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Influence of weak internal control on investment relationship and firm value in listed companies in Tehran Stock Exchange

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ABSTRACT

Investors in capital markets today rely heavily on reliable financial information. The high quality of financial reporting helps investors better assess their risk and value for the company and improve their investment decisions. The purpose of this study is to investigate the impact of weak internal control on the relationship between investment and firm value in listed companies in Tehran Stock Exchange.
The statistical population includes all companies listed in Tehran Stock Exchange and 90 companies listed in Tehran Stock Exchange during 2012-2012 are selected as statistical sample. In this study, a mixed data model was used to test the research hypotheses. The results of the research hypothesis test showed that the impact of the investment variable on the value of the company is confirmed by the smaller level of significance, while the positive effect of the test statistics is direct. The research findings also show that the variable impact of interactive effect of investment and weak internal control on company value is rejected due to the larger level of significance.
Keywords: Internal control weakness, Investment relationship, Corporate value.

Problem Statement

In the last two decades, following the financial scandals of companies such as Enron and WorldCom, internal controls have been brought to the attention of lawmakers to increase investor confidence in the reliability of financial statements. Therefore, investors can easily find out about the quality of the company's internal control system. In our country also in 1391, pursuant to Article 11 of the Tehran Stock Exchange Acceptance Guidelines, the Tehran Stock Exchange has issued the Internal Control Guidelines for publishers admitted to the Tehran Stock Exchange. According to this article, management is responsible for evaluating the effectiveness of internal controls and should report on the results of internal control evaluations. The Company's Independent Auditor is also required to comment on the establishment and implementation of an appropriate and effective internal control system by the Company in the context of internal controls (Stock Exchange, 2012). Investment represents a set of investment policies and policies and is constantly revised by the company over time. Investment opportunities do not happen by themselves, but rather they must be identified or created. Different types of investment opportunities may originate at different levels of the company segments. However, the market response to declaring internal control weak is largely negligible (Agnova, 2007). The explanation is that stock prices have already mentioned much of the weakness of internal control over previous years. Internal control is not a specific event or situation, but a set of sequential and inclusive actions that influence and extend all activities of the organization. These actions occur continuously throughout the operations of an organization. They are the path that governs and manages the organization and exists in an inclusive and integral way (Poetry, 2011). Effective internal controls allow the business to achieve its goals, to achieve this, it must ensure that internal control reports are reliable. This includes efficient access to company laws and regulations and policies and obligations (Hassan Yeganeh and Saghafi, 2009). Recent financial scandals in US and European capital markets (such as Enron, WorldCom, and Parmalat) have confirmed the importance of financial reporting quality, especially profit quality. According to many theoretical studies, because market information risk is not volatile, they are considered in asset pricing models and are considered as factors affecting the expected return on investors and hence the cost of capital of the company. (Isley & Hara, 2014). It is expected that improving the quality of earnings by reducing information risk and lowering the cost of capital will increase the market value of the company. Therefore, this research seeks to answer the question whether the investment of companies has a significant relationship with their value and also does the weak internal control affect this relationship?

2. Research goals

Main Objectives of the Study

1-Explain the relationship between investment and company value.

2- Explain the impact of weak internal control on the relationship between investment and company value.

3. Research hypotheses

1- Investing in projects has a significant relationship with the value of the company.

2- Weak internal control affects the relationship between investment and company value.

4. Theoretical foundations of research:

An organization's internal control structure consists of policies and procedures that are designed to provide relative assurance of achieving organizational goals. Relative certainty means that no internal control structure is ideal and the internal control expense of a business unit should not exceed its expected benefits. Proper design and deployment of internal control systems in economic units is one of the most important factors in achieving effectiveness and efficiency of operations, promoting financial accountability and transparency, adherence to laws and regulations, and helping prevent fraud and financial abuse (Ghanbarian, 2011). Generally speaking, investing means consuming the available money to make more money in the future. In other words, investing means postponing current consumption to achieve more future consumption. Time and risk are both important because they involve money investing in the present and its value is determined while the future rewards are usually uncertain. In some cases the characteristic of the present becomes dominant and in some cases the risk is of paramount importance. Both are important, and at other times (Sharpe, 2002). Among the roles sponsored by a financial manager are determining the value of the company for different types of securities. When a company is considering or not buying securities, it must be aware of the value of that investment. Determine the amount of investment to acquire a financial asset using common techniques. Generally, checking the public offering of stocks to raise capital and maximize the interests of current shareholders is to determine the price and timing of stocks, and so on the value of the company.

5. Research area

5-1 Subject matter

The subject area of this research is financial accounting and investment management.

5-2 Time Zone

The time range of the research and the importance of time in collecting data in the time domain is mentioned. The research time domain covers the 5-year period from 2013 to 2016.

5-3 Spatial realm

The scope of this research includes all listed companies in Tehran Stock Exchange.

6. Research background

6-1 Preliminary Research in Internal Studies

- Hajia (1989) in a study entitled "Business Strategy, Important Weaknesses in Internal Controls, and Delay in Audit Reporting" found that firms with an exploratory business strategy had weaknesses in the importance of internal controls in audit reports, but firms with less defensive strategy. Weaknesses have important internal controls. The results of the first and second hypotheses confirm the organizational theory that the corporate strategy of the company is a good indicator for evaluating the strength of internal control system, but the third hypothesis was not confirmed.

- Jafarian and Razvani (1989) in a study entitled "The Relationship of Stock Exchange Value with the Intrinsic Value of Stocks to Investment Decisions of Companies Listed in Tehran Stock Exchange" found that free cash flow is a criterion for measuring firm performance and cash flow. Indicates that the company has at its disposal the expenses required to maintain or develop the assets. If the free cash flow is negative, it can mean a lot of company investment, which is normal in many startups.
- Farahmand (1979) in a study entitled "Assessing the Impact of Tax Optimization, Accruals and Investment on the Value of Companies Listed in Tehran Stock Exchange" found that there was a positive and significant relationship between tax avoidance, operational accruals and capital. Valuable listing of listed companies is available on the Tehran Stock Exchange.
- Shirazian and Kayhani (1396) in a study entitled "Investigating the Impact of Institutional Ownership, Investment Opportunity and Profitability on the Profit and Value Sharing of Companies Listed in Tehran Stock Exchange" found that the positive and significant effect of institutional ownership, capital opportunity Investment and profitability are based on the amount of profit divided.

6-2 External records

- Jacobi et al. (2017) "The Relationship Between Internal Control Weakness, Investment and Company Value" The results showed that companies with internal control weakness reduced their investment amount, which in turn reduced the value of the company.
- Wang et al. (2016) in a paper examined the relationship between overinvestment, inflationary uncertainty, and high management confidence. The results showed that the quality of internal controls reduces earnings management and improves audit quality.
- Fix & Lima (2010) In a study of the relationship between audit committee quality, auditor independence, and weaknesses in internal controls, the analysis revealed that there was a relationship between audit committee quality, auditor independence, and internal control weaknesses. Also, most of the listed companies had internal control weaknesses with more independent auditors. In addition, most of the companies that had recently changed their auditors had internal control weaknesses.
- Amotella (2009) examines the impact of leverage on investment in emerging markets. The effect of leverage on investment is important because the value of the firm is determined by the expected cash flows from the investments. But the channel through which leverage affects investment is unclear. Managers prefer to grow the size of the company and increase their strength in the company, even if it is at the expense of losing shareholder wealth and lowering the value of the company due to poor project acceptance.

7. Research Method

The purpose of this research is applied research, development of applied knowledge in a particular field. It is also descriptive-correlational in terms of method and nature. The research is based on deductive-inductive framework and its information is post-event type.

7-1 Society and Statistical Sample

In the present study, the companies listed in the Tehran Stock Exchange constitute the target population. In this study, systematic removal method was used for sampling. Thus, taking into account the statistical population (all companies listed on the stock exchange until 1396) and the following criteria, sampling has been done that out of the statistical population only 90 companies have met all the above criteria. They were used as examples in the present study.

The criteria used to select the sample from the statistical population are as follows: Companies that do not meet the above criteria will be systematically eliminated, meaning that they will be excluded from the sample. Detailed sampling of the statistical population by systematic elimination is described.

Table 1-Statistical population screening table (sampling in the present study)

Title	Number
Total companies listed on Tehran Stock Exchange at the end of the year 1395	520
In order to make the information comparable, their financial year is not the end of March	97
No change in the financial year during the period under review	93
Be admitted to the stock exchange after 90 years	84
Except for investment and intermediary companies	87
Required information is not available	69
Number of Sample Companies	90

7-2 Operational definition of variables and how to measure them internal control: According to Article 5 of the Securities Admission Guidelines in Tehran Stock Exchange (approved January 1, 2010): “The applicant for admission to the Tehran Stock Exchange must attach the application form to the following documents in the form of a stock exchange. Submit the panel to the Exchange through the Admission Advisor. One of these documents paragraph 2 of this article is the auditor's confirmation of the adequacy of the company's internal control system so that it ensures that the rights and interests of shareholders are equally protected and respected ”(Hesas Yeganeh et al., 2016).

Internal control weakness:

The concept of internal control refers to the process of designing, executing, and protecting those designated by management in order to provide reasonable assurance about the reliability and quality of financial reporting, the efficiency and effectiveness of operations, and ultimately the proper enforcement of laws and regulations. Et al., 2015).

investment: It is a type of asset held by an investor to increase economic benefits through the distribution of benefits (in the form of dividends, guaranteed and rentals), value enhancements or other benefits (such as benefits from business relationships). (Accounting Standard # 1 - Investment Accounting).value of the company: Valuation In financial knowledge, the process of determining the current value of an asset or a company is valued.

7.3 Data analysis method

In this study ،multivariate linear regression model is used to test the hypotheses.

A linear regression model analysis has three test steps as follows:

Stage One: Linear Regression Model Estimation Tests

Step Two: Testing the Linear Regression Model Defaults

Step Three: Test the research hypotheses

In this step, two tests of Fimmer and Hasman are used to determine the method of estimating (fitting or executing) the respective regression model. The software used for data analysis and tests (multiple regression model) is Eviews software version and the research regression model is also expressed.

8. Data analysis (reviewing research hypotheses)

Inflation Factor Analysis of Variances (Linear Test)

The variance inflation factor evaluates the multiple linearity in the ordinary regression analysis. In fact, this index indicates how much of the change in the estimated coefficients of the coefficient has increased. As an empirical rule, the greater the value of this factor than the number 2, the greater the linearity, thereby rendering the regression odel inappropriate for prediction. Therefore, the higher the variance inflation factor for an independent variable, it is concluded that the variable does not play a greater role in the model than the other variables (Habibpour and Safari Shali, 2009).

Variance Inflation Factor (VIF) statistics show the correlation between the research variables and the permissible VIF is less than 10 and since the above table values are less than 10, there is no correlation between the research variables.

8.1 Hypothesis 1: Investing in projects has a significant relationship with company value.

L-F test

In order to estimate and test the hypotheses, the F-Lemmer test must first be performed to identify the pooled data or panel data, as well as the Hausman test to determine the fixed effects or the random effects. The F-Lemmer test was used to determine whether the combined data model or panel model was used. If (0.05 prob) is (panel data method) otherwise the data model is approved.

Table 2- Flemier test results

		L-F test	Model
Test result	Probability (0/05)	Statistics	
Combined data	0/0000	4/343	1

Reference: Research Findings

According to the table above, since the statistical probability of F-Limer is less than 5%, the data is used as a panel.

Hasman test

The Hausman test is performed to determine whether the fixed effect model is used against the random effect model. The Hausman test is based on the presence or absence of the relationship between the estimated regression error and the independent model variables. If such a relationship exists, the random effect model and if no relationship, the fixed effect model will be used. The hypothesis indicates that the independent variables are not correlated and the estimation error and the hypothesis represent the existence of a relationship.

H0: Random Effect

H1: Fixed Effect

Table 3- Hassman test results

Hasman test		
Test result	Probability (0/05)	Statistics
Fixed effects	000/0	51/27

Table 4- Results for Estimation of the First Research Pattern

Error level	**The standard deviation**	**T statistics**	**Estimated coefficients**	**Variables**
000.0	129180.0	414316.2	18270.0	investment
000.0	152487.0	149444.3	480251.0	Financial Leverage
0000.0	147201.0	674076.4	688027.0	size of the company
1886.0	046080.0	317045.1	060690.0	Age
0377.0	961408.0	085323.2-	004846.2 -	Constant coefficient (width of origin)
F statistics	Probability statistic F	Camera-Watson statistics	Adjusted coefficient of determination	The coefficient of determination
468/4	00.0	060/2	539/0	558/0

Reference: Research Findings

Here, to determine the appropriate model, the Hausman test is used, since the probability is less than 5%, the null hypothesis is rejected and the fixed effects model is used. Findings show that the relationship of all variables except the age of the company is significant at the level of 0.05 error. Considering the F statistic (4.68) and the error level (0.000) which is less than the error level of 0.05, thus it can be stated at 95% confidence level that the research model fits well. It is well-fitted and highly significant. 0.55 indicates the coefficient of determination, which explains the independent variables. That is, more than 53.9% of the dependent variable changes are justified by the independent and control variables of the model. Meanwhile, the Watson camera stat value is 2.060. According to the Watson camera statistic, it can be accepted that there is no serial correlation model between the rest of the sentences and one can claim the absence of self-correlation.

8.2 Second hypothesis: weak internal control affects the relationship between investment and firm value. L-F test In order to estimate and test the hypotheses, the F-Lemmer test must first be performed to identify the pooled data or panel data, as well as the Hausman test to determine the fixed effects or the random effects. The F-Lemmer test was used to determine whether the combined data model or panel model was used. If it is (0.05 ≥prob), (panel data method), otherwise the pooled data model is approved.

Table 5- Flemier test results

		L-F test	Model
Test result	Probability (0/05)	Statistics	
Hybrid	0/0000	4/31	1

Reference: Research Findings

Table 6 - Results for Estimation of Second Research Pattern

Error level	**The standard deviation**	**T statistics**	**Estimated coefficients**	**Variables**
000.0	129180.0	21543316.2	182301.0	Investment
8124.0	076313.0	237483.0-	018123.0-	Financial Leverage
000.0	152487.0	149444.3	475201.0	size of the company
0000.0	0.147201	674076.4	688030.0	Age
1886.0	046080.0	317045.1	060889.0	Constant coefficient (width of origin)
0280.0	965431.0	204712.2-	128497.2-	The coefficient of determination
F statistics	Probability statistic F	Camera-Watson statistics	Adjusted coefficient of determination	Investment
4099/5	000000.0	064/2	529/0	554/0

Reference: Research Findings

According to the table above, since the statistical probability of F-Limer is less than 5%, the data is used as a panel.
Hassman test of the first model of research
The Hausman test is performed to determine whether the fixed effect model is used against the random effect model. The Hausman test is based on the presence or absence of the relationship between the estimated regression error and the independent model variables. If such a relationship exists, the random effect model and if no relationship, the fixed effect model will be used. The hypothesis indicates that the independent variables are not correlated and the estimation error and the hypothesis represent the existence of a relationship.

H0: Random Effect
H1: Fixed Effect

Table 7- Hausman test results

Hasman test		
Test result	Probability (0/05)	Statistics
Fixed effects	001/0	23/52

Here, the Hassman test is used to determine the appropriate model, since the probability is less than 5%, the null hypothesis is rejected and the fixed effects model is used. According to the findings of the study, it is observed that the relationship of all variables to the non-interacting effect of investment and weak internal control and age of the company are significant at 0.05 level of error. Given the F statistic (5.4099) and the error level obtained (0.000) and is lower than the error level of 0.05, thus at 95% confidence level it can be stated that the research model is well It is well-fitted and highly significant. 554 / indicates the coefficient of determination that explains the independent variables. That is, more than 52% of the dependent variable changes can be justified by the independent and control variables of the model. Meanwhile, the camera-Watson statistic value is 2.064. According to the Watson camera statistic, it can be accepted that there is no serial correlation model between the remaining sentences and one can claim the absence of autocorrelation.

9. Interpret the results and compare:

In this section, based on previous theoretical and research findings, as well as the models and variables used in this study, we interpret the results of the research hypothesis test:

- Research hypothesis 1: The relationship between investment in company value projects was tested. The results of the test show that investing in projects is significantly associated with company value. As a result, the research hypothesis is accepted.

The results of this hypothesis are in line with those of Fakhri and Asgari (2015). Fakhari and Asgari (2015) studied a study on the relationship between investment and firm value in listed companies in Tehran Stock Exchange. The results show that there is a nonlinear relationship between investment and firm value and this nonlinear relationship has a maximum point which is the optimal level of investment. The results also show that the investment opportunity improves the optimal level of investment. Investing and investing effectively works and ultimately increases the value of the company. Research findings can be useful for corporate executives to invest efficiently and for investors to make economic decisions. The greater the investment in projects, the greater the returns and value creation. Second hypothesis of the study: The effect of weak internal control on the relationship between investment and firm value was tested. The results of the test show that weak internal controls do not affect the relationship between investment and company value. The results of testing this hypothesis are close to those of Jacobi et al. (2017). This result indicates that the weakness of internal controls does not affect the intensity and weakness of the relationship between investment and company value.

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