

# Original Article: Investigating the Effect of Voluntary Disclosure of Information on the Company's Risk-Taking with Emphasis on the Moderating Role of Managerial Ownership

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## ABSTRACT

Based on classical and neoclassical economic theories, efficiency has a direct relationship with risk, and considering that the purpose of forming companies is to obtain more efficiency, therefore risk-taking is in the essence of the corporate system. On the other hand, companies should apply a reasonable level of risk-taking in order to insure themselves against damages caused by unreasonable risk-taking. The risk tolerance of companies is influenced by various factors. The current research was conducted with the aim of investigating the effect of voluntary disclosure of information on risk taking, considering the moderating role of managerial ownership. For this purpose, research hypotheses were tested by collecting information from 125 companies admitted to the Tehran Stock Exchange during the period of 2015 to 2021 and using the multivariable regression method. This research was applied from the point of view of the objective and the method of analysis was descriptive-correlation. The findings of the research showed that the level of voluntary disclosure of information has a positive and significant effect on the company's risk-taking. Also, the results of the research indicate that managerial ownership has strengthened the positive effect of the level of voluntary disclosure of information on the company's risk-taking.

## Introduction

In case of high risk fluctuations in the asset market, the efficiency of institutions can be affected by these market risks. Olson and James (2017) and Ricardo *et al.* (2021) show in their article that the spread of risk in the asset market leads to the spread of agency costs and the difference between managers and investors in investment

decisions. This can lead to profit monitoring in financial reports and reduce the quality of financial reports. To deal with factors affecting organizational risks, it can help a lot to diagnose this problem. Risk control conditions in Iran's real estate market are weak because some organizations lack effective risk control.

In an article, according to Ozlati *et al.* (2021), examines the voluntary disclosure of non-financial data and its consequences (insisting

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on matching the theories of attribution and legitimacy). In the current research, it has been tried to combine the theories of symbolization and legitimacy in the category of voluntary disclosure of non-financial data and to examine the role of these data in the form of a framework and several regression models. For this purpose, the information of 102 organizations admitted to Tehran Stock Exchange during the ten-year period from 2009 to 2018 was used. The results of the survey showed that the voluntary disclosure of non-financial information reduces agency costs in the future, risks, the cost of shareholders' fees and the cost of debt, and also lead to the improvement of the liquidity ratio of the organization's inventory and liquidity.

Toulabi and Amjadian (2021) investigated the effect of ownership control on the risk of future stock price decline. In this article, the NCSKEW criterion is used to calculate the risk of stock value reduction, which is the negative deviation of the organization's monthly stock returns during the financial year. The scope of the research includes a sample of 90 organizations admitted to Tehran Stock Exchange during 2015-2016. Regression models have been used to test the hypotheses. On the other hand, the current research is of post-event type and in terms of its purpose, it is considered an applied research. The results of this research showed that there is no statistically significant relationship between ownership control and stock depreciation risk, which contradicts the results of Chen and Zhang (2016). In addition, the results show that the relationship between ownership control and the risk of stock depreciation in organizations with increased agency fees is not statistically significant.

Yekhdani *et al.* (2021) in an article investigated the effect of an organization's cross-sectional level of development on the relationship between voluntary and mandatory disclosure of data and inventory risk. To measure the variable of optional extrapolation of data, three criteria of timeliness, accuracy and bias of mid-term, and annual profit forecast of the organization were used. Mandatory disclosure was also measured using the executive data disclosure agenda from Tehran Stock Exchange. To test the hypotheses, the

data of 130 organizations accepted by the Tehran Stock Exchange from 2009 to 2018 and the multiple regression model were used. Based on the results of the research, the progress of the company under the title of variable adjustment has an effect on the relationship between the time of medium-term profit expectations with implicit risk, short-term and annual profit expectations with implicit risk. In addition, only based on the characteristics of the organization in the form of separate boom and bust periods of the asset market can affect the relationship between torch criteria and average and annual profit forecast with risk criteria.

Furthermore, the research results indicate the effect of the organizational development factor on the relationship between mandatory compliance and risk management based on characteristics.

Barzegar and Khatami (2019) investigated the effect of ownership control on risk tolerance in organizations. For this purpose, the information of 115 acceptable production organizations of Tehran Stock Exchange during the years 2011 to 2016 was separated and analyzed, and the result of estimating the research patterns using the collected information shows that there is a positive and direct relationship between the ownership variable. Control and risk in the organization means that with the expansion of control ownership, the risk in the organization expands. Moreover, agency cost affects the relationship between control ownership and risk in the organization.

This means that the effect of ownership control on the expansion of risk tolerance is greater in organizations with higher agency costs. In a research, Louis and Robinson (2021) examined the factors affecting risk in the company and the results showed that the relationship between profitability and liquidity has the greatest and least effect on risk in the company and the relationship between capital performances. The second and the third suffixes are after the usage links.

In an article, Lem and Lemman (2020) investigated the relationship between company risk-taking and ownership structure. Risk is measured with the help of capital efficiency variance and company ownership organization

based on the amount of ownership of the major shareholder and the company. The effects of membership in business categories and the development of the legal framework on the relationship between risk tolerance and asset structure were analyzed. In this regard, the data of 453 companies from the Bucharest Stock Exchange were analyzed between 2010 and 2017, and the fixed effects regression analysis method was used to analyze the data. The results of the research indicate that the ownership percentage of the main shareholder and organizational ownership have a significant negative relationship with risk, which means that the risk in the company decreases with the increase of the ownership percentage of the main shareholder.

The results showed that the company's membership in the business category and the development of the legal framework have no effect on the relationship between the main shareholder's ownership and risk.

In an article, Wardhani (2019) examined the place of audit quality in the market's reaction to voluntary disclosure of data. For this purpose, the information of West Asian companies and multivariate regression were used. The criteria for measuring the market reaction in this research are: Abnormal stock efficiency, stock efficiency fluctuations, the price gap offered for buying and selling shares, and stock exchange capacity [1].

The results of the surveys showed that the voluntary disclosure of data corresponds to a positive reaction of the stock market, which includes an increase in the extraordinary performance of stocks, more volatility in stock performance, average stock volume, deals, and reductions in the distance between the offer price for buying and selling shares. The case study strengthens this interaction.

Butosan (2017) in an article investigated the effect of discretionary disclosure level and company risk in UK real estate market with the help of regression method. To measure the extent of voluntary data disclosure, they examined companies that are members of the Investment and Management Research Committee. The disclosure index was evaluated based on a list of dimensions, general data, historical data, non-asset data, future

perspective, organizational analysis, and verification, as well as using a weighting approach. The results showed that in companies with fewer analysts, future perspective data and non-capital data are less reliable, and in companies with more analysts, historical data are more reliable, and expanding the range of discretionary data reduces the company's risk. They are in a state of financial bankruptcy and some of them are exempted according to the commercial law.

In addition, many organizations are faced with the renewal of the financial reporting program every year, which indicates a weakness in risk control in the organization [2] Emphasizing the moderating role of managerial ownership, the importance of systematic risk assessment lies in the fact that the goal of investors is to make a profit. To understand this importance, investors invest in funds with high returns and relatively low risk. If the investor's rate of return is higher than the expected rate of return, the credit of the capital will increase and his wealth will increase.

Therefore, shareholders and investors should identify the important variables that determine the risk of the company's stock. Therefore, the factors affecting the organization's risks play an important role in predicting future returns. Many investors and financial decision makers avoid risk due to the current market conditions and pay attention to many factors in choosing an investment that increase the decision of investors (2).

On the other hand, real investors who take risks with their decisions should invest in multiple institutions to spread their performance. Therefore, by diversifying their portfolio, they reduce their risk. However, risk reduction is not possible even by diversifying the portfolio. This type of risk is caused by factors such as huge economic components that affect the overall market return. Systematic risk is a part of capital return fluctuations that results from the simultaneous effect of multiple factors on the stock market rate (3).

With the formulation of laws and the approval of financial crises in the past years, shareholders and investors need to expand the dimensions and quality of data and more reliable and powerful managers to make better

decisions. One of these important resources in the property markets is the presence and decision-making of managers who are known as leaders of organizations, whose decision-making competence can help investors make decisions to some extent (4).

Whilst, the continuous changes of the organization's managers can cause information asymmetry and failure to make the necessary decisions to control the organization. In addition, one of the qualitative characteristics of profit is the profit stability. When determining future cash flows, financial analysts and investors are not interested in the number of accounting profits as the only determining factor, but for them, the consistency and frequency of the profit provided is very important. Interest stability can have an effective effect on cash flow in life cycle stages and reduce investment risk for shareholders (5-7).

Therefore, in connection with the above cases, it seems necessary to conduct this research on the property market in Iran. This research has helped to increase the knowledge of asset market research and, as a result, it will provide valuable practical recommendations to

managers and shareholders of organizations in reducing the organizational risks [7-9].

#### *Population and statistical sample*

The companies accepted in the Tehran Stock Exchange were selected as the statistical population of the current research, and if they have the following conditions, they will be selected by the method of systematic elimination and will be included in the final sample of the research:

(1) During the period of 2015 to 2021, it was continuously present in the market of Tehran Stock Exchange and the end of the company's financial period should be the end of March to provide comparability between companies [9].

(2) Due to the different nature of the performance of financial intermediation companies, banks, insurance, leasing, and investment companies, these companies will also be removed from the final sample [10].

(3) After considering the above conditions, 125 companies have been selected as the final sample of the research [11-13].

How to choose the final sample is reported in Table (1)?

**Table 1** The process of selecting the statistical sample of the research

Number	Description
379	Companies admitted to Tehran Stock Exchange until the year 1400
42	Companies whose financial year is not the end of March 1400
55	Banks, insurance, leasing, and investment
157	Companies whose information was not accessible during the research period
125	The remaining companies
7	Number of years under review (2015-2021)
1000	Number of years - the company under review

As reported in Table (1), the final sample number was 125 companies, which resulted in the use of 875 company-years in the final analysis of the research.

#### *Research data collection tools*

In this research, data collection was completed with two library and data mining methods.

#### *Research variables and how to calculate them*

The method of measuring the research variables in an operational manner and relying on the valid models proposed in previous researches is presented below in the order of the role in the model.

**Research hypotheses**

**H<sub>1</sub>.** The level of voluntary disclosure of information has a positive and significant effect on the company's risk-taking.

**H<sub>2</sub>.** Managerial ownership strengthens the effect of voluntary information disclosure level on company's risk-taking.

**Research models**

In order to test the first hypothesis, the regression model was used, as described in Equation (1):

$$Risk.Taking_{i,t} = \beta_0 + \beta_1 Disc_{i,t} + \beta_2 Size_{i,t} + \beta_3 ACC_{i,t} + \beta_4 Lev_{i,t} + \beta_5 OFC_{i,t} + \epsilon_{i,t} \tag{1}$$

To test the first hypothesis of the research, the coefficient  $\beta_1$  is used, if the coefficient  $\beta_1$  is positive and significant, the first hypothesis of the research will not be rejected. To test the

second hypothesis, the regression model was used, as described in Equation (2):

$$Risk.Taking_{i,t} = \beta_0 + \beta_1 Disc_{i,t} + \beta_2 Ma.Own_{i,t} + \beta_3 (Disc_{i,t} * Ma.Own_{i,t}) + \beta_4 Size_{i,t} + \beta_5 Acc_{i,t} + \beta_6 Lev_{i,t} + \beta_7 OFC_{i,t} + \epsilon_{i,t} \tag{2}$$

To test the second hypothesis of the research, the coefficient of interactive variable  $\beta_3$  is used if the coefficient  $\beta_3$  is increased compared to the coefficient  $\beta_1$  in the first model of the research and the significance level of the statistic is less than 0.05.

median, the minimum, the maximum, standard deviation, and skewness. In this research, first, descriptive statistics were taken, and the results showed the presence of outlier data in some variables. Accordingly, to reduce the negative effects of outlier data on the results, the Winzorising command is used to repair the outlier data. The findings of descriptive statistics after outlier data correction are presented in Table (2).

**Results**

Descriptive statistics seeks to describe the collected data using components such as mean,

**Table 2** Descriptive statistics of variables after outlier data repair

Elongation	Crookedness	The maximum	The minimum	Standard deviation	Middle	Average	Number of observations	Variable
5.759	1.929	13.050	0.670	3.275	1.983	3.292	875	Risk taking
1.819	0.663	81.56	0.000	29.522	6.87	25.164	875	property management
2.958	0.670	18.041	12.651	1.383	1.6274	14.808	875	Size of the company
2.497	0.103	0.311	-0.171	0.125	0.058	0.066	875	Accrual items
2.061	0.0009	0.877	0.197	0.193	0.530	0.531	875	Financial Leverage
2.780	0.645	0.409	-0.065	0.124	0.106	0.127	875	Operating cash flows

In this research, the information collected from 125 companies in a period of 7 years from

2015 to 2021 has been studied and analyzed statistically. Accordingly, the number of

observations for each variable was 1800 company-years. The company's risk tolerance in the studied sample is on average 3.292 and it reached 0.670 in the lowest value and 13.050 in the highest value. In addition, the level of voluntary disclosure of information in the examined sample was more than 3 points in 43% of the companies (373 years-companies) and less than 3 points in 57% of the investigated companies (502 years-companies), which indicates the weakness of most companies in voluntary disclosure. Management ownership was 25.164% on average. The average size of the companies in the examined sample is 14.808 and the financial leverage has an average of 0.531. According to the descriptive statistics, the most skewness and elongation are assigned to the company's risk tolerance variable [14-16].

#### *Tests related to classical regression assumptions*

Before testing the hypotheses, the classical assumption of regression should be evaluated. Classical assumptions in this research are divided into two categories: Classical

assumptions before model estimation and classical assumptions after model estimation, and the results of evaluating these assumptions are presented as follow [16-18].

#### *Classical regression assumptions before model estimation*

Before estimating the research models, the normality of distribution of the variables and the linearity between the explanatory variables have been evaluated.

#### *The test of normality of research variables*

In this research, the Shapiro-Valk test was used to check the normality of the distribution of variables, and the results of this test are presented in Table (3). The results show that none of the research variables have a normal distribution except the level of voluntary information disclosure. According to the central limit theorem, if the number of observations for each variable is more than 30 observations, the non-normal distribution of the variables will not create a problem in the research results.

**Table 3** Normality test results

Result	Meaningful	Shapiro Valk test	Variable name
		Statistics	
It is not normal.	0.00000	12.520	Risk taking
It is normal.	0.99743	2.798	Level of voluntary information disclosure
It is not normal	0.00000	9.788	Property management
It is not normal.	0.00000	7.481	Size of the company
It is not normal.	0.00168	2.933	Accrual items
It is not normal.	0.00000	4.654	Financial Leverage
It is not normal.	0.00000	7.490	Operating cash flows

#### *Collinearity detection test*

In the current research, the Variance Inflation Factor (VIF) test was used to check the collinearity between the explanatory variables, and the results of this test are shown separately

for each model in Table (4). The results show that the average variance inflation factor of both research models is less than 10 and this result is also true for each variable. Based on this, the present research does not have the problem of collinearity between the variables.

**Table 4** The results of the collinearity test

Result	The second model	The first model	The explanatory variables
	VIF	VIF	
There is no collinearity.	1.04	1.02	Level of voluntary information disclosure
There is no collinearity.	1.06		property management
There is no collinearity.	1.08	1.08	Size of the company
There is no collinearity.	1.23	1.23	Accrual items
There is no collinearity.	1.33	1.27	Financial Leverage
There is no collinearity.	1.24	1.23	Operating cash flows
There is no collinearity.	1.16	1.16	Mean variance inflation factor

*Choosing the right model for hypothesis testing*

In this research, at the beginning, using Chow's test (F test) to select the best model among combined data and consolidated data, the results of the significance level of this test for both research models were less than 0.05, which is the path of combined data. It was chosen to continue the research. Also,

Hausman's test was used to choose between fixed effects and random effects, and the results of this test were less than the significance level of 0.05 for both research models, and accordingly, both research models were finally estimated with the fixed effects method. The results of Chow and Hausman tests for both research models are reported in Table (5).

**Table 5** Chau and Hausman test results-choosing the right model for the hypothesis test

Selected pattern	Test				Theories
	Hausmann		Chow		
	Meaningful	Statistics	Meaningful	Statistics	
Fixed effects	0.0000	27.70	0.0000	18.35	First
Fixed effects	0.0000	38.57	0.0000	17.43	Second

*Classical assumption of regression after estimating the model*

In this research, to ensure that there is no problem in the regression results, the classical assumptions of regression were investigated using appropriate statistical methods. For this purpose, four classical assumptions, including zero mathematical expectation of errors, heterogeneity of variance, cross-sectional correlation of residuals, and serial correlation of residuals were investigated. The results of these tests are presented as follow.

*The test of zero ness of the mathematical expectation of error values*

In this research, one-sample t-test (Student's t-test) was used to check whether the mathematical expectation of errors is zero, and the test results are reported in Table (6).

As the results show, because the significance level of the test in both research models is greater than 0.05, the assumption of zero mathematical expectation of errors has been confirmed in both research models [19-21].

**Table 6** The results of the mathematical hope test of zero error values (one sample t test type)

Test result	Significance level	Model
The average error is zero.	1	First
The average error is zero.	1	Second

### Test of heterogeneity of variances

According to Chow and Hausman tests, it was found that both research models should be estimated using the fixed effects model. Based on this, the modified Wald test was used to check the heterogeneity of variance, and the results of this test are reported in Table (7). The

results showed that the significance level of the test for both research models is less than 0.05. Accordingly, the hypothesis of variance heterogeneity was confirmed and the generalized least squares regression model was used to solve this problem [22-24].

**Table 7** Results of variance heterogeneity test

Test result	Modified parent test type		Model
	Meaningful	Statistics	
Existence of heterogeneity of variance	0.0000	9041.63	First
Existence of heterogeneity of variance	0.0000	8749.01	Second

### Test for serial non-autocorrelation of residuals

To check the assumption of non-existence of serial autocorrelation of the residuals, the Waldridge test was also used, and the results of this test for both research models are reported in Table (8). The results show that the significance level of the Waldridge test in both

research models is less than 0.05. Based on this, the assumption of non-serial autocorrelation of the residuals was not confirmed, and to solve this problem, the generalized least squares of the  $X_{t|t_s...}$  AR command was used to solve the autocorrelation problem [25-27].

**Table 8** The results of the Waldridge serial autocorrelation test

Result	Significance level	Test statistics	Model
The existence of serial autocorrelation	0.0000	56.892	Statistical model of the first hypothesis
The existence of serial autocorrelation	0.0000	54.739	Statistical model of the second hypothesis

### Cross-sectional correlation test of residuals

To check the assumption of cross-sectional correlation of the residuals, the boys' test was also used, and the results of this test are presented in Table (9). As the significance level of this test for the first research model shows, the significance level is greater than 0.05 and there is cross-sectional correlation among the

residuals of the first model. Furthermore, the results of the boys' test (significance level less than 0.05) indicate the existence of cross-sectional correlation between the residuals of the second research model. To solve this problem, the generalized least squares test was used so as not to create a gap in the results of the final test [26-28].

**Table 9** The results of the cross-sectional correlation test between the residuals

Result	Significance level	Test statistics	Selected pattern	Model
Absence of cross-sectional correlation	0.0892	1.700	Fixed effects	The first model
Existence of cross-sectional correlation	0.0424	2.030	Fixed effects	The second model

### Regression of research hypotheses

After checking the classical assumptions of regression to reject or not reject the double hypotheses of the research, the models were

tested, and the results are interpreted separately for each hypothesis.

### Testing the first research hypothesis



H<sub>1</sub>. The level of voluntary disclosure of information has a positive and significant effect on the company's risk-taking [28-30].

**Table 10** The results of the first research hypothesis test

Significance level	Statistics T	Standard deviation	The coefficient of determination	Variable role	Variable title
0.014	2.54	0.102	0.290	Independent	Level of voluntary information disclosure
0.000	15.36	0.221	3.397	Control	Size of the company
0.180	-1.34	0.427	-0.572	Control	Accrual items
0.200	1.28	0.452	0.579	Control	Financial Leverage
0.002	-3.16	0.526	-1.665	Control	Operating cash flows
0.399	0.84	1.449	1.223		Width from the origin

In this research, a multivariate linear regression model with five explanatory variables has been used to test the first research hypothesis. To comment on the rejection or non-rejection of the first hypothesis of the research, the variable determination coefficient of the level of voluntary disclosure of information should be taken into consideration. If the coefficient of determination of this variable is a positive number, it indicates the confirmation of the positive effect of the independent variable on the dependent variable. As reported in Table (10), the coefficient of determination of this variable is equal to 0.290, which is a confirmation of the positive effect of the level of voluntary disclosure of information on the company's risk-taking. On the other hand, the statistical significance level of this variable is also used to verify the significance of the relationship

between independent and dependent variables, and if it is less than 0.05, the significant effect of the variable has been confirmed at the 95% confidence level. The results show that the statistical significance level of this variable is equal to 0.014, which is less than 0.05, and based on this, the first hypothesis of the research is not rejected. Likewise, the adjusted coefficient of determination shows that the explanatory variables used in the model can predict 75% of the company's risk-taking changes. The significance level of Wald's statistic (0.0024) also indicates that the whole model is significant and there is no problem in the regression results [30-32].

*Testing the second research hypothesis*

H<sub>2</sub>. Managerial ownership strengthens the effect of voluntary disclosure of information on the company's risk-taking.

**Table 11** The results of the second research hypothesis test

Significance level	statistics T	standard deviation	The coefficient of determination	Variable role	Variable title
0.004	2.83	0.105	0.298	Independent	Voluntary disclosure of information
0.000	3.48	0.004	0.016	Equalizer	Property management
0.043	2.09	0.001	0.003	Equalizer	Voluntary disclosure of information* Management ownership
0.000	15.36	0.221	3.397	Control	Size of the company
0.150	-1.44	0.434	-0.625	Control	Accrual items
0.212	1.25	0.456	0.570	Control	Financial Leverage
0.001	-3.27	0.533	-1.740	Control	Operating cash flows

0.696	0.39	1.424	0.557	Width from the origin
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In this research, to test the second hypothesis of the research, the variable determination coefficient of the level of voluntary disclosure of information should be taken into consideration. If the coefficient of determination of this variable is a positive number, it indicates the confirmation of the positive effect of the independent variable on the dependent variable. As reported in Table (11), the coefficient of determination of this variable is equal to 0.298, which is a confirmation of the positive effect of the level of voluntary disclosure of information on the company's risk-taking. On the other hand, the statistical significance level of this variable is also used to confirm the significance of the relationship between the independent and dependent variable, and if it is less than 0.05, the significant effect of the variable has been confirmed at the 95% confidence level, which is equal to 0.004 in this table and the effect of the independent variable on the dependent variable has been confirmed. On the other hand,

the coefficient of determination of the moderator variable, which is managerial ownership, is equal to 0.016, and the significance level of its statistic is 0.000, which indicates the positive and significant effect of managerial ownership on managers' risk-taking. On the other hand, the interactive variable (level of voluntary disclosure of information \* managerial ownership) has a determination coefficient of 0.003 and a significance level of 0.043, which confirms the second hypothesis of the research.

Moreover, the adjusted coefficient of determination shows that the explanatory variables used in the model can predict 75% of the company's risk-taking changes. The significance level of the parent statistic also indicates that the whole model is meaningful and there is no problem in the regression results [33-35].

According to the analysis of each hypothesis, the summary of the results of the hypotheses is as follows:

**Table 12** Hypotheses results

Result	Hypothesis
Failure to reject the hypothesis	The first hypothesis: The level of voluntary disclosure of information has a positive and significant effect on the company's risk-taking.
Failure to reject the hypothesis	The second hypothesis: Managerial ownership strengthens the effect of the level of voluntary information disclosure on risk taking.

### *Conclusion from the research findings*

In this research, the two hypotheses determined for the research were tested [35-37].

### *Conclusion about the findings of the first hypothesis test*

The results of the test of the first research model showed that the level of voluntary disclosure of information had a positive and significant effect on the risk-taking of the investigated companies. According to agency theory, voluntary disclosure of information is a factor in reducing the information asymmetry between the company and the stakeholders, and therefore reduces agency costs. In

companies where more information is disclosed, the quality of financial reporting also improves managers, like external users, need quality and transparent information to make decisions, and therefore, if the level of voluntary disclosure of information increases, their decision-making errors will also decrease because they will make decisions with more knowledge.

Likewise, based on the theory of signaling, voluntary disclosure conveys this message to the market that the supporting company has a good performance and this makes the market react positively to the company. The market interprets the voluntary disclosure of

information by the company as a low agency cost and this increases the social capital of the company. Companies that have a higher level of voluntary disclosure will have a higher financing ability and will bear lower interest costs because the company's risk to creditors is reduced by disclosing information.

Accordingly, due to more financial resources and acquired social capital, the company has a higher ability to use investment opportunities and applies more risk tolerance in its activities to obtain higher returns. The findings of the present research are in line with the results of the researches of Botosan (2017) and Barzegar and Khatami (2019), but it is in contrast to the findings of the researches of Chen *et al.* (2016), Lem and Lemman (2020) and Sajjadi *et al.* (38).

#### *Conclusion about the findings of the second hypothesis test*

In the second hypothesis, it seeks to determine the moderating role of managerial ownership in the effect of the level of voluntary disclosure of information on the risk-taking of companies listed in Tehran Stock Exchange, which the statistical analysis of the collected data did not reject the above hypothesis. Ownership of management is a tool to reduce agency costs because when managers are placed as owners, their interests are aligned with the interests of shareholders and the conflict of interests will be less than before. Managers are naturally interested in disclosing less information to use this information asymmetry and stored confidential information to secure personal benefits, but managerial ownership reduces this motivation of managers and encourages them to disclose information voluntarily.

According to the institutional theory, managerial ownership is a tool to pressure the company to increase the transparency of information and acts as the next effect of corporate governance. In addition, managerial ownership increases the influence of managers, and the manager will have more authority in decisions, and based on this, the company's risk-taking power will also increase. The managers who buy a percentage of the company's shares, because they are partners in the company's interests and increase the yield,

try to get more returns from the investments of the company.

According to classical economic theories, there is a direct relationship between risk and return, and this makes managers to take more risk to earn more dividends. By reviewing the research literature, it was observed that a similar research with the second hypothesis has not been done, and accordingly, it was not possible to compare the results with the findings of other researches.

#### **Conclusion**

The current research has determined the moderating role of managerial ownership in the effect of the level of voluntary disclosure of information on the company's risk-taking. For this purpose, after posing the research questions, the theoretical and practical importance of the research was explained. Likewise, the aims and hypotheses of the research were initially discussed. The present study was designed based on two hypotheses, in the first hypothesis, the effect of the level of voluntary disclosure of information on the risk-taking of the company, and in the second hypothesis, the moderating role of managerial ownership in the effect of the level of voluntary disclosure of information on the risk-taking of the company was tested. Accordingly, after defining the conceptual and operational variables of the research by selecting the companies accepted in Tehran Stock Exchange as the statistical population, after applying the necessary restrictions and using the systematic elimination method, 125 companies were selected as the final sample of the research.

According to the operational definition of the variables, the necessary data were collected by referring to reliable databases such as KODAL website and Stock Exchange Organization website. Based on the predicted statistical methods, the data was analyzed in the Stata econometrics software environment. Descriptive statistics and hypothesis testing before and after regression estimation and research model testing have been among the most important actions of the fourth chapter of the research, which ultimately led to not rejecting the research hypotheses. In the following, the results of the research hypotheses are interpreted.

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