

## ARTICLE

# THE ASSESSMENT OF INTERNAL AUDIT QUALITY AND THE OWNERSHIP STRUCTURE OF THE COMPANIES OPERATING IN THE TEHRAN STOCK EXCHANGE INVESTMENT INDUSTRY

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### ABSTRACT

The main goal of study is the assessment of internal audit quality and the ownership structure of the companies operating in Tehran Stock Exchange investment industry. This study is a descriptive research. We used the library research method for theoretical data collection, and obtained the necessary information for the realization of research goals by using statistical data. In this study, we used multivariate linear regression model in order to test the hypotheses. The research population consisted of all active investment companies listed in Tehran Stock Exchange that was available during the years 2009-2014. The results of the correlation of variables between the percentage of institutional shareholders and ownership concentration with internal audit quality in the companies listed in Tehran Stock Exchange showed that there are significant relationships between all the independent research variables and the internal audit performance quality in the companies listed in Tehran Stock Exchange, i.e. all research hypotheses were confirmed.

### INTRODUCTION

**KEY WORDS**  
Internal audit,  
corporate governance,  
ownership  
concentration, Tehran  
Stock Exchange

Internal audit has been considered as pillars of modern organizations and the mutual understanding of the functions and needs of the internal audit staff and the managers of different levels of organization relative to each other will help the organization to achieve its goals. Internal auditors' professional relationships and interactions as one of the most important parts of the organization with other administrators, is an important factor for achieving the objectives of the internal audit and in the next step, benefiting of the organization from it. Generally, the internal auditor evaluates the design and effectiveness of the internal control system. A good design of the internal control system ensures that the organization's objectives will be carried out with reasonable costs. An efficient control system is a system that accomplishes what has been considered in every stage of design [1].

The quality of the audit is one of the main topics in the sphere of audit and the capital market. In order to recognize the different concepts and dimensions of the audit quality, a variety of studies has been carried out to discover the relationship between the quality of audit and its other variables. However, since the audit quality is barely visible in practice, research in this area has always faced a lot of problems. The audit profession, like other professions, needs the public trust to maintain its position. The society expects that the audit profession provides an audit report with the optimum quality. This is an added value that only the audit profession is able to add it to the financial information of companies [2]

### Factors affecting the supply and demand for high-quality audit services

In General, the research in the field of audit quality can be defined in two general groups of factors affecting the supply of high-quality audit and the demand for high-quality audit. Research had done from the perspective of auditing services suppliers, mainly stresses on factors like the ability of auditors in providing high-quality audit. Research conducted from the perspective of users of the audit services mainly deal with the factors that affect the demands of audit report users, including the shareholders, legal authorities, creditors and employers [3].

The research carried out from the perspective of suppliers mainly stress factors that affect audit capabilities in providing high-quality audit. From the perspective of auditors, the ability of auditors and economic incentives affect the audit quality. Also, certified and professional auditors have a higher perception of falsifications committed in providing the financial statements and it would increase the quality of auditing decisions. From the perspective of auditors, the size of the audit institute is one of the features that affect the quality of the audit [3].

### Internal audit and the audit committee

The existence of the audit committee, which is composed of members of the board of directors to oversee the internal audit tasks and responsibilities, boosts the internal auditors' independence and a stronger link between the audit committee and the internal audit unit, means more independence and thus realism and impartiality of the internal auditors in auditing and reporting operations. The audit committee is responsible for monitoring the hiring, promotion and salary and benefits of the head of internal audit department and the operations of internal audit unit [4].

The auditing methods, standards and guidelines must be also verified by the audit committee's approval. The purpose of the audit committee is assisting the board of directors in the conduct of regulatory

Received: 8 October 2016  
Accepted: 20 December 2016  
Published: 17 January 2017

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responsibility to ensure the following items [5]: (a) qualifications and independence of independent auditors; (b) compliance with mandatory rules and regulations; (c) correctness of financial statements; and (d) properly and correct performance of the internal audit and independent auditors.

### Organizational position of the internal audit

In the context of particular organizational position of the internal audit unit and the impact of this position on the internal audit impartiality, it is best that the internal audit unit should report to the highest management ranks of the economic unit and do not assume any executive responsibilities. Any management restrictions imposed on the internal audit unit should be carefully assessed. In particular, the internal auditor shall engage freely with the independent auditor. In an optimal organizational structure, the internal audit is a subset of audit committee and its members will be appointed by the board of directors or independent managers that have no executive responsibility in the organization. This committee will be formed in order to enhance the interests of the shareholders and stakeholders with the goal of reducing information asymmetry between managers and shareholders [6] [Fig. 1].

**Figure 1:** Diagram of internal audit's organizational position

Shareholders / stakeholders	
Representation theory / information asymmetry	
Board of directors	
Audit committee / audit committee charter	
Independent audit	Internal control-Risk management
Evaluation of adherence to laws & regulations	Internal audit

### Internal audit and independent audit

The high quality of internal audit activity in the process of independent auditing is aligned with low independent audit fees. For example, in a study entitled Identifying Contributing Factors of Reliance of Independent auditors on The Work of the Internal auditors from the perspective of the auditors that are members of the Iranian Association of Certified Public Accountants (IACPA), variables like professional competence, quality of the work, professional care and the level of inherent risk by the internal auditors has a significant positive relationship with the reliance of independent auditors on their performance [6].

### Internal auditor and the quality of financial reports

The audit committee is a new control mechanism in financial reporting and more research in this field improves the quality and reliability of financial reporting and transparency of financial information. Through measures such as increasing the independence of the audit committee, presence of the people with financial, accounting and auditing expertise in the audit committee and the increased effectiveness of the audit committee in order to improve the honest presentation and reliability of the financial reporting process and expanding the research into the audit committee's features and effectiveness, more emphasis to improve the characteristics of audit committee and its effectiveness on the financial reporting process will be applied [7].

### Internal audit in the government structure

The authority of government auditors should be as extensive as possible so that it can meet the entire government agencies' activity. The auditors by providing independent and objective guarantees are able to increase the value of each part of the organization. Anyway, a comprehensive and desirable audit requires the internal audit and independent audit that have complementary roles. Ultimately, the government audit with its optimum performance by creating the responsibility of accountability and maintaining the important values of the government strengthens and ensures the government's governance system [6].

### Independence of auditors

The value of an independent audit depends on auditors' assessment of the fair presentation of financial statements and the effectiveness of internal controls. Hence, the crucial role of the audit committee ensures the apparent and inherent independence of the auditors. A major concern that damages the independence of auditors is providing non-audit services [8]. The Sarbanes Oxley rule bans non-audit services and forces the audit committee to assess any non-audit services provided by auditors.

### Internal audit in the organization

"Internal audit is a counseling, ascertaining, independent and unbiased activity, that is designed in order to add value and improve the organization's operation. It aims to help the organization achieve its goals through the assessment and improvement of the effectiveness of risk management and organizational control and monitoring processes with a regular and disciplined approach" [9]. Unfortunately, most organizations define the main task of internal audit as a review of the adequacy of internal control and financial information reliability. But today, as the present definition shows, the internal

audit range of activities is far more expanded than before. They engage in reviews of operational efficiency, information technology reliability, effectiveness and efficiency of business transactions both inside and outside of the country, helping to improve the company's operations and processes, and monitoring the customer satisfaction. The purpose of this research is the evaluation of the internal audit quality and the ownership structure of the companies operating in Tehran Stock Exchange investment industry [6].

## MATERIALS AND METHODS

This research, in terms of goal is an applied research and the objective is to determine the extent of the relationship between the variables. For this purpose, appropriate indicators would be selected according to the measurement scale of the variables. The data measurement scale is a relative scale. This means that the theoretical basics and the research background were obtained through library study, other sites, comparable framework articles, and compilation of information for approval or rejection of the hypotheses within an induction reasoning process. Since the type of the tested relationship in this research is of the correlation (post-occurrence) type, we used the multivariate regression analysis to determine the extent of the effect of independent variables on the dependent variable.

### Population

It consists of all the companies listed in Tehran Stock Exchange during March 2009 to 20 March 2015. The sampling method is based on the systematic removal with the following conditions: 1- the information required for the calculation of the research's operating variables for them should be available; 2- they must be listed in the Stock Exchange at least from 2009 and have operated actively until the end of the research period; 3- the end of their fiscal year should be March 20th. The final sample size according to the above criteria and screening method was 99 companies. To check the hypotheses' variables, the information relating to the sampled companies, the initial calculations were performed in the spreadsheet software (Excel) and the data for the analysis were prepared, and then we used the EViews 7 software for the final analysis.

### Research model and operational definition of variables

The research's conceptual model is represented as follows [Fig. 2].

**Figure 2-**Source: adjusted model; (Johel et al., 2013)

Conceptual model	
Independent variables	Dependent variable
Percentage of institutional stockholders	Internal audit quality
Ownership concentration	

### Research model and measurement method of the variables

$$IAQ = \beta_0 + \beta_1 Owninv + \beta_2 Concentration + \beta_3 SIZE + \beta_5 BTM + \beta_6 ROA + \epsilon_i$$

#### 1-Dependent variable:

IAQ = In this research, according to Johel et al. (2013), the internal audit performance quality that can be assessed through the following two criteria: the amount of internal audit unit's activity background of the company *i* based on year, obtained by the difference between the current year and the internal audit unit establishment year; and the audit unit's operating costs including training cost, salary and benefits of internal audit personnel divided by the sum total of the company's assets; and in this research we used the second procedure.

#### 2-Independent variables:

Owninv = The percentage of the number of institutional shareholders, i.e. the institutional shareholders are individuals who own more than five percent of the company shares. This variable is equal to the percentage of total shares that are owned by such people.

Concentration = ownership concentration. The meaning of the ownership concentration is the number of shares held by the major shareholders and major shareholders are those who are indicated as major shareholders of the company in the company's financial statements report or the board of directors' report to the assembly and hold over 5% of the company shares.

#### 3- Control variables:

Size = It is a control variable in the research whose impact is important to adjust the final result. This variable indicates the size of the company calculated through the natural logarithm of the book value of the total assets of the company.

BTM = A control variable calculated through division of the book value of the shareholders' equity by its market value.

ROA = Return of assets calculated by the ratio of net profit to the total assets.

## Data analysis methods and tools

The data and variables available in a model are usually three different types: time series data, cross-sectional data, and combined data.

The time series data measure the values a variable (multiple variables) at successive points of time. This sequence can be annual, seasonal, monthly, weekly or even continuous.

The cross-sectional data measure the values a variable (multiple variables) over time and over multiple units. These units can be manufacturing units, and different companies or industries.

## Multivariate regression

Multivariate regression is a method of combining the predicting variables. In this procedure, a multivariate regression equation is calculated that summarizes the estimation's values in one equation. For each variable, the equation coefficients are calculated and defined based on its importance in the prediction of the specific criteria. The degree of correlation among predicting variables in the equation of multivariate regression and the dependent variable is shown by the coefficients. The multivariate regression model is as follows:

$$Y_i = \alpha + \beta_1 X_{1,i} + \beta_2 X_{2,i} + \dots + \beta_n X_{n,i} + \varepsilon_{n,i}$$

Where:  $Y_i$  =  $i$ th observation of the dependent variable,  $\alpha$  = width from the origin (constant value),  $X_{n,i}$  =  $i$ th observation of the dependent variable  $X_n$  ( $n = 1, 2, \dots, n$ ),  $\beta$  = independent variable coefficient,  $\varepsilon$  = disturbance component.

In such a model the following basic assumptions are used: 1- a linear relationship does not exist between the independent variables; 2- the expected value of errors is zero and their variance is fixed (the distribution of errors should be normal); 3- there is no correlation between the model errors; and 4- the dependent variable has a normal distribution.

## Model appropriateness test

In order to test the suitability of the estimated model, we firstly assume that the model does not depict the changes in  $Y$  significantly. We used the  $F$  stat to test the aforesaid hypothesis. If at the error level  $\alpha$  (5% in this study) the value of  $F$  stat is greater than the value of the table, the null hypothesis shall be rejected and one may say that the changes accounted for in the model are appropriate or there is a significant relationship between the dependent variable and the independent variable. Also, if the significance level of model ( $\text{sig}$ ) is less than the error level  $\alpha$  (5% in this study), the null hypothesis is rejected and one may deduce that the model  $F$  significantly justifies the changes in  $F$  (i.e. the model is appropriate).

## Study of the structure of the combined data and its various models

In the review of the cross-sectional and time series data, if the coefficient of cross-sectional effects and the time effect is not significant, all the data can be combined with one another and can be estimated by ordinary least-squares regression. This method is also called the combination data. We briefly explain the fixed effect and random effect models due to their importance: to determine the model used in the combination data several tests are used as the following: The Chav test, the Chav test determines the fixed effects model application vs. combining the entire data (the integrated model). The test hypotheses are as follows:

HO: Pooled Model

H1: Fixed Effect Model

The first hypothesis is based on the bound values and the contrary hypothesis is based on the non-bound values. The Chav test stat is based on the sum of the squares of the non-bound model and bound model error as follows:

$$chaw = \frac{(RRSS - URSS)/N - 1}{URSS/NT - N - k}$$

This stat has a  $F$  distribution with  $N-1$  and  $NT-N-K$  degrees of freedom. If the bound  $F$  stat value has a lower value than the table's  $F$  stat value, at the defined significance level, the hypothesis  $H_0$  can be rejected and there is a significant effect for the cross-sections. So, the fixed effect model is used, otherwise the combination data model will be used.

Hausman test: Hausman test determines the use of fixed model vs. random effects. The Hausman test is based on the presence or absence of correlation between the estimated regression error and the independent variables of the model. If such a connection exists, the fixed effect model applies and if this connection is not available, the random effects model will be applied. The  $H_0$  hypothesis shows the lack of relationship between the independent variables and the error estimate and the hypothesis  $H_1$  represents the existence of a relationship.

HO: Random Effect

H1: Fixed Effect

Madala (1998), to carry out the Hausman test, has depicted the estimation of the amount of variance  $q$  by  $V(q)$  and presented the  $M$  stat as such:

$$M = \frac{q^2}{v(q)}$$

## RESULTS

### Descriptive statistics of the data

The table 1 shows the descriptive statistics of research variables within the study period. The descriptive statistics of the research variables measured according to the aforementioned 99 companies during the test period (2009-2014) are presented in the form of the 594 year-company, including the mean, median, standard deviation, minimum and maximum. It is noteworthy that the determination of skewness of each variable will dramatically help in the appropriate data analysis and it will be used in the process of the research [Table 1].

**Table 1-** The descriptive statistics of the research variables during the course of study

Variables	Kurtosis	Skewness	Standard deviation	Minimum	Maximum	Median	Mean
Percentage of institutional shareholders	2.949	1.075	0.076	0.600	0.875	0.667	0.663
Ownership concentration	2.745	0.575	0.106	0.300	0.907	0.437	0.451
Size	3.235	0.029	1.244	9.889	16.686	13.409	13.430
Rate of return of assets	68.723	7.277	0.911	0.000	11.680	0.040	0.270
Internal audit performance quality	1.787	0.073	0.202	0.241	0.937	0.576	0.580
Ratio of book value to market value	16.096	-0.970	0.551	-4.394	2.705	0.342	0.442

### Inferential statistics

Testing the reliability of variables, in this section we checked the durability or validity of the research variables. We used the Im-Pesaran-Shin test (1997) to evaluate the reliability. The Im-Pesaran-Shin test was formed according to the weighted average of Dickey-Fuller test among cross-sectional samples. Let's review the generalized Dickey-Fuller regression:

$$y_{it} = \rho_i y_{i,t-1} + \sum_{j=1}^{p_i} \varphi_{ij} \Delta y_{i,t-j} + z_{it} \gamma + \varepsilon_{it}$$

The durability study requires assuming that  $H_0: \rho = 1$  for all is. In this test, the  $H_1$  hypothesis is as such:  $H_1: \rho < 1$ . By testing the  $H_0$  hypothesis, the variable's durability can be studied. The results of this test are shown in [Table 2].

**Table 2:** Im-Pesaran-Shin test (IPS)

Variables	Probability	T stat
Non-acting managers in the board of directors	0	-20.48
Ownership concentration	0	-23.605
Size	0	-17.489
Return of rate of assets	0	-20.998
Internal accounting performance quality	0	-23.363
Ratio of book value to market value	0	-22.912

Method	**_stat	stat
Im, Pesaran and Shin W-stat	0	-56.052

The  $H_0$  hypothesis in the aforementioned test showed the lack of reliability of research variables and the hypothesis  $H_1$  indicated the reliability of research variables and according to the IPS test results (see table 2), because all variables have a significance level less than 0.05, so the hypothesis  $H_1$  at 95% confidence level across all the variables accepted during the course of the study were at a reliable level. The IPS test

results show that the mean and variance of variables were fixed over time and the covariance of variables were fixed between different years. As a result, the use of these variables in the model does not create a false regression.

### Determining the appropriate model for the estimation of regression model

In order to determine the appropriate model (combination or tabulated with fixed or random effects) in order to test the hypotheses, we used the Chav and Hausman tests.

(A) Chav test: The F test results related to the regression model of the present study are shown in the table 3. In the case of regression models of the research, with regard to the significance levels, the Chav test results show that the H0 hypothesis (combination model) is not confirmed [Table 3]. In other words, there is a group or individual effect and the tabulated data method (Panel) should be used to assess the regression model of the research and in the following, we used the Hausman test to determine the type of the Panel model.

**Table 3:** Chav test

Regression model	F test	F stat	Probability	Test result
Original regression model	Quantity	107.7273	0.035	Rejection of null hypothesis

B) Hausman test: After determining that the width from origin is not the same for different years, the method of application in the estimation of the model (fixed or random effects) must be determined, so we used the Hausman test. In the Hausman test, the H0 hypothesis tests based on compatibility of random effect estimations vs. H1 hypothesis based on incompatibility of random effect estimations. The results of the Hausman test for the research model are shown in [Table 4]. The results show that the X2 stat of the Hausman test for research models that are not significant at 95% confidence level which for the research model means non-confirmation of H1 hypothesis therefore according to the Hausman test, the fitting of original regression model of this research using panel data model with random effects method would be appropriate.

**Table 4:** Hausman test

Original regression model	Quantity	2.7774	0.836	Null hypothesis is not rejected
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### Testing the classical regression hypotheses

Before processing the regression models, it is necessary to test the assumptions of linear regression.

### Testing the normal state of the distribution of variables

We used the Jarque–Bera test to study the the normal state of distribution of the dependent variable. The output table of Jarque–Bera test in Eviews software for this variable is shown in [Table 5]. According to the table and Jarque–Bera stat, since the significance level of the aforementioned variable is above 0.05, the H0 hypothesis is confirmed so we can say with 95% confidence that the dependent and independent variable of the said research in the above models have a normal distribution as shown in the following diagram.

**Table 5:** Jarque–Bera test

	Probability	Jarque–Bera stat
Percentage of institutional shareholders	0.57258	114.4005
Ownership concentration	0.502057	34.36822
Size	0.603775	1.452093
Return of rate of assets	0.712324	112150.1
Internal accounting performance quality	0.580036	36.92251
Ratio of book value to market value	0.268879	4337.739

### Testing the independence of errors

The Durbin–Watson test, checks the serial correlation between residual regression (errors) on the basis of the following statistical null hypothesis: H0: there is no self-correlation between errors. H1: there is a self-correlation between errors. The Durbin–Watson stat with the critical values is at the error level of 1% as shown in [Table 6]. Due to the fact that the amount of the calculated Durbin–Watson stat of the research’s regression model is larger than the critical value at 0.05 error level, hence the lack of serial correlation of residuals in regression model is confirmed at 0.05 significance level. Since in this study one regression model was used for the evaluation of five hypotheses, such models are as follows, respectively: the regression model to assess the research hypotheses is as follows:  
 $IAQ = \beta_0 + \beta_1 Owninv + \beta_2 Concentration + \beta_3 SIZE + \beta_5 BTM + \beta_6 ROA + \epsilon_i$ ,

**Table 6:** Testing the independence of errors

Regression model	Critical values (error level 0.01)		Durbin–Watson test
	Upper limit	Lower limit	
Regression model of research	2.756	1.244	2.078

### Testing the normal state of distribution of errors

One of the regression assumptions is that the equation errors have a normal distribution with a mean of zero. To study the normal state of equation errors, the error components’ curve is plotted for each of the regression models. Figure [3] shows that due to the significance coefficients and other related coefficients, the error distribution of the model is normal. As it can be observed, the distribution of errors in the model according to the Jarque–Bera stat has a normal distribution.

Dependent variable: Internal audit performance quality  
 Frequencies Mean= 0.35E-12 Standard deviation=0.487  
 Regression model error components  
 Fig. 3: Jarque–Bera stat curve for error components

### Collinearity test between independent variables

A low tolerance means there is little variable information and problems arise in the use of regression analysis. The variance inflation factor is also the inverse of the tolerance and if it is increased the variance of regression coefficients will be increased and regression will be rendered inappropriate for prediction. The minimum amount of tolerance for model variables is 0.1 or 0.2 in statistical references. Also, experience has shown that if VIF is larger than 5, it suggests that there is a possible warning and if it is larger than 10, a serious warning exists and it means that the related regression coefficients were estimated poorly due to Multicollinearity. According to table 7, the tolerance for independent variables is above 0.2 and the variance inflation factor is also very close to 1 (much less than 5), as a result, the hypothesis appertaining to no collinearity between independent variables will be confirmed.

**Table 7:** Testing the collinearity between independent variables

	Variance inflation factor	Tolerance
Percentage of institutional shareholders	2.70	0.63
Ownership concentration	1.07	0.07

In this section, the results of fitting the regression models of the research are studied and consequently the research hypotheses will be investigated.

### Variance inequality

The inequality variance means that in the estimation of regression, the error terms values have unequal variances. We used the White test for estimating the inequality variance. Typically, the White test is used when we are unaware of variance distribution of error terms and cannot guess it. So, the White test takes the most general situation into account and it is very sensitive to detecting inequality variance. The steps to perform the White test are as follows: first we estimate the main model assuming that there is no inequality variance (we assume that we have two explanatory variables, of course this is easily extendable to the general mode with k explanatory variables). (Estimation 1). Then we calculate the amounts of residues and their squares.

$$Y_i = \beta_0 + \beta_1 + \beta_1 x_{1i} + \beta_2 x_{2i} + u_i$$

Then, we write a new regression as such: (Estimation 2)

$$e^2_i = \gamma_0 + \gamma_1 X_{1i} + \gamma_2 X_{2i} + \gamma_3 X_{1i}^2 + \gamma_4 X_{2i}^2 + \gamma_5 X_{1i} X_{2i} + u_i$$

i.e., we apply the regression to the square of residues on every single explanatory variable, square of explanatory variables, and also the two by two products of variables. The benefit is that we almost account for all possible modes of inequality variance. The F test for the significance of the whole regression is calculated by the equation below:

$$F = \frac{\left(\frac{R^2}{k}\right)}{\left(\frac{1 - R^2}{n - k - 1}\right)}$$

The judgment phase: If we use the F stat, then we compare with the aforementioned degree of freedom, and if we use the LM stat, then we compare it with the Chi-square distribution with the related degree of freedom. In this hypothesis, the null hypothesis is that we have an equality variance and thus if the calculated stat is above the value in the table, then our primarily expressed model has inequality variance. The results of this test is explained as follows: the results of the White tests are given in the table 8. The results indicate that the F stat for each of the two models used in the research is not significant at 0.05 error level and as a result, the null hypothesis based on the lack of variance inequality in the model's data at 0.05 error level is confirmed.

**Table 8:** Results of the variance inequality

Description	White stat	Probability	Test result
First regression model	0.632	0.639	No inequality

#### Testing the research hypotheses (conclusion)

Testing the research's first regression model: After testing the regression assumptions and ensuring their realization, the results of fitting the above regression equation for the production companies are presented in the table 9. The F stat value (14.133) means that the whole regression model is significant. As specified at the end of table 9, the determination coefficient and the adjusted determination coefficient of the above model are 79.6% and 77.1%, respectively. Therefore, it can be concluded that in the above regression equation, only about 77.1 percent of the variations in the internal audit performance quality occurred in the company will be explained by the independent variables and the aforementioned control. Method of judgement: If the value of sig calculated by the software is less than intended confidence level (5% in this study), the significance of the desired variable is confirmed and the related hypothesis is confirmed. Also according to the value of t stat, if this stat is larger than its equivalent amount in student t-table with the same confidence level (5%), the relevant hypothesis is confirmed.

**Table 9:** Fitting results of the first regression equation

Name of variable	Variable coefficient	Coefficient value	T stat	Significance level
Constant value	α0	0.7668	4.1006	0.0000
Percentage of institutional shareholders	α1	0.6121	3.8175	0.0394
Ownership concentration	α2	-0.3111	-3.8979	0.0373
Size	α3	-0.3253	-35.8384	0.0191
Ratio of book value to market value	α4	0.0047	0.2911	0.7711
Ratio of rate of return of assets	α5	0.0029	0.3012	0.7634
Coefficient of determination	79.6%	F stat		14.132
Adjusted coefficient of determination	77.1%	Significance)P-Value(		0000/0
		Durbin-Watson stat		2.078

Testing the research hypotheses: First hypothesis: There is a significant relationship between the institutional shareholders and the internal audit performance quality. According to the results of the table 10, it is observed that the significance level of the coefficient of the effect of the variable number of board of directors' members is shown with the symbol Boardsize smaller than the estimated type I error level of 0.05 (p-value =0.006) and thus, we may accept that the number of members of the board of directors on amount of the internal audit performance quality of the companies listed in Tehran Stock Exchange has been significant. Also, based on the negative value of the regression coefficient of effect (-0.619), a high number of members of the board of directors has a negative and direct impact on the internal audit

performance quality of the companies listed in Tehran Stock Exchange. Therefore, one may conclude that the higher number of members of the board of directors decreases the quality of the internal audit performance of the companies listed in Tehran Stock Exchange. Another result of this conclusion is that the higher number of members of the board of director leads to less supervisory function of each member and typically the supervisory function in total will be reduced and thus, the first research hypothesis will be accepted.

Second hypothesis: there is a significant relationship between the ownership concentration and internal audit quality. According to the findings of this table, the significance level of ownership concentration variable' coefficient of effect is shown with Concentration symbol smaller than the estimated level of type I error 0.05 (p-value=0.037) and hence we can accept that the amount of ownership concentration on the internal audit performance quality by audit institutions in the companies listed in Tehran Stock Exchange has been significant. Also, due to the negative value of the regression coefficient of effect (-0.311) we can conclude that the amount of ownership concentration has a direct and negative effect on the internal audit performance quality of the companies listed in Tehran Stock Exchange. Potentially, we may conclude that a higher ownership concentration, due to the increased profiteering of the owners and the reduction of breakdown of ownership task processes, the internal audit performance quality will be reduced in the studied companies. Therefore, the second hypothesis of the research will also be accepted.

**Table 10:** Summary of the evaluation of research hypotheses

Research hypothesis	regression coefficient	Result of accepting or rejecting the hypothesis
First hypothesis: there is a significant relationship between the institutional shareholders' percentage and the internal audit performance quality.	-0.612	Accepted
Second hypothesis: there is a significant relationship between the ownership concentration and internal audit quality.	-0.311	Accepted

## CONCLUSION

The research population of this study includes all investment companies listed in Tehran Stock Exchange that has been active during 2009-2014.

Testing the research hypotheses, first hypothesis: There is a significant relationship between the institutional shareholders' percentage and the internal audit performance quality. We can accept that the percentage of institutional shareholders on the internal audit performance quality of the companies listed in Tehran Stock Exchange was significant. Also, due to the positive value of the regression coefficient of effect (0.612), the percentage of institutional shareholders has a positive and direct effect on the internal audit performance quality of the companies listed in Tehran Stock Exchange. The result of accepting the second hypothesis is also consistent with the results of similar research. Second hypothesis: There is a significant relationship between the ownership concentration and internal audit quality. We can accept that the amount of ownership concentration on the internal audit performance quality of the companies listed in Tehran Stock Exchange was significant. Also, due to the negative value of the regression effect coefficient (10.311), the amount of ownership concentration has a negative and direct effect on the internal audit performance quality of the companies listed in Tehran Stock Exchange.

### CONFLICT OF INTEREST

There is no conflict of interest.

### ACKNOWLEDGEMENTS

None

### FINANCIAL DISCLOSURE

None

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