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EXPLORING THE MODERATING ROLE OF AUDIT QUALITY IN THE IMPACT OF CORPORATE GOVERNANCE ON THE INVESTMENT EFFICIENCY OF THE COMPANIES LISTED IN TEHRAN STOCK EXCHANGE

Hosein Moradi

Department of Accounting ,Faculty of Economics and Accounting, Central Tehran Branch,
Islamic Azad University ,Tehran ,Iran. Email: hoseinmoradi76@gmail.com.

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ABSTRACT

Regarding the increased competition in trade, firms need to rely on appropriate timely investments to survive. Because of the developments in the contemporary world, especially in the developing countries, these countries need appropriate solutions to make better use of their facilities to solve their economic problems. One of the important factors in solving the economic issues of the countries is to expand and develop investment. However, it is not sufficient by itself; due to the limited financial resources, in addition to investment development, increasing the investment efficiency is an important issue as well. Hence, the present study attempted to explore the impact of the corporate governance mechanism on investment efficiency as well as the moderating role of audit quality in this relationship. It is applied descriptive-correlational research. In other words, this study explored the relationship and correlation between variables through regression. To achieve the above purpose, three hypotheses were developed. For hypothesis testing, a sample of 108 companies listed in the Tehran Stock Exchange from 2013 to 2019 was selected. The multivariate regression model based on panel data was used for hypothesis testing. The results of this research indicate that there is a significantly positive relationship between corporate governance and investment efficiency with the moderating role of audit quality.

INTRODUCTION

Rapid growth and development of economic relations have caused intense competition in the areas of trade, industry, and investment. Therefore, firms need to rely on appropriate timely investments to survive and develop their activities (Khodaei Valahzagh and Yahyaei, 2010). The role and nature of audit are introduced in relation to uncertainty and doubts governing the reported quality of accounting information. An auditor is in the front line of dealing with, certifying, and validating the management claims contained in financial statements. As a social mechanism and a monitoring tool for governments, auditing helps monitor and control the administrators' behavior. Moreover, regarding the corporate financial scandals and crises

during the last two decades, they nearly pointed an accusing finger at auditors and the audit quality. After the bank fraud detection in Iran in 2011, some experts claimed an audit failure. To respond to these events, the legislators made some changes (Eskandari and Orfi, 2005). Due to the limited financial resources, in addition to investment development, increasing investment efficiency is an important issue as well. The realization of investment efficiency entails, on one hand, the prohibition of investing resources in activities in which the investment has occurred more than the desirable level (overinvestment prohibition) and, on the other hand, the direction of resources toward activities demanding more investment (underinvestment prohibition) (Modarres and Hesarzadeh, 2008).

Audit quality is an important issue in the area of auditing and the capital market. The main output of auditing is the independent auditor's report about the annual financial statements addressing the shareholders. The main goal of accounting is to help investors make proper economic decisions. The investors cannot access the internal information of a firm as it should be if management is separated from the ownership of a business unit. It has resulted in the existence of auditing. Actually, through professional examination of the financial reports prepared by the manager, auditing provides the manager with the necessary assurance of using financial reports. Generally, auditors aim to protect the shareholders' interests against significant distortions and mistakes contained in financial statements. The auditors attempt to increase audit quality to maintain their professional reputation and avoid judicial claims against themselves. The economic units always seek to decrease the cost of their capital to increase firm value and shareholders' wealth. They can achieve their goals by presenting financial statements audited with high quality because the investors and creditors hesitate without auditing or auditing with low quality; therefore, they are unwilling to invest or demand a very high rate of return because of accepting the probable risks (Ahmad, 2004).

One of the factors determining investment efficiency is having good corporate governance mechanisms that confirm management reputation. Good corporate governance mechanisms may increase the transparency, authenticity, and reliance on financial declarations (Rahman and Bermer, 2016; Salin, 2017); they may also facilitate the auditors' role in fulfilling their duties regarding the audit quality. In contrast, weak corporate governance mechanisms cause corporate mismanagement policy, defamation, fraud encouragement, and immoral actions (Karim et al., 2018). Accompanied by minor scandals due to fraud in incorrect financial statements, these mechanisms cause a loss of confidence in financial declarations (Rahman and Bermer, 2016).

Through audit quality and information asymmetry, the corporate governance mechanisms affect investment either directly or indirectly. Concerning direct impact, the corporate governance mechanisms restrict management behavior and decisions that are reflected by presenting responses in the investment decision efficiency. These mechanisms need to be ensured that firm assets are effectively managed (Chen et al., 2017; Salin et al., 2018). However, there is an indirect relationship between the corporate governance mechanisms and investment impact through the quality of earnings. Audit quality enhancement means increased investment impact

since having good corporate governance mechanisms provide an appropriate space to increase audit quality and decrease information asymmetry, resulting in pressure and trust in manager for correct decision making (Clinch et al., 2012). Many studies have been conducted on the impact of different factors on investment efficiency so far. However, no researcher has yet explored the impact of audit quality on the relationship between corporate governance and investment efficiency. According to the above, the main question of this research is that does audit quality affect the relationship between corporate governance and investment efficiency?

Theoretical foundations and research background

Investment

“Investment includes the expenses spending on increasing or preserving capital stock. The capital stock includes the building of factories, machinery, official and sale offices, and other durable goods used in the production process. It should be noted that capital stock also includes residential houses and inventory stocks” (Admati and Pfleiderer, 2009).

Therefore, it can be said that investment expenses are categorized into three distinct groups including business fixed investment, real estate investment, and inventory investment.

The investment issue is taken into consideration from the perspectives of micro-and macroeconomics. From the microeconomic viewpoint, capital is of importance because firm investment at present is influenced by the future accessible capital for the production process. Although the present time is taken into account, there should be a balance between capital cost today and the expected future earnings. From the macroeconomic viewpoint, the total investment is importantly manifested as a factor determining the demand. Additionally, investment also increases the economic production capacity.

Investment efficiency and inefficiency

Generally, investment efficiency means accepting projects with a positive net present value and investment inefficiency means selecting projects with a negative net present value or failure to select investment opportunities. There are at least two theoretical criteria for determining investment efficiency. The first criterion indicates that financing investment opportunities need collecting the resources. All projects with a positive net present value in an efficient market should be financed. Many studies in the financial area have shown that financial limitations restrict the managers’ ability to finance. One of the things inferred is that firms with financial limitations may reject accepting and doing projects with a positive net present value, causing underinvestment. The second criterion also indicates that if a firm decides to finance, there is no guarantee for doing a correct investment. For example, the managers may select inappropriate projects in favor of their interests or misusing the available resources and step toward an inefficient investment. Most of the papers in this area predict that selecting weak projects causes overinvestment (Saqafi and Arabmazar Yazdi, 2010).

The determining factors of investment efficiency

There are at least two determining factors for investment efficiency. The first factor is that a firm needs capital increase to finance investment opportunities. In a perfect market, all projects with a positive net present value should be financed although investment texts state that only the firms

whose managers' ability to finance potential projects have been restricted, encounter financing limitations (Hubbard, 1998). In other words, the firms encountering financing limitations reject the projects with a positive net present value because of high costs of the capital increase, resulting in investing lower than the favorable level. The second factor of investment efficiency indicates that even if a firm decides to increase capital, there is no guarantee for correct investment. The extreme desire of managers to handle large firms results in their decision on accepting all investment projects, even those with a negative net present value without considering the shareholders' interests, resulting in investing higher than the favorable level. However, the investment efficiency entails, on one hand, the prohibition of consuming the resources on activities in which investment has been made more than desirable (overinvestment prohibition) and, on the other hand, the direction of resources toward activities demanding more investment (underinvestment prohibition) (Khodaei Valahzaghari and Yahyaei, 2010).

Corporate governance

Corporate governance can be regarded as a set of rules, processes, and relations among shareholders, managers, and auditors of a firm to guarantee the multilateral rights of shareholders, inhibit the probable misuses, and lead to the aims of responsiveness, transparency, justice, and respect for the rights of shareholders (Qodrati and Feyzi, 2015).

Corporate governance is a system for controlling and directing a firm; a system that determines, controls, and directs the relationship between the firm and shareholders. Furthermore, corporate governance includes legal, cultural, and institutional arrangements that determine the direction of firms' movement and performance and can improve the performance of the firm. Concerning different heterogeneous corporate governance structures in different countries due to dissimilar socio-economic conditions in these countries, the relationship between corporate governance and the performance and value of firms can be different in the financial markets of the developed and developing countries (Nikbakht et al., 2010).

Principles of corporate governance

In the first phase of corporate governance definition, considering the basic principles of the corporate governance system is more important; the following cases can be mentioned in this regard (Rahmani, 2008).

The first principle: necessary foundations for efficient implementation of the principles of corporate governance should be laid in line with increasing transparency and efficiency of markets. Besides, they should be compatible with internal codes of conduct, and the responsibilities of legislators, managers, and executive bodies should be distinguished.

The second principle: corporate governance should support the rights of all shareholders (major and minor shareholders). To achieve this goal, it should consider the basic rights of shareholders such as creating a fixed ownership system, the feasibility of stock transfer, receiving the periodic information of the investee companies, the feasibility of commenting and the right of voting in general assemblies, and the possibility of changing the members of the board of directors.

The third principle: corporate governance has to behave equally with all shareholders; in other words, it should behave minor and foreign

shareholders as it does with major shareholders. All shareholders can claim damages due to a violation of their rights.

The fourth principle: corporate governance should consider the role of employees. It should recognize their legal rights based on the contracts and take an action toward cooperation between the firm and employees to produce wealth, create jobs, and improve the financial status.

The fifth principle: companies need to disclose the information transparently and provide the shareholders with periodic information on the performance of the board of directors and financial issues. The information should be prepared based on accounting standards, audited by an independent auditor, and presented to the shareholders.

The sixth principle: corporate governance has to determine the manner of administering the company, monitoring the activities, and the responsibilities of the board of directors. The decisions of the board of directors should be in line with protecting the rights of the shareholders and result in the promotion of the companies.

Audit quality

Quality of the provided services is one of the dimensions the audit institutions attempt to distinguish themselves from other institutions in this regard. The auditors often believe that the criteria used by employers (the employer's institute management and the beneficial third parties) affect the audit quality assessment.

Davidson and Neu (1993) define audit quality as the auditor's ability to discover and report significant distortions and also discover the manipulation done regarding the net income. However, Lampe and Sutton (1994) believe that instead of examining the audit service quality holistically, each audit project should be separately examined.

Some studies have directly assessed audit quality. For example, Lampe and Sutton (1994) explored the supervision of work and the exertion of quality control standards during work as the difference in audit quality.

Research background

Walid (2020) conducted a study titled "the impact of audit quality on corporate governance and investment efficiency" and explored the moderating role of audit quality in the impacts of corporate governance on investment efficiency. The results of their study indicated that corporate governance and audit quality have a significant relationship with investment efficiency. Besides, audit quality plays a moderating role in the relationship between corporate governance and investment efficiency. Thus, the results of the above research showed that audit quality moderates the relationship between corporate governance and investment efficiency.

Du et al. (2018) conducted a study titled "the integration of corporate governance and investment efficiency". The results of their research indicated that if the corporate governance integration increases, the underinvestment problem decreases that results in increased investment efficiency.

Nor et al. (2018) conducted research titled "the relationship between "the audit committee independence and auditor selection" and investment efficiency" and explored 200 superior companies listed in the stock exchange of Malaysia. The results indicated that the audit committee independence does not affect investment efficiency; however, auditor selection has a direct

impact on investment efficiency. Furthermore, the results of the above research revealed that there is not a relationship between audit committee independence and investment efficiency and that there is a relationship between auditor selection and investment efficiency.

Chen et al. (2017) conducted a study titled “ownership structure, corporate governance, and investment efficiency” to explore the impact of ownership structure and corporate governance on the investment efficiency of the companies listed in the Shanghai Stock Exchange. They found out that ownership focus has a negative impact on investment efficiency and the impact is more prominent in governmental companies than the private ones. Moreover, strong corporate governance improves investment efficiency. Hence, the above research showed a direct relationship between corporate governance and investment efficiency.

Elaoud and Jarboui (2017) conducted research titled “the role of a professional industrial auditor in the relationship between the accounting information quality and investment efficiency”. The findings clarified that the impact of the accounting information quality on investment efficiency is higher in companies audited with a professional industrial auditor.

Mansourfar et al. (2020) conducted a study titled “the moderating role of the internal and external dimensions of corporate governance in the relationship between information asymmetry and investment efficiency” and explored 106 companies listed on Tehran Stock Exchange. The results indicated that the existence of information asymmetry and ambiguity in financial information can cause inefficient investments by the management. Therefore, the presence of appropriate corporate governance is one of the ways to reduce information asymmetry and increase investment efficiency. Overall, they concluded that corporate governance moderates the relationship between information asymmetry and investment efficiency.

Bahar Moqaddam et al. (2019) conducted a study titled “the moderating impact of audit quality on the relationship between the accounting information quality and investment efficiency”. The results of the research indicated that independent and high-quality auditing is a mechanism that can improve the accounting information quality, resulting in a reduction of problems due to unfavorable selection and agency costs; hence, it increases the investment efficiency. Besides, the results showed that through improving the accounting information quality, the impact of reduced overinvestment and underinvestment is higher in companies enjoying a higher auditing quality. In sum, the results of the research revealed that audit quality plays a moderating role in the relationship between accounting information quality and investment efficiency.

Hashemi and Musha‘sha’i (2018) conducted research titled “exploring the impact of the corporate governance mechanisms on the relationship between feelings of the investor and the investment decisions of the companies”. The results of the research showed that the “feelings of the investor” have a significant impact on the new investment level and overinvestment of the companies. Furthermore, corporate governance had a significant impact on the relationship between feelings of the investor, new investment, and overinvestment. In other words, in companies with higher corporate governance levels, the impact of the feelings of the investor on the

investment decisions of the company is improved. These findings indicate that corporate governance affects the relationship between feelings of the investor, new investment, and overinvestment.

METHOD

The present study is a retrospective (quasi-experimental) research, i.e. it was done based on analyzing the historical information (the financial statements of the companies). It is applied descriptive-regressive research.

The population was limited to companies that were listed in Tehran Stock Exchange at least since the beginning of the fiscal year of 2013 and were present therein until the end of the fiscal year of 2019 as well as enjoying the following features.

1. Their fiscal period should end at the end of Esfand because of increasing the comparability.
2. The selected company should not be a part of the banks and financial institutes (investment companies, financial intermediaries, holding companies, leasing, and insurances).
3. The companies should not change their fiscal year during the research period.
4. All information about the companies should be accessible for research.

Regarding the abovementioned conditions, 108 companies had all conditions to be included in the population.

The library and field methods were used in this study for data collection. The theoretical foundations of the research were collected from books, magazines, and specialized Persian and English websites. The information needed for calculating variables and estimating the research model was collected and entered into the Excel software.

Research hypothesis

Audit quality affects the relationship between corporate governance mechanisms and investment efficiency.

The econometric model of the research

The multiple regression model based on panel data is used for hypothesis testing according to relation (1) and Walid's research (2020).

$$IE_{it} = \beta_0 + \beta_1 GOV_{it} + \beta_2 AQ_{it} + \beta_3 GOV_{it} \times AQ_{it} + \beta_4 Lev_{it} + \beta_5 CA_{it} + \beta_6 Age_{it} + \beta_7 Size_{it} + \beta_8 Loss_{it} + \varepsilon_{it} \quad (1)$$

All research hypotheses were tested at the confidence level of 95 percent.

The explanation and measurement of the dependent variable

Investment efficiency (IE_{it}): conceptually, investment efficiency is referred to the investment rate having a positive NPV for projects. According to relation (2), the proposed model of Biddle et al. (2009) was used to calculate the investment efficiency.

$$Investment_{it} = \beta_0 + \beta_1 SalesGrowth_{it-1} + \varepsilon_{it} \quad (2)$$

$Investmen_t$ is the total investment of the company defined as the increased net tangible and intangible assets and it has been homogenized by dividing by the sum of the assets at the beginning of the period.

$SalesGrowth_{it-1}$ indicates the growth of sales that is the difference of the sales rate of period t-2 from t-1.

The explanation and measurement of the independent variable

Corporate governance (GOV_{it}) is a checklist consisting of 4 components related to the corporate governance compatible with the Iranian reporting environment. Then, scoring is used to operationalize the indicator of corporate governance. The components of corporate governance and their operational definition are presented in relation (3).

$$GSCORE_{it} = \sum(BD-IND_{it}, DUALITY_{it}, CEO-Stability_{it}, BD-KNOW_{it}) \quad (3)$$

In the above relations:

$GSCORE_{it}$ is the score of corporate governance due to the characteristics of the board of directors.

$BD-IND_{it}$ is the independence of the board of directors of the company i in year t. It equals one if the ratio of non-executive members to the total members of the board of directors is more than average; otherwise, it equals zero.

$DUALITY_{it}$ is the duality of the chief executive officer i in year t. It equals zero if the chief executive officer is also the chairman or the vice-chairman of the board of directors; otherwise, it equals one.

$CEO-Stability$ is the stability of the chief executive officer of the company i in year t. It equals zero if the chief executive officer has changed during the last two years; otherwise, it equals one.

$BD-KNOW_{it}$ is the financial knowledge of the board of directors of the company i in year t. It equals one if a member of the board of directors is a financial and accounting expert; otherwise, it equals zero.

The explanation and measurement of the moderating variable

Audit quality (AQ_{it}): the quality of accruals was used in this research to measure the audit quality indicator. The moderated model of McNichols (2002) is presented according to relation (4).

$$ACC_{i,t} = \beta_0 + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta SALES_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{it} \quad (4)$$

$$ACC = (\Delta CA - \Delta CASH) - (\Delta CL - \Delta STD) \quad (5)$$

The explanation and measurement of the control variables

Financial leverage (Lev_{it}) is used for calculating the financial leverage from the ratio of total liabilities to total assets at the end of the fiscal year (Walid, 2020).

The operating cash flow fluctuations (CA_{it}) is the standard deviation of the operating cash flow divided by total assets.

Firm age (Age_{it}) is the natural log of the number of years the company has been listed on the Tehran stock exchange (Walid, 2020).

Firm size ($Size_{it}$) is the natural log of all assets at the end of the fiscal year (Walid, 2020).

Profitability status ($Loss_{it}$) equals one if the company has reported a loss; otherwise, it equals zero (Walid, 2020).

Method and instruments for data analysis

Econometrics, panel data, Eviews software, descriptive statistics (mean and standard deviation), and inferential statistics (OLS regression) were used for data analysis.

RESULTS

Descriptive statistics

The descriptive statistics used in the research include mean, median, standard deviation, maximum and minimum of all data that are presented in table 1.

Table1. Descriptive statistics

The panel of Continuous Variables							
Symbol	Variable	Mean	Median	Max	Min	SD	Observations
IE	Investment efficiency	-0.324	-0.332	-0.011	-0.632	0.190	756
GOV	Corporate governance	2.001	2.000	4.000	0.000	0.896	756
AQ	Audit quality	-0.071	-0.062	-0.005	-0.177	0.044	756
Lev	Financial leverage	0.607	0.603	0.952	0.236	0.195	756
CA	The operating cash flow fluctuations	0.075	0.060	0.318	0.010	0.058	756
Age	Firm age	3.121	3.091	4.189	2.197	0.454	756
Size	Firm size	14.333	14.276	19.169	10.789	1.500	756
Loss	Profitability status						

The panel of Discreet Variables

Symbol	Variable	Percentage of one	Percentage of zero	No. of observations
Loss	Profitability status	15.74	84.26	756

Source: research findings

Correlation of variables

The results of the correlation test are presented in Table 2.

Table 2. The correlation between variables

	IE	GOV	AQ	Lev	CA	Age	Size	Loss
IE	1.000							
GOV	0.026	1.000						
AQ	0.080*	0.015	1.000					
Lev	0.110*	-0.121*	-0.053	1.000				
CA	-0.048	-0.052	-0.256*	-0.004	1.000			
Age	-0.024	0.068	0.006	0.053	0.028	1.000		
Size	-0.024	0.127*	0.063	0.130*	-0.130*	0.280*	1.000	

Loss	-0.051	-0.166*	-0.173*	0.373*	0.086*	-0.008	-0.046	1.000
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*Significance at the level of 95%

Source: research findings

Inferential statistics

Test for selecting the type of the model

The summary of the results of the F-limer and Husman test is provided in Table 3.

Table 3. F-limer and Husman Test

Model	F-Limer Test			Husman Test		
	F-Limer value	P	Result	Chi squared value	P	Result
First	4.739	0.000	Panel	36.642	0.000	Fixed effects
Second	4.603	0.000	Panel	30.616	0.000	Fixed effects
Third	4.979	0.000	Panel	35.128	0.000	Fixed effects

Source: research findings

As seen, the significance level of the F-Limer test is zero and lower than 0.05. As a result, the panel data method is accepted.

Moreover, regarding the significance level of the Husman test in table 3 which is 0.000 and lower than 0.05, the fixed effects method is accepted.

Hypothesis testing

Research hypothesis: audit quality affects the relationship between corporate governance mechanisms and investment efficiency.

Table 4 indicates the results obtained from testing the third hypothesis using the multiple regression model based on panel data.

Table 4. The result of the research hypothesis testing

$IE_{it} = \beta_0 + \beta_1 GOV_{it} + \beta_2 AQ_{it} + \beta_3 GOV_{it} \times AQ_{it} + \beta_4 Lev_{it} + \beta_5 CA_{it} + \beta_6 Age_{it} + \beta_7 Size_{it} + \beta_8 Loss_{it} + \epsilon_{it}$					
Variable	Symbol	Coefficient	Standard error	t value	P of t value
Corporate governance	GOV	0.032	0.014	2.27	0.023
Audit quality	AQ	1.147	0.347	3.30	0.001
Interaction variable	GOV×AQ	0.269	0.134	1.99	0.046
Financial leverage	Lev	0.105	0.031	3.39	0.000

The operating cash flow fluctuations	CA	-0.082	0.040	-2.06	0.039
Firm age	Age	-0.031	0.013	-2.23	0.025
Firm size	Size	-0.016	0.006	-2.55	0.010
Profitability status	Loss	-0.105	0.028	-3.69	0.000
Fixed value	C	-0.090	0.093	-0.960	0.337
The adjusted coefficient of determination	F value		P of F value		
0.297	11.158		0.000		

Source: research findings

As seen in Table 4, the probability of F value is zero that is lower than 0.05. Therefore, it can be said that the model is significant with 95% confidence. Moreover, the results of the adjusted coefficient of the determination indicate that about 30 percent of changes of the dependent variable are explained by the independent and control variables of the model.

According to the results of table 4, the coefficient of the interaction variable (corporate governance \times audit quality) is 0.502; besides, the probability of t value of the said variable shows that the interaction variable coefficient is significant at the confidence level of 95%. Furthermore, the positive sign of this coefficient shows a direct relationship between interaction variables and investment efficiency. Hence, the hypothesis stating “audit quality affects the relationship between the corporate governance mechanisms and investment efficiency” is not rejected.

Moreover, the probability of t value related to control variables indicates that all variables are significant at the confidence level of 95%. Besides, the sign of the coefficients of the operating cash flow fluctuations, firm age, firm size, and profitability status is negative, showing an inverse relationship with the dependent variable; the sign of the coefficient of financial leverage is positive that indicates a direct relationship with the dependent variable.

Assumptions of linear regression

Examining lack of autocorrelation

The results of the Durbin–Watson statistic in the model are presented in table 5.

Table 5. The results of Durbin–Watson Test

Model	Coefficient of determination	The adjusted coefficient of determination	Durbin–Watson	F value	Sig.
First	0.288	0.280	1.969	12.065	0.000
Second	0.269	0.261	1.968	9.275	0.000
Third	0.306	0.297	1.971	11.158	0.000

Source: research findings (Appendix 5)

According to table 5, because the Durbin–Watson value is between 1.5 and 2.5, the assumption of the existence of autocorrelation between errors is rejected, indicating the lack of autocorrelation among error values.

Homogeneity of error variance of the model

The results of the White test are presented in the following table.

Table 6. The results of the White test

Model	Statistic	P	Result
First	9.568	0.000	Heterogeneity of variance
First	8.139	0.000	Heterogeneity of variance
First	7.570	0.000	Heterogeneity of variance

Source: research findings

The statistical research hypotheses in the White test are provided below.

Null hypothesis (H_0): the error variance values are homogeneous.

Hypothesis 1 (H_1): the error variance values are not homogeneous.

As seen, the significance level of the White test is lower than the error level of 5%. Therefore, at the error level of 5%, the null hypothesis (H_0) of this test, stating the homogeneity of variances, is rejected. In contrast, hypothesis 1, stating the heterogeneity of variances, is accepted. Thus, the final estimation of this model is done using the generalized least squares method to satisfy the assumption of the homogeneity of variances in regression analysis and solve the problem of the heterogeneity of variances (Petersen, 2009).

Collinearity analysis

The results are presented in Table 7. They indicate that the inflation rate of variance of independent and control variables of the research model is at a permissible level and there is no problem in this regard.

Table 7. The collinearity test among variables

		First hypothesis	Second hypothesis	Third hypothesis
Symbol	Variable	Variance inflation factor	Variance inflation factor	Variance inflation factor
GOV	Corporate governance	1.036		2.088
AQ	Audit quality		1.073	2.428
GOV×AQ	Interaction variable			2.403
Lev	Financial leverage	1.244	1.241	1.244
CA	The operating cash flow fluctuations	1.006	1.018	1.021

Age	Firm age	1.044	1.060	1.065
Size	Firm size	1.078	1.081	1.110
Loss	Profitability status	1.246	1.262	1.282

Source: research findings

DISCUSSION AND CONCLUSION

The objective of the present study was to explore the impact of the corporate governance mechanism on investment efficiency and the moderating role of audit quality. The research hypothesis stated that audit quality affects the relationship between corporate governance mechanisms and investment efficiency. Concerning the probability of t value related to the interaction variable, it can be mentioned that the coefficient of the interaction variable is significant at the confidence level of 95%. Moreover, the estimated coefficient for the interaction variable is 0.269. Besides, the positive sign of this coefficient indicates a direct relationship between interaction variables and investment efficiency. The corporate governance mechanisms restrict management behavior and decisions that are reflected by presenting responses in the investment decision efficiency. These mechanisms need to be ensured that firm assets are effectively managed. Audit quality enhancement means increased investment impact since having good corporate governance mechanisms provide an appropriate space to increase audit quality and decrease information asymmetry, resulting in pressure and trust in manager for correct decision making. Thus, it can be said that if the interaction variable increases, the rate of investment efficiency increases as well. Hence, the hypothesis stating “audit quality affects the relationship between the corporate governance mechanisms and investment efficiency” is not rejected. The results of the present study are in line with the findings of Walid (2020).

In line with this research and the results, some recommendations are presented below.

As an institute stipulating rules for compiling the regulations and codes related to corporate governance and performing monitoring affairs, Tehran Stock Exchange should offer a greater consideration for the companies with weak corporate governance.

While analyzing companies for buying their stocks, the investors are suggested to take into account the value-creative variables such as the value created for shareholders like audit quality.

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