THE EFFECT OF CORPORATE GOVERNANCE ON THE FINANCIAL PERFORMANCE OF COMPANIES LISTED ON THE TEHRAN STOCK EXCHANGE

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Abstract:
The present study investigated the effect of corporate governance on the financial performance of companies listed on the Tehran Stock Exchange. In this study, the duality of CEO duties and financial performance were considered as corporate governance mechanisms. Indicators like return on assets, return on equity and net operating profit after tax have been used to measure financial performance. The studied period was 2013 to 2017 and samples were member companies of Tehran Stock Exchange. The findings revealed that corporate governance and financial performance of companies listed on the Tehran Stock Exchange had a favorable significant association. With the ROE index, there was a significant positive association between board accountability and corporate performance. With the TQ index, there was a positive significant association between board accountability and company performance, and with the ROE index, there was a positive significant relationship between transparency level and firm performance. There was also a substantial positive link between the amount of transparency and business performance as measured by the TQ index, as well as a significant positive relationship between the audit committee and company success as measured by the ROE index.

Keywords: corporate governance, financial performance, audit committee.

1. Introduction

In recent decades, the concept of corporate governance has received more attention following the economic downturn and financial crises in many developing and developed countries. Corporate governance with an emphasis on accountability to all stakeholders is a key element in efficiency and economic growth as well as strengthening the confidence of potential and actual investors. The laws, regulations, structures, procedures, cultures, and systems that fulfill the aims of accountability, transparency, fairness, and respect for stakeholders' rights are known as corporate governance. Considering this concept in banks is of special importance.

Corporate governance is described as the system of connections that serve the interests of all stakeholders, including employees, between the board of

directors, CEO, shareholders, and all stakeholders, including employees. Corporate governance establishes a framework within which the organization's goals are defined, as well as the instruments for attaining those goals and assessing performance. The four basic elements of corporate governance, including fairness, transparency, accountability and responsibility, are beyond the cultural, legal and economic structures of countries.

We have seen numerous and widespread difficulties in firms operating in the United States, Europe, Southeast Asia, and other regions of the world during the last few years. Examining examples of companies' failure shows that although the problems created for them are often specific to each company, it can be said that non-compliance with corporate governance principles has been a common cause of failure of these companies (Hasas Yeganeh, 2005, p. 34).

Bloomfield (2009) argues that one of the most important benefits of establishing corporate governance mechanisms enables them to increase their capital at a lower cost of capital. Today, with the advent of information economy and the introduction of knowledge-based and network-based economy, intellectual capital is introduced as a competitive and strategic element. In other words, intellectual capital is the main pillar of the move towards knowledge-based business and knowledge economy is one of the obvious and direct results of network and information economics (Saleh et al., 2009).

The corporate governance system seeks to change the management of joint stock companies from traditional to dynamic independent management. In this structure, not only the interests of shareholders are guaranteed, but also the company is accountable to individuals such as creditors, banks, consumers and ultimately society (Sajjadi, 2009).

On the other hand, deciding on the quality of profits i.e. how the company is financed, affects the value and return of the company like other decisions of financial managers. As a representation of shareholders, every management should strive to govern the quality of the company's earnings in such a manner that the cost of capital is minimized, maximizing the company's value and shareholders' returns, and meeting shareholders' expectations (Mohseni, 1998).

The corporate governance system has gotten greater attention as firms have grown and the board of directors' responsibilities and powers have grown. Corporate governance is a combination of internal and external control systems that balances the interests of shareholders with the needs and powers of the board of directors. Ultimately these mechanisms provide reasonable assurance to shareholders and providers of financial resources and other stakeholders stating that their investment will be returned at a reasonable profit and their interests will be taken into account (Zeinoddin Meymand, 2011).

It is theoretically expected that the characteristics of an appropriate corporate governance model, moderate market fluctuations and the economic and social situation in society on the company and with its correct actions, real results can be expected and there would not be at once a surplus abnormal return in the market for a group of shareholders, because corporate governance aims to meet the needs of all stakeholders, including the whole community, and seeks to establish a balanced relationship among all stakeholders, seeking to maximize the total wealth. According to the classical theories, there is no role for financial disclosure in an efficient market, so there is no demand for accounting information (Watts and Zimmerman, 1978).

The concept of corporate governance is a progressive and new concept in the development of companies, especially large ones. Transparency and proper division instead of authority and responsibilities among the pillars of companies, as well as the adoption of control and monitoring mechanisms based on corporate governance to prevent possible abuses seem to be essential. Organizations and managers have to find new ways to adapt to global changes and developments so that they can remain in the arena of domestic and global competition and outperform competitors. There have been several scales for performance, but financial scale have been used more in the past. Since the 1980s, many researchers have emphasized financial and performance-based scales (Noravesh et al., 2015).

But the financial crises in recent years have led to more emphasis on corporate governance mechanisms around the world. On the other hand, gauging a company's success is one of the most significant financial challenges it faces. Corporate financial performance must be measured since it is the foundation for many choices made both inside and outside the firm. Decisions related to investments, increasing the capital of companies, agency relationship and many other decisions are all based on performance measurement (Vakilifard and Bavandpour, 2010).

In recent years, significant progress has been made in establishing a corporate governance system through legislation and supervision, as well as voluntary actions of companies in developed and developing countries. Investors and shareholders have become more aware of the need and importance of corporate governance and are interested in pursuing the establishment of this system in companies. Some empirical papers indicate a positive relationship between corporate governance and corporate returns (Qalibaf Asl, 2008).

There are several ways to measure financial performance, but all measures must be taken in summary. Linear items such as revenue, operating income or cash flow from operations can be used, as well as total unit sales. In addition, the analyst or investor may want to delve deeper into the financial statements and reduce the margin growth rate or any debt. Evaluating the performance of companies is very important in economic decisions, the ultimate goal of any financial institution can be considered in creating value. In other words, if a financial institution is incapable of creating value or prefers the considerations of some stakeholders to another, it will not remain competitive. In these circumstances, financial ratios can be considered as a tool to measure this goal (Mohammad Pourzarandi, 2013).

Many studies have been done in the corporate governance literature to explore the link between company performance and good governance in developed and developing nations (Sami et al., 2011).

Aman et al. (2011) Business governance has a substantial beneficial link with corporate performance, according to the findings. In contrast, Akbar et al. (2016) discovered that corporate governance and performance had a substantial negative connection. In reality, separating ownership from management permits executives to make decisions that are in their own best interests rather than the best interests of shareholders (Jensen and Meckling, 1976).

In other words, corporate governance is one of the main mechanisms in reducing agency costs and good corporate governance mechanisms improve the performance and increase the value of companies. The concepts of openness,

fairness, accountability, and responsibility are all part of corporate governance, which is the act of effectively managing a corporation in order to maximize the interests of all stakeholders (Bawarakdro et al., 2012).

One of the most fundamental criteria for enhancing a company's performance is to implement corporate governance principles. The financial success achieved from the implementation of these principles indicates the creation of value (Akbari Moghadam and Piri, 2011).

The primary goal of the study is to investigate the link between corporate governance and firm success, which is broken down into the following sub-objectives.

1. Using the ROE index to look at the connection between board responsibility and business performance.
2. Using the TQ index to look at the link between board responsibility and firm performance.
3. Using the ROE index to investigate the link between the amount of disclosure and firm performance.
4. Using the TQ index, investigate the link between the amount of transparency and firm performance.
5. Using the ROE index to investigate the link between the audit committee and the company's performance.
6. Using the TQ index to investigate the link between the audit committee and corporate performance.

2. Literature Review

Vanoosh Bandpei and Raeiszadeh (2017) in an article examined the effect of board size and company characteristics on the financial performance of companies listed on the Tehran Stock Exchange. For this purpose, 110 companies active in the Tehran Stock Exchange in the period from 2011 to 2015 have been selected. Excel and Eviews were used to process and analyze the collected data. Multivariate regression method has also been used to test the hypotheses. The results obtained from the article show that the size of the board does not affect the financial performance of companies, company characteristics including company size and company life have a positive effect on the financial performance of companies listed on the Tehran Stock Exchange. Among the control variables, the liquidity ratio has a positive effect on the company's financial performance.

Bavieh Taeimi et al. (2016) in an article examined the effect of the CEO duality on the performance of companies listed on the Tehran Stock Exchange. The present paper examines the effect of CEO duality as one of the most important components of corporate governance on the performance of companies listed on the Tehran Stock Exchange during the return period of 2008 to 2013. The financial performance of companies is measured using Tobin and the profit margin ratio. These Q are four indicators of return on assets, return on equity. The paper is a descriptive correlational one. Hypotheses are tested by multivariate regression model and panel method with random effects has been used to estimate data. The results of the hypothesis test show that the CEO's task duality only affects the profit margin ratio and has no significant effect on the other variables.

Shourvarzi et al. (2015) in a study examined the relationship between corporate governance and performance based on fuzzy regression. This paper

examines the relationship between corporate governance and corporate performance based on fuzzy regression among 151 firms. Based on the results of this paper, the hypothesis of the relationship between the presence of non-executive members on the board and the existence of institutional owners with the company's performance was confirmed. Also, no significant relationship was observed between the dual role of CEO and company performance. Therefore, according to the results of this paper, special attention is paid to corporate governance mechanisms for improving company performance.

Al-Ahdal et al. (2020) in an article examined the effect of corporate governance on the performance of companies listed on the Indian Stock Exchange. The study population included 53 companies on the Indian Stock Exchange. The results showed that the accountability of the board of directors and the audit committee does not have a significant effect on the company's performance. There was also a significant negative relationship between company performance and company disclosure.

Qadorah and Fadzil (2018) investigated the relationship between board size and the CEO role duality with company performance. In the study, multivariate regression method was used to analyze the available data for 64 industrial companies listed on the Amman Stock Exchange (ASE) in the fiscal year 2013. Results showed the positive effect of board size on company performance. On the other hand, the results showed evidence to support the effect of CEO duality on company performance in this area.

Isu Cole and Chize A (2017) evaluated corporate governance disclosure in Nigerian and Ghanaian banks and concluded that Ghanaian banks had a lower level of disclosure than Nigerian banks and banks in both countries had poor scores on discretionary disclosure of corporate governance.

Hayam Wahbe (2017) in an article examined the common effects of board characteristics on company performance in Egypt. The results of this article showed that the dual responsibility of the CEO and increasing the proportion of non-executive members had a significant negative effect on the corporate performance.

Imad Katoum (2016) examined the relationship between the characteristics of the board of directors and the company's performance in Palestine. The results showed that board size had nothing to do with company performance, but there was a significant positive relationship between company life and company performance.

Caio and Repamonti (2016) examined the relationship between corporate governance quality and capital structure in Brazil. The results showed that improving corporate governance quality affected both equity and debt in the capital structure.

Motiva et al. (2015) examined the effect of discretionary disclosure on the financial performance of companies listed on the Nairobi Stock Exchange and found a strong relationship between discretionary disclosure and financial performance.

Shahvan (2015) in a study entitled “The effect of corporate governance on financial performance and financial crisis in Greece”, empirically examined the effect of corporate governance quality on corporate performance and financial risks with reference to the importance of corporate governance quality and its effect on performance and financial crisis and lack of a comprehensive study that examine

the effect of corporate governance quality on performance and financial crisis by considering various indicators. The results showed that the corporate governance rating in Greek companies was relatively low. Also, the results did not support the positive relationship between corporate governance and financial performance. In addition, the results indicated that there was a significant negative relationship between the quality of corporate governance and the financial crisis. The results showed that the characteristics of companies affect the financial performance and financial crisis of companies operating in emerging markets.

3. Research method

The statistical population of this article consists of all companies that have the following conditions. In this article, due to the use of descriptive correlational method, sampling will not be done in this article and the whole community will be examined:

1. Their fiscal year shall end at the end of March and shall not change during the period.
2. The companies under review which are not among financial intermediation companies such as investments, banks and leasing companies.
3. Their transactions have been done continuously in Tehran Stock Exchange and they have not stopped their activity for three months.
4. Their financial information is fully available.
5. Also, the time frame of this research is considered between 2013 and 2017 (five years). The scope of the research is 5 years from 2013 to 2017.

The present research is applied in terms of purpose. Due to the nature of the present study, the data collection method is desk and field study. In the desk study method, data are collected by reviewing the records and backgrounds available in libraries or other information centers, as well as files and other types of information storage devices. In the hypothesis testing and statistical analysis section, a multivariate linear regression model based on panel data will be used. Panel data provide more information and variability, less alignment between variables, greater degree of freedom, and higher efficiency. To determine the test model, the panel or pooled model, the F-Limer test will be used, and if it is a panel, the Hausman test will be used to determine the model. The ordinary least squares method is also used to estimate. Relevant tests will be performed with EViews. The data required to calculate the research variables will be extracted from the database of “Rahavard Novin” and the website of “Islamic Research, Development and Studies Management - Securities Exchange Organization” and “Codal”. After collecting the data needed for the article, it is important to choose the right tool to calculate and analyze information about variables. Excel and EViews8 will be used to perform calculations and prepare the data to the information required by the article and also to analyze them. One of the things to consider when collecting data is the validity of the data collection tools. The validity of data collection tools means that the tools can reflect the facts well. Since the data collection tools in this study are banks and information websites prepared by the Tehran Stock Exchange Organization, the validity of data collection tools can be trusted.

4. Findings

The regression models of this paper to test the hypotheses are as follows:

$$ROE_{it=} \alpha + \beta_1 BA_{it} + \beta_2 AC_{it} + \beta_3 TD_{it} + \beta_4 LEV + \beta_5 GE-$$

$$TQ_{it=} \alpha + \beta_1 BA_{it} + +\beta_2 AC_{it} + \beta_3 TD_{it} + \beta_4 LEV + \beta_5 GE-$$

In this paper, corporate performance is recognized as a dependent variable. For this purpose, two indicators will be used to measure the company's performance, which are equity returns and Tobin Q.

To measure the return on equity (ROE), dividends after tax on the total equity will be used. And to measure the Tobin Q index, the market value to the book value of assets will be used.

Board Accountability (BA): Five indicators are used to measure this variable. If the number of board members is more than five, it gets the number one, otherwise zero. If the characteristics of the board members are reported, it gets the number one and otherwise zero. If all members attend at least 75% of the meetings, it gets number one, otherwise zero. If the chairman and the managing director are separate, it gets number one, otherwise zero. If the performance of the board is evaluated regularly, it gets number one and otherwise zero. At the end, these scores are added and measured as the final number of the index.

Audit Committee (AC): This variable is measured using five indicators. If the firm has an audit committee, it is ranked first; otherwise, it is ranked zero. If the audit committee consists of non-executive members, it receives a score of one, otherwise it receives a score of zero. If the chairman of the executive committee is not a member of the executive committee, it receives number one; otherwise, it receives zero. The audit committee receives number one if it has at least three members; otherwise, it receives zero. If at least one member of the audit committee has financial knowledge, it receives a score of one, otherwise it receives a score of zero. If the audit committee meets at least twice a year, it receives a score of one; otherwise, it receives a score of zero. At the end of the day.

Disclosure Level (TD): Five indicators are used to measure this variable. If the company's goals are reported, it gets one, otherwise zero. If the company's financial statements are in accordance with the principles of accounting, it gets number one, otherwise zero. If the corporate governance reports are submitted annually, it gets number one, otherwise zero. If stock price information is reported, it gets number one, otherwise zero. If the company's risk management reports are submitted, it gets number one, otherwise zero. At the end, these points are added and presented as indicators.

Financial Leverage (LEV): The ratio of total corporate debt to total corporate assets.

Governance Effectiveness (GE): Global Corporate Governance Index

Table 1. Control variable

Proxy measurement	Symbol	Variable name	Variable type
Return on equity is calculated at the end of the year after dividends have been paid on all equity.	ROE	Return on equity	Dependent variable
Q Tobin can be calculated by the ratio of market investment plus total debt divided by the company's total assets.	TQ	Q Tobin	
Board Accountability Index (16 items)	BA	Board Accountability	Independent variables
Audit Committee Index (10 items)	AC	Audit Committee	
Transparency and Dissemination of Information Index (14)	TD	Transparency and dissemination of information	
It was measured by dividing total assets by total liabilities.	LEV	Influence	Control variables
Global Management Index	GE	Government effectiveness	
In case of production 1, otherwise 0	ID	Industry agents	
If there are Indian companies1, and companies of Persian Gulf countries 0	CD	Country agents	

In quantitative analysis of financial issues, there are three types of data (Rahbari, 2004): Time series data, cross-sectional data and panel data.

Time series data presents the values of one or more variables over a period of time. Because data production or data collection dates are different, it creates different types of time series.

Cross-sectional data are collected over a period of time for one or more variables.

Combined data have temporal and cross-sectional dimensions. In fact, it expresses the properties of a variable that changes both over time and at different times.

In the present paper, panel data are used to estimate the model. The three main methods for estimating panel data-based models are as follows:

1. Common fixed y-intercept for all cross-sectional observations. In such models, all observations are combined and ordinary least squares (OLS) regression is performed to estimate it. Such models are called hybrid regression models. In other words, the simplest way is to remove the space and time dimensions from the panel data and ordinary least square (OLS). But despite its simplicity, due to limiting assumptions, this method may incorrectly show and distort the true picture of the relationship between the Xs.

2. Different y-intercept among cross-sectional observations (fixed effects method or least square dummy variable LSDV).

3. Random y-intercept for cross-sectional observations (random effects method). Generalized F test is used to choose between hybrid regression model methods and fixed effects regression. This method relies on the coefficient of determination R2 and tests whether the coefficient of regression with fixed effects is significantly greater than the coefficient of determination of the hybrid regression model. The statistics of this test are presented in the following formula:

R2 fe: regression coefficient with fixed effects

R2 pool: Integrated regression model determination coefficient (common y-intercept)

N: Number of cross-sectional observations

T: Article time periods (years)

Nt: Total number of observations

K: Number of independent explanatory variables of the model

The calculated F is compared with the table F and the following hypothesis is tested:

Ho: There is no significant difference between the coefficients of determination of the two methods.

H1: There is a significant difference between the coefficients of determination of the two methods. If the H1 hypothesis is accepted, fixed effects regression should be used. After the generalized F test is done, it is time to choose between fixed and random effects models. The test that helps to choose one of the methods is called Hausman test which has an asymptotic distribution of chi-square and its hypotheses are as follows:

H0: There is no systematic difference in coefficients.

HT: There are systematic differences in coefficients. Under the H0 hypothesis, there is no difference in the coefficients estimated by FEM and REM methods. If the null hypothesis is rejected, the result is that REM is not correct and it is better to use FEM (ibid.).

After performing the tests and selecting the appropriate estimation method, we proceed to estimate regression. Regression estimation means estimating the coefficients of variables or in other words. But are the estimated coefficients significant? To test the significance of each of the estimated regression coefficients in the case of two domains, it is assumed that the regression coefficient is zero and in other words, the independent variable Xi has no effect on the changes of the dependent variable Y, i.e. the H0 hypothesis will be expressed as follows:

$H0: \beta i = 0$

In contrast, H1 hypothesis or competitor states that the independent variable is effective in changing the dependent variable, that is:

$H1: \beta i \neq 0$

But in the single-domain case, the hypotheses H0 and H1 are in one of the following forms, the first case expressing a significant negative relationship and the second case a significant positive relationship.

$H0: \beta i \geq 0$

$H0: \beta i < 0$

$H1: \beta i \leq 0$

$H1: \beta i < 0$

Student's t test as well as F statistic can be used to test the existing hypotheses. Of course, in Eviews, other information is provided in this regard based on the minimum probability of confirming the H0 hypothesis, based on which the H0 hypothesis can be confirmed or rejected without referring to the table and using the information in the p-value (Prob) section. Given the predicted confidence level, if this probability is less than 0%, the H0 hypothesis is rejected, which means that the hypothesis is confirmed (ibid.). To evaluate the significance of the regression model by having a k-variable regression model:

To test the hypothesis:

That is, all slope coefficients are zero at the same time. In contrast, all slope coefficients are not zero at the same time (at least one of them is not zero. By calculating

If (K-1) (N-K) α is F> F, H0 is rejected, otherwise we may accept it. As mentioned earlier, in the Eviews, the H0 hypothesis can be confirmed or rejected using the information in the p-value (Prob).

The first step in analyzing data is to describe or summarize it using descriptive statistics. Descriptive statistics is a set of methods for summarizing, classifying, describing, and interpreting data. Descriptive data analysis is used only to examine the status of a group or a situation, such as status, type, data description, etc. But the analysis of relationships and changes between variables and the analysis of a set of variables to explain the cause is beyond the scope of descriptive statistics and a set of methods are applied that are usually used to express the relationship between two or more variables and generalize the characteristics of the statistical sample to the statistical community which is called inferential statistics.

Table 2. Descriptive statistics indicators of research model variables

Highest value	Least value	SD	Median	Mean	Symbol	Operational definition
7.87	3.47-	3.519	0.259	0.389	ROE	Return on equity
1.373	0.002	0.132	0.046	0.087	Q-Tobin	Q Tobin
1	0	0.661	0.536	0.522	BA	Board Accountability
1	0	0.688	0.651	0.612	AC	Audit Committee
1	0	0.566	0.517	0.501	TD	Disclosure level
0.963	0.096	0.209	0.572	0.564	LEV	Financial Leverage
1	0	0.523	0.499	0.488	GE	Governance Effectiveness

As briefly mentioned above, dispersion indices represent the extent of dispersion or variation in the data of a distribution. There may be distributions whose means are equal but their dispersion differs around the mean. One of the most important and valid dispersion indices addressed in this analysis is standard

deviation (SD). This criterion is the positive root of the variance of the data, which is superior to other dispersion statistics. Also, in comparison of two or more societies whose standard deviation is less, the values of the studied traits of that society are more uniform than other societies. If the dispersion is high, the standard deviation will be large. The descriptive results of this study including mean, median, standard deviation, minimum observation and maximum observation are presented in the following tables. A slight difference between the mean and median indicates that the variables are normal. Variables also have low standard deviation and this confirms the uniform distribution of data

Table 3. Normality of variables

Significance	Kolmogorov-Smirnov test statistics	Symbol	Variable
.000	0.121	ROE	Return on equity
.000	0.211	Q-Tobin	Q Tobin
.000	0.134	BA	Board Accountability
.000	0.128	AC	Audit Committee
.000	0.104	TD	Disclosure level
.000	0.130	LEV	Financial Leverage
.000	0.094	GE	Governance Effectiveness

As the results in Table 3 show, none of the variables in the article follow the normal distribution despite scaling (the significance of the Kolmogorov-Smirnov test is less than 5% in all of them). It should be noted that the normality of variables is done only for continuous variables and accounting data is usually not normal and this does not cause any problem in the regression model. Unlike regression which measures the effects of variables as a whole, the correlation coefficient measures the correlation of two variables in pairs. Thus, the higher the correlation between the two variables, the better the research results. Based on the results of Tables 4 and 5, it can be seen that there is a good correlation between dependent and independent variables as well as independent variables with each other at the levels of one and five percent, and this will improve the regression results. The results of the Pearson-Spearman correlation are almost identical. The direction of the variables can also be decided according to the regression equation.

Table 4. Pearson correlation coefficients of variables

GE	LEV	TD	AC	BA	Q-Tobin	ROE	Variable
0.009	-0.022	0.060	0.030	-0.041	0.035	1	**ROE**
.092*	-0.016	-0.029	0.018	0.007	1	0.035	**Q-Tobin**
0.012	-0.038	-.309**	-.313**	1	0.007	-0.041	**BA**
-.082*	0.040	.761**	1	-.313**	0.018	0.030	**AC**
-0.031	0.015	1	.761**	-.309**	-0.029	0.060	**TD**
-0.070	1	0.015	0.040	-0.038	-0.016	-0.022	**LEV**
1	-0.070	-0.031	-.082*	0.012	.092*	0.009	**GE**

Alignment is not one of the underlying regressions, but in order to better fit the regression model and the absence of false variables, it is necessary to do so, and the degree of alignment between independent variables should be investigated. According to the results of Table 5, it can be seen that for all variables, this factor is less than 5, there is no alignment between the variables and model fitting can be done.

Table 5. Investigation of alignment between variables

Variance inflation factor	Variance coefficient	Symbol	Variable
1.166	0.857	ROE	Return on equity
1.143	0.875	Q-Tobin	Q Tobin
2.525	0.396	BA	Board Accountability
2.446	0.409	AC	Audit Committee
1.010	0.990	TD	Disclosure level
1.093	0.915	LEV	Financial Leverage
1.148	0.871	GE	Governance Effectiveness

To describe these tests, the AR (1) model is considered for the variable in which the studied variable Y_{it} is the studied variable (dependent and independent variables) i = 1,2,…, N represents companies, t = 1,2,…, number of time series observations in each country, X_{it} is y-intercept, and δ_i is the self-correlation coefficient and ε_i is the disruption sentence, which are assumed to be independent between different companies. If $|\rho_i| < 1$, in this case the desired variable is stable and if $|\rho_i| = 1$, Y_i has a single root and unstable. For this test, there are two assumptions about ρ_i, first, we assume that there are common factors between different companies so that $\rho_i$is the same for all companies ($\rho_i = \rho$ for all companies). The Levin et al. test (2000 Levin, Lin & Chu,), the Breitung test (Breitung, 2000), and Hadri (Hadri, 2000) test are based on this assumption. On

the other hand, the second assumption is that ρ_i is not considered the same between companies. The IFS[1] and the Fisher tests are also based on this assumption. Furthermore, the null hypothesis in the hadri test is the lack of a single root, whereas the null hypothesis in other tests is the existence of a single root. The Levin et al. test is used as the decision criteria in this article. This test's H0 shows that the variables under investigation do not have a single root. If the calculated statistic value is less than the table value after calculation The results of this test, which are presented in Table (6), include y-intercept and trend. H0 in this test indicates the existence of a single root. The results show that the integrated series are on the stable level.

Table 6. Results of panel unit root test based on Chi-square Fisher test

Result	Significance level	Levin's test	Variable
Stable	000/0	69.51-	ROE
Stable	000/0	31.72-	Q-Tobin
Stable	000/0	20.60-	BA
Stable	000/0	15.22-	AC
Stable	0000/0	22.16-	TD
Stable	002/0	2.81-	LEV
Stable	0000/0	5.43-	GE

Source: Article results

5. Discussions

The present study was conducted to investigate the effect of corporate governance on the financial performance of companies listed on the Tehran Stock Exchange. In this part of the research, the hypotheses will be tested.

Sub-hypothesis 1: Investigating the relationship between board accountability and corporate performance with ROE index

Sub-hypothesis 2: Investigating the relationship between board accountability and corporate performance with TQ index

Sub-hypothesis 3: Using the ROE index to investigate the link between the amount of transparency and company performance

Sub-hypothesis 4: Using the TQ index, researchers are looking at the link between the degree of transparency and business performance.

Sub-hypothesis 5: Using the ROE index to investigate the link between the audit committee and business performance.

Sub-hypothesis 6: Investigating the relationship between the audit committee and corporate performance with TQ index

[1] Im, Pesaran and Shin, 2003

Before fitting the regression model and hypothesis test, it should be checked which regression model is suitable for hypothesis testing. Therefore, we examine the Chow test. In this test, the null hypothesis is that the regression model fits as a combination and the opposite hypothesis is that the regression model fits as a panel. If at 95% confidence level (error -5%) the f-statistic calculated from the regression equation is less than the f-value obtained from the graph, H0 cannot be rejected, otherwise H1 is rejected.

According to Table 7, the significance level of F-statistic for regression models is less than 0.05. In this way, it can be concluded that H0 (integrated model) is rejected and the hybrid model is confirmed. Once it is determined that the y-intercept is not the same for different years, the method used in estimating the model (fixed or random effects) should be determined, for which the Hausman test is used. If at 95% confidence level (5% = α) the statistic calculated from the regression equation is smaller than the obtained from the graph, the H0 cannot be rejected and otherwise H1 is rejected. In other words, if the significance level of Hausman test is greater than 0.05, the model with random effect and if the significance level of this test is less than 0.05, the panel model with fixed effect is used.

Table 7. Hausman test

Test result	Likelihood	χ^2 statistics	Model title
Panel model with fixed effects	0.0006	23.50	First model
Panel odel with fixed effects	0.00014	12.28	Second model

According to Hausman test in Table 8, the fit of regression models of this study using the estimation of the panel data model using the fixed effects will be appropriate for the model.

Table 8. Summary of hypothesis results

Result	Hypothesis	No.
Confirmed	Investigating the relationship between board accountability and corporate performance with ROE index	1
Confirmed	Investigating the relationship between board accountability and corporate performance with TQ index	2
Rejected	Investigating the relationship between disclosure level and corporate performance with the ROE index	3
Confirmed	Investigating the relationship between disclosure level and corporate performance with TQ index	4
Rejected	Investigating the relationship between the audit committee and corporate performance with the ROE index	5
Rejected	Investigating the relationship between the audit committee and corporate performance with the TQ index	6

Hypothesis 1: Investigating the relationship between board accountability and corporate performance with the ROE index

According to the statistical results, the first hypothesis of this article has been confirmed. Therefore, there was a significant positive relationship between board accountability and corporate performance with ROE index. Since ownership has been separated from management, it has become very difficult to supervise managers. Therefore, several regulatory mechanisms have been proposed to reduce agency costs. Since increasing the wealth of shareholders is one of the most important goals of companies and increasing wealth will be achieved only as a result of good performance, so the effect of corporate governance mechanisms, including board accountability on the performance of companies is very important. As a result, the presence of board members on the board can improve performance. CEOs play an important role in creating the right mix of executives among board members.

Hypothesis 2: Investigating the relationship between board accountability and corporate performance with TQ index

According to the statistical results, it was found that the second hypothesis has been confirmed. Today, due to the expansion of economic activities, financial markets and investment boom in capital markets, especially stock exchanges by individuals and legal entities, access to accurate and timely information and their accurate and realistic analysis, the most important tool to make the right decisions and gain benefits is the optimal use of financial resources. In today's society, information plays an important role in human life, and the more advanced society is, the more and better it uses the information. One of the reasons for progress in developed societies is the optimal and effective use of information. The end product of the accounting process is the provision of information to various users, both internal and external users, in the form of accounting reports.

Hypothesis 3: Investigating the relationship between the level of disclosure and corporate performance with the ROE index

According to the hypothesis test, this hypothesis has been rejected. Therefore, there is no significant relationship between the level of disclosure and the corporate performance with the ROE index. Disclosure quality refers to the ease of studying the interpretation of financial statements. When the amount of information provides the accuracy and timeliness of the disclosure information, investors can assume that the value of the securities is high after receiving the information. Therefore, the quality of disclosure affects the value of securities.

Hypothesis 4: Investigating the relationship between the level of disclosure and corporate performance with the TQ index

According to the results, this hypothesis has been confirmed. Every business unit needs working capital to continue its activities and to develop activities and increase profitability, it is necessary to make new investments. Both the needs of the business unit, i.e. working capital and new investment, are met through financing. Financing and investing decisions in companies are decisions that are both forward-looking. In financing decisions, the company uses the funds in question to be able to fulfill its obligations to suppliers in the future (Khajavi et al., 2010).

Hypothesis 5: Investigating the relationship between the audit committee and corporate performance with the ROE index

Statistical results indicate that this hypothesis has been rejected. The audit committee as an important part of the corporate governance system can improve

the financial reporting process and the performance of the company. In agency relationships, the owners' goal is to maximize wealth, so in order to achieve this goal, they monitor the agent's work and evaluate his performance. Therefore, if the audit committee presents a favorable picture of the financial statements to the board members and the CEO, it will have a better position to adopt effective strategies to increase the company's performance.

Hypothesis 6: Investigating the relationship between the audit committee and corporate performance with TQ index

Statistical results indicate that this hypothesis has been rejected. Audit committees need to be properly organized and used; in which case these committees can have significant benefits for all creative groups. If the firm does not have an audit committee, it should explain why in its annual reports, as well as the necessity for one in the next financial quarter. On the other hand, the audit committee's efficacy may be influenced by a variety of factors such as financial flatness, independence, size, and so on. Recommendations for future study based on the findings:

- Investors, financial analysts are recommended to pay attention to the financial performance of companies in their decisions.
- The board of directors and shareholders are recommended to use specialized and independent people in the audit committee.
- Investigating the effect of corporate governance on social responsibility and financial performance.
- The effect of corporate governance on the efficiency of intellectual capital and financial performance.
- The effect of risk management on the relationship between corporate governance and corporate financial performance.

5. Conclusions

Experimental research in the social sciences, such as accounting, faces some limitations in generalizing the results to the entire statistical population. Factors such as lack of access to data of some companies and also the existence of stock price trading interruptions, have reduced the number of samples and affects. the ability to generalize the results to all companies on the Tehran Stock Exchange. Also, the existence of many factors such as the prevailing psychological climate on the Tehran Stock Exchange and its effect on inflation and economic and political conditions, may affect some variables such as stock market value and companies and their operating profit during the research period.

According to the present study, the least that can be suggested is that the existence of corporate governance and its implementation in the majority of companies, as well as valuing institutional shareholders in the ownership structure, pay attention to other characteristics of the board other than their executive responsibility. It will improve the company's performance and value in the financial markets and provide relevant and timely information to users.

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