descriptive statistics and drawing histogram chart and calculations of Pearson and Spearman; and eventually, the testing of hypotheses has been done using a binomial test. The results show that financing methods and individual characteristics of investor (except gender) have effects on the behavior of investors in the Tehran Stock Exchange

Keywords: Financing, personal characteristics, investor behavior, Tehran Stock Exchange

Introduction:

Investors are among important element of the capital market. The ultimate goal of any investor from maintaining their capital is maximum profit and efficiency. In order to encourage investors to invest in financial assets, efficiency of these assets should be higher than other options (Mehrani and Bahramfar, 2004)

There are different methods of financing including internal and external financing or a combination of these. Managers of economic firms are under increasing pressure in the current era due to the limitation of financial resources especially in commerce and narrowing of the competition in order to reduce operating costs and total cost and also choose the most cost effective capital structure for the firm's activities in order to increase firm's value, have timely payment of debt, continuity of activities and greater presence in the internal and external markets. These pressures on executives of firms are normally from various groups such as shareholders, consumers and other stakeholders. Strategies of managers to achieve the above objectives are favorable financing with the lowest cost for the development and economic

development of activities of businesses, increasing profits and maximization of shareholders' wealth (Jahankhani and Kanani-Amiri, 2006).

Financing is the art and science of cash management. The objectives of financing are investment, profitability, reduction of risk and resolving social and economic needs of firms. Profit from business of firms is considered among the important factors of continuity of activities of firm and is an important source of financing for firms operating activities in the future. Providing financial desirable resources is among the concerns of firms in the world. Any type of activity requires financial resources. Hence, financial resources have been considered as the lifeblood of firms and small and large businesses and organizations. In fact, the main purpose of any economic activity is profitability and earning profits is not possible without financial resources (Paramasivan and Subramanian, 2012).

Companies face sources of internal financing and external financing in financing decisions. The main tasks of managers is maximization of shareholders' wealth. The impact of financing methods and method of using proceeds of these methods on future stock returns are important for them. Also, method of financing can affect earnings per share, financial risk and the percentage of ownership (Frank and Goyal, 2003).

Managers and shareholders of economic firms who are active in the early years usually face the problem of obtaining credit and they prefer internal financing due to its lower cost but lack of profit sharing for many years to investors who have invested in the firm for profitability not only will lead to their dissatisfaction but it will also reduce their motivation to keep their capital in the firm. Thus, managers turn to external financing in long term (Ghanizadeh, Rain, 2015).

Theoretical literature and research background

Debt and release of preferred stock or common stock have a common feature which is sources of funding is out of the Profit unit and its operations while retained earning represents an internal source of financing. As long as profit manager convince can individuals to invest in units or credits and loans, there will be no limitations in terms of funding from external sources but retained earnings are an internal source of profit and are limited to annual profits obtained by profit unit after deduction of distributed profits. Financing through the issue of ordinary shares and use of retained earnings also have a common characteristic because they both represent funds granted by the owners of profits (compared with donors, credits and loans and preferred shareholders). Research carried out about financing methods of large profit units in large industrial countries indicate that primarily, the main source of profit funds is retained earnings and the second source after it is borrowing a major source of required funds.

Although common stock and preferred stock provide less funding compared with the first two sources but these two sources are s important from the perspective of profit in a given period (Hafezi, 2013).

Managers initially act through operating funds of organization for financing and then turn to foreign markets and they prefer debt over equity in this way. According to this logic most of the financial managers initially act on assessment of their borrowing capacity and create debt to the levels of resulting capacity after applying special considerations. The main risk of debt is inability to pay the principal and interest at maturity. Thus, these fixed payments must be settled regardless of profitability of firms. Any kind of failure to pay lead to bankruptcy or legal action against economic unit. In addition, maintaining financial integrity and competitive position of economic unit is greatly important. Economic unit must work in a way that it can have sufficient funds for strategic investments, dividend payments, costs of research and development and so on. Failure to provide these funds will threaten the financial health of the economic unit. Financial manager should be able to always consider a balance between internal cash flows and external flows in determining borrowing capacity. Cash flows that can be used to pay financial obligations should be determined for this purpose (Antoniou et al, 2002).

Therefore, investors' behavior can be interpreted as follows: Herding behavior is the tendency of investors to do group deals; in other words, this type of behavior is created when people are influenced in their decision making by the behavior of others or do trading with a large number of investors in a similar direction in a specified time period. This type of behavior forms in capital market when there is a high correlation between activities of different stakeholders. In general, this phrase means that Investors show a similar behavior in the market (Lao & Singh, 2011).

Accommodating in informational behavior of investors can be defined as changes in behavior or beliefs of a person as a result of real or imagined pressure from another person or group of persons. In general, people have two important goals, one is correct thoughts and actions and the other is having friendly relations with people through behaving based on their expectation (Hussein & Hassan, 2009).

If investors have more comprehensive financial needs, it can have important implications in the decision-making process of investors because small investors will be sensitive to social influences of other investors and those investors can have influence on them. In a way that humans are affected by each other in almost every activity and this includes financial and investment activities (Hirschleifer & Teoh, 2000).

Adaptive information behavior is seeking for accurate interpretations about the reality and having correct behavior. Correctness of behavior means having a behavior in line with the nearest way to achieve goals. This behavior which is exact interpretation of the facts and correct behavior due to internal factors such as lack of knowledge and experience and external factors such as rapid and unexpected changes of the environment. Bikhchandani and Shorma (2001) consider information flow as the main factor in adaptive behavior of investors. They believe that people who do not have complete access to information or adequate knowledge in the field of investment receive information from the behavior of others which can be the source of adaptive or group behavior of investors in the market (Hoffman, 2000).

Investors who understand that their knowledge and experience about correct decisions is inadequate may obtain their information from knowledgeable people or review the behavior of other investors in the social environment to reduce the bad feeling of uncertainty and reach a correct decision. But some evidences suggest that investors are still hesitant about making the best decision even when information signals tell an individual to buy or sell which share. Thus, investment turns into a subjective form from an objective form (Lao & Singh, 2011).

Tesai and colleagues (2012) examined the strategic behavior of major investors in their research. Their result experimentally show that Price depends on trading volume. They also provided a model which was consistent with the real data. Salim and Yadov (2012) showed the herd-like behavior of investors on the stock exchange of China in their research. The results is that the herd-like behavior in the short and medium terms have direct relation with stock returns but this relation is negative in the long term. Yao et al (2014) evaluated the herding behavior of investors in the Stock Exchange of China. The results show that the herding behavior is more common in the Stock Exchange compared to other industries. Also, the herding behavior reduced over time of the study.

Moradi and Izadi (2015) evaluated the effect of financial literacy of investors on decision to invest in securities in their study. The results show that all four considered factors including individual thoughts, accounting information, economic information and personal financial needs affect the decision to invest in Iran. There is also a significant positive relation between level of financial literacy and the factors influencing investment decisions but this relation is very weak and less than 10 percent of change in effect of factors influencing investment decisions are explained by the level of financial literacy. In addition, the results show that by consideration of type of employment, sensitivity of factors affecting investment decisions higher compared to the level of financial literacy in the field of non-financial employment.

Seif Allahi, Kordlouie and Dashti (2015) carried out a research named "Comparative study of behavioral factors in investment of financial assets" and randomly selected 385 investors in the Tehran Stock Exchange and collected the required data by questionnaire. The results show that all of the factors except

for "overconfidence" affect the investor and the level of this effect is different for each one and these factors in terms of effectiveness are respectively: 1. Relative gains and losses; 2. disposition effect; 3. conservatism 4. Herding behavior; 5. Intuition of representation; 6. Effect of ownership and 7. Regret avoidance. Ebrahimi Moghadam and Ahmadi Moghadam (2015) carried out a study entitled the effect of financial leverage and conditional conservatism on investment inefficiency of companies listed on the Tehran Stock Exchange and used the statistical sample of 107 firms listed in the Tehran Stock Exchange during 2009-2013 and showed that financial leverage and conditional conservatism have significant negative effect on investment inefficiency.

Methodology and hypotheses

This is an experimental research. One of the features of experimental method is that it manipulates or intervenes the variables and controls the obtained results and observed a group which have been random selected. This is also an applied research. Applied researches are those which use theories, laws, principles and techniques which are developed in basic researches to solve administrative and real problems. The method of this research is inductive and the results of evaluation on statistical samples have been extended to the whole population. In the end, this is a descriptive correlational study. This research is done to understand the relation between variables but discovery of causal relations are not a necessary (Hafeznia, 2009).

Thus, the main and secondary research hypotheses are as follows:

The main hypothesis: there is a significant relation between methods of financing and investor's behavior
 Secondary hypotheses:

1. Using ordinary equity method has significant effect on investment behavior on the stock exchange
2. Using retained earnings method has significant effect on investment behavior on the stock exchange
3. Using loans method has significant effect on investment behavior on the stock exchange
4. Using sale of assets method has significant effect on investment behavior on the stock exchange
5. Using individual characteristics has significant effect on investment behavior on the stock exchange
6. Experience of Investor has significant effect on his behavior on the stock exchange

The population in this research includes shareholders and investors in Tehran Stock Exchange. However, people under 18 years are not considered in this thesis because investment of these people is usually done by a third party. Cochran formula is the method of sampling in this research. Since the statistical population is unlimited this formula was used to obtain the sample:

$$n = \frac{\frac{z^2 pq}{d^2}}{1 + \frac{1}{N} \left(\frac{z^2 pq}{d^2} - 1 \right)}$$

In which

n is the sample size

N is Statistical population size

z is the acceptable standard error of confidence percentage

p is a proportion of the population with a certain characteristic (eg male population)

q (p-1) is a proportion of the population without a certain characteristic (eg female population)
d is the Degree of certainty or potential efficiency

Hypothesis test model

Analysis of the data in this study has been carried out using statistical methods such as Cronbach's alpha for reliability of questionnaire and descriptive statistics, correlation analysis and binomial test to analyze the hypotheses. Cronbach's alpha is used not only for questions with two zero and one option and is also used for multi-valued options (such as whole five-item Likert) (Momeni and Ghaiyoomi, 2015).

Hypotheses in this research have been analyzed using binomial test. Binomial test, which is sometimes called Ratio Test, is used when we want to evaluate a particular ratio in the population. This test is used to determine the impact or lack of impact of a variable on a given phenomenon. In the design of this test, H0 usually indicates lack of impact and H1 usually indicates the impact of that variable (Momeni and Ghaiyoomi, 2015).

Research findings

Table 1 shows the frequency of individual characteristics of investors in the Stock Exchange

Table 1: the frequency of individual characteristics of investors in the Stock Exchange

Individual characteristics		Frequency
Gender	female	23
	male	77
Age	18-30	41
	31-45	49
	46-60	10
	61 and higher	0
Education	Diploma and lower	20
	Associate Degree	3
	Bachelor	57
	Masters	18
	PhD	2
Experience	Less than 5 years	54
	5-10 years	18
	More than 10 years	28

From 100 examined questionnaires, most investors in Tehran Stock Exchange were male and most frequent age range is between 31 and 45. Also the most frequent education level is Bachelor degree and the most frequent experience is less than 5 years

Table 2: Descriptive statistic of questionnaire

question number	Average	Median	Facade	SD	Variance	skewness ratio	Slenderness ratio	Minimum	Maximum
1	6.7	7	7	0.98	0.96	-1.83	6.2	3	9
2	6.6	7	7	1.17	1.37	-2.09	6.64	1	9
3	7.08	7	7	1.2	1.44	-1.71	8.16	1	9
4	7.14	7	7	1.21	1.47	-0.58	1.91	3	9
5	6.88	7	7	1.2	1.44	-1.41	4.2	3	9
6	6.8	7	7	1.17	1.38	-1.2	3.45	3	9
7		7	7	1.55	2.41	-1.56	4.46	1	9
8		7	7	1.63	2.67	-1.37	1.85	1	9
9		7	7	1.29	1.67	-0.75	1.37	3	9
10		7	7	1.24	5.54	-1.58	4.75	1	9
11		7	7	1.34	1.8	-1.15	1.79	3	9
12		3	3	2.24	5.04	-0.68	-0.68	1	9
13		7	7	1.16	1.34	2.17	6.93	1	9
14		7	7	1.43	2.06	-1.47	3.9	1	9
15		7	7	1.35	1.82	-1.51	3.55	1	9
16		7	7	1.47	2.18	-1.22	1.69	1	9
17		7	7	1.28	1.64	-0.96	1.59	3	9
18		7	7	1.17	1.37	-0.67	2.75	3	9
19		7	7	1.55	2.4	-1.69	4.86	1	9
20		7	7	1.49	2.2	-1.2	2.45	1	9
21		7	7	1.76	3.1	-0.47	0.06	1	9
22		7	7	1.68	2.84	-0.75	0.18	1	9
23		5	7	1.99	3.96	-0.43	-0.59	1	9
24		7	7	1.48	2.2	-0.68	1.26	1	9

Values for coefficient of skewness and Slenderness in table 2 show that these data have a normal distribution. Values for average, median and Façade show that the majority of responses to the questionnaire was the answer of I agree with the score of 7 but this response has been mostly I disagree in 12 questions which has the score of 3. The positive form of this question has effect on investor's behavior and has been used negatively deliberately in order to control the accuracy of respondent. This this question is considered in the questionnaire as a controlling a question. Since most of the respondents have selected the option of I disagree, it can be concluded that they have had high accuracy to answer the questions.

Table 3: Results of hypotheses

Hypothesis	Description of hypothesis	result
first	Using ordinary equity method has significant effect on investment behavior on the stock exchange	Accepted
second	Using retained earnings method has significant effect on investment behavior on the	Accepted

	stock exchange	
third	Using loans method has significant effect on investment behavior on the stock exchange	Accepted
fourth	Using sale of assets method has significant effect on investment behavior on the stock exchange	Accepted
fifth	Using individual characteristics has significant effect on investment behavior on the stock exchange	Accepted
sixth	Experience of Investor has significant effect on his behavior on the stock exchange	Accepted

Conclusion

Following results have been obtained from this study:

Questionnaire was used in this study to evaluate the effect of financing methods and individual characteristics on the behavior of investors. Thus, the questionnaires were distributed among different investors of Tehran Stock Exchange. Thus, it was shown in statistical analysis of individual characteristics that 23% of investors were female and 77 percent of them were male. In evaluation of age of investors, 41 percent of investors are in age range of 18-30, 49% are in age range of 31-40 and 10% are in age range of 46-60 and there was no investor more than 61 years old. Also in evaluation of education level of investors 20 percent of them had education level of diploma or lower, 3 percent of them had Associate Degree, 57 percent of them had bachelor degree, 18 percent of them had Master's Degree and 2 percent of them had PhD. In case of experience of investors, 54% of them had less than 5 years of experience, 18 percent of them had 5 to 10 years of experience and 28 percent of them had more than 10 years of experience in the Stock Exchange. Thus, most of the investors were male and their age range was 31-45. Also the most frequent education level is Bachelor degree and the most frequent experience is less than 5 years.

Values for coefficient of skewness and Slenderness in descriptive statistics indicate that these data follow a normal distribution. Values for average, median and Façade show that the majority of responses to the questionnaire was the answer of I agree with the score of 7 but this response has been mostly I disagree in 12 questions which has the score of 3. The positive form of this question has effect on investor's behavior and has been used negatively deliberately in order to control the accuracy of respondent. This this question is considered in the questionnaire as a controlling a question.

Since most of the respondents have selected the option of I disagree, it can be concluded that they have had high accuracy to answer the questions. Histogram chart shows that the answer of I agree with score of 7 is the most frequent answer for most of the questions expect for the 12th question. The answer of I disagree is the most frequent in case of the 12th question. Results of Pearson and Spearman correlation coefficient calculations showed that there is a low correlation between the questions of questionnaire. Results of testing the first hypothesis showed that since the sig of all six questions is less than 5 percent, the assumption of equal success ratio for each of the six questions is rejected with 0.56. Also since this

observe ratio is less than 0.56 for all six questions, the first hypothesis is accepted which means that equity method is effective on the behavior of investors on the stock exchange. Results of testing the second hypothesis showed that since the sig of all six questions is less than 5 percent, the assumption of equal success ratio for each of the six questions is rejected with 0.56. Also the ration observed for questions 10, 11 and 12 is less than 0.56. Thus, the second hypothesis is accepted. The 12th question is a control variables and has a negative impact on investor behavior. Thus, negativity of this relation and greater number of questions with answers of completely disagree and disagree are true responses to prove this hypothesis. Thus, the second hypothesis is accepted based on this question which means that retained earnings method is effective on the behavior of investors on the stock exchange. Results of testing the third hypothesis showed that since the sig of all six questions is less than 5 percent, the assumption of equal success ratio for each of the six questions is rejected with 0.56. Also since this observe ratio is less than 0.56 for all six questions, the third hypothesis is accepted which means that loaning method is effective on the behavior of investors on the stock exchange. Results of testing the fourth hypothesis showed that since the sig of all four questions is less than 5 percent, the assumption of equal success ratio for each of the four questions is rejected with 0.56. Also since this observe ratio is less than 0.56 for all four questions, the fourth hypothesis is accepted which means that sale of assets method is effective on the behavior of investors on the stock exchange. Results of testing the fifth hypothesis showed that since the sig of questions 21, 22 and 24 is less than 5 percent, the assumption of equal success ratio for each of the four questions is rejected with 0.56 but since the sig of question 23 is more than 5 percent, the assumption of equal success ratio of this question is no rejected with 0.56. Also since this observe ratio for questions 21, 22 and 24 is less than 0.56. Fifth hypothesis of research is accepted with these questions but in case of question 23, this ratio is more than 0.56 and the fifth hypothesis is not accepted which means gender is effective on the behavior of investors on the stock exchange. But in total of four questions, since three questions confirmed the fifth hypothesis, it can be concluded that Investor's individual characteristics (except gender) are effective on the behavior of investors on the stock exchange. Results of testing the sixth hypothesis showed that since the sig of all three questions is less than 5 percent, the assumption of equal success ratio for each of the three questions is rejected with 0.56. Also since this observe ratio is less than 0.56 for all three questions, the sixth hypothesis is accepted which means that experience is effective on the behavior of investors on the stock exchange. Based on the results, all methods of financing are effective on the behavior of investors on the stock exchange. Also individual characteristics are effective on the behavior of investors on the stock exchange. But results showed that gender in not effective on the behavior of investors on the stock exchange.

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