

The Impact of External Corporate Governance Mechanisms on Financial Distress among Companies Listed in Tehran Stock Exchange

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Abstract

Corporate governance refers to a set of policies, practices, and actions taken to meet the interests of corporate stakeholders. Corporate governance mechanisms are tools that can be used to protect stakeholders' and creditors' interests against financial variations and crises. The corporate governance system aligns the goals of different groups in the company and tries to prevent the financial distress and create value for companies. The main objective of the present study is to explore the impact of external corporate governance mechanisms (institutional ownership level and institutional ownership concentration) on financial distress. Accordingly, one main hypothesis and two sub-hypotheses were developed. The sample under study included 118 companies that were selected based on financial statements from 2006 to 2013. To test the research hypotheses, multivariate regression analysis was used with mixed data. Results showed that of external corporate governance mechanisms, institutional ownership concentration had a negative effect on the corporate financial distress. However, institutional ownership level had no significant effect on corporate financial distress.

Keywords: Corporate governance, Financial distress, Institutional Ownership Level, Institutional Ownership Concentration

Introduction:

Corporate governance refers to a set of policies, practices, and actions taken to meet the interests of corporate stakeholders. The aim of corporate governance is to guarantee the corporate activities and the management policies in line with the interests of shareholders in particular and all stakeholders in general. Therefore, a significant relationship can be expected between corporate governance and their financial performance.

Unfavorable corporate financial performance brings about irreparable consequences for corporates such as financial distress. Financial distress means those events that speed up the insolvency of business entities such as violating loan contracts (Noravesh, 2009). Corporate financial distress occurs through four stages: failure, poor liquidity, default, and bankruptcy. It should be noted that the financial distress will not necessarily lead to bankruptcy, but bankruptcy is one of the consequences of financial distress that is usually taken as a last resort.

There are usually two limited and broad perspectives in the definitions proposed for corporate governance. In the limited perspective which is usually based on the theory of representation, corporate governance is confined to the relations between the company and its shareholders. On the other hand, in the broad perspective, corporate governance can be seen as a network of relations not only between the company and its owners but also between the company and a large number of stakeholders including employees, customers, sellers, and holders of bonds. Such a perspective is based on stakeholder theory. Theoretically, it is expected that characteristics of corporate governance affect the corporate financial performance as an effective governance reduces negative outcomes resulting from the conflict in the managers' and owners' interests such as power manipulation (Rajabi & Ganji, 2010).

Statement of the problem:

Changes in the business environment, increased competition, and economic and political conditions have resulted in the dynamicity of the business environment. Therefore, based on what was mentioned, the rapid and appropriate response by the business entity against unstable external conditions plays a significant role in the growth and prosperity or in its financial distress and ultimately the corporate bankruptcy. In financial literature, various definitions have been offered for financial distress. Gordon has defined it as reducing the earning power of companies that may increase the inability to repay interests and the principal debt. Whitaker considers financial distress as a situation in which the company's cash flows are less than its total interests on long-term debts. From an economic standpoint, financial distress can be interpreted as a situation where the company is losing and in this case the company is experiencing failure. In fact, in this case, the rate of returns is less than the rate of cost of capital. The other type of financial distress occurs when a company fails to observe one or more clauses related to the debt, such as failing to keep the current ratio according to the contract, a case that is called technical default. Another case of financial distress occurs when the company's cash flows are not sufficient to repay principal and interest of debt. This occurs when the company's equity becomes negative. One of the important issues which could have a significant role in preventing corporate financial distress is the establishment of corporate governance (strategic management). Corporate governance is an issue that stresses the corporate strategy and the owner's equity and it can reduce shareholders' and managers' conflict of interests. Such conflict of interest is related to representation issues resulting from two main reasons: The first reason is related to differences in goals and preferences of the participants in the company and the second reason is the participants' insufficient information concerning each other's function, knowledge, and preferences. Generally speaking, corporate governance includes legal, cultural, and institutional arrangements that determine how a company must operate and to what direction it must move. Elements that are present in this scene include shareholders and their ownership structure, board of directors and its members, the corporate management who is led by the Managing Director or Chief Executive Officer and the beneficiaries who may have an impact on the company's direction (Mousavi et al., 2010).

From the perspective of representation theory, the presence of non-executive and independent managers in the boards of directors who have the expertise, independence, and the legal power needed for supervising the corporate performance can be regarded as powerful corporate governance mechanism (Byrd et al., 1992).

Thus, the corporate governance system aligns the goals of different groups in the company and tries to prevent the financial distress and create value for the company. cc mechanisms are in fact tools that can be used to protect stakeholders' and creditors' interests against financial variations and crises. Therefore, the main question address in this study is whether external corporate governance mechanisms affect financial distress in companies listed in the Tehran Stock Exchange or not.

Significance of the study

Corporate governance is a set of processes, rules, policies, and practices that are used to address how organizations and companies are directed and controlled and how different beneficiaries interact with each other in line with the organization's or the company's goals. Corporate governance is a multifaceted concept whose main facet is the accountability (responsibility) of key persons in the organization and the influence of corporate governance systems on the economic effectiveness (Atallahi & Rasti, 2013). Corporate governance puts especial emphasis on issues such as the role of shareholders, their relations and the control of company affairs, board accountability, improving performance and effectiveness of the board, the role of specialized committees such as the audit, risk, compliance, and remuneration committees, the role of auditors and accounting systems and internal control, board independence, the existence of optimal power balance among the board members, the use of non-executive members, and preserving the interests of all stakeholders. The reason is that the use of such mechanisms leads to greater stability in the business and prevents financial distress and thereby the bankruptcy of the business entity. Given the inadequate research in the field of external mechanisms of corporate governance and financial distress and the impact that the establishment and the use of corporate governance mechanisms can have on the stability of the business unit, the researchers in this study were motivated to explore the impact of external corporate governance mechanisms on financial distress among companies listed in Tehran Stock Exchange.

Research Background

Corporate bankruptcy and financial distress are usually caused by various interrelated factors. Therefore, determining the exact cause(s) of bankruptcy and financial distress in a given period is a difficult task (Keynes & Brother, 1988). The causes of bankruptcy generally include external and internal factors. External factors are those factors that are not controllable by the company but they cause financial problems in the company including the features of the economic system, changes made in economic structures, changes in the trade, improvements and transfers in the public demand, business fluctuations (inconsistency between production and consumption, unemployment, reduced sales, inflation, price drops, and increase in the interest rate), financing problems, natural disasters, and the intense market competitions. Internal factors, on the other hand, include cases where managers have made a mistake or have been unable to take actions in their management decisions.

Evidence shows that corporate governance is one of the most common terms in the global commerce vocabulary at the turn of the new millennium. The collapse of large corporates such as Enron and WorldCom in the USA in recent years have produced great interest in the dominant role of corporate governance and its principles in preventing such collapses. Besides, professional associations, universities, and legislative bodies have shown special interest in this issue (Hassas Yeganeh, 2009).

Research on corporate governance shows that each country has its own corporate governance system. The number of corporate governance system is as many as the number of the countries in the world (Hassas Yeganeh, 2009). A model to address corporate governance must be developed according to the

circumstances governing a given country. However, concepts such as equality, transparency, accountability, and responsibility are among basic concepts in all approaches to corporate governance.

Kalatzis and et al., (2010) in their study addressed the impact of corporate governance system on financial constraints using the data from 532 joint stock Brazilian companies over 1997 to 2000 and concluded that the concentration of ownership and higher control would result in additional financial constraints.

Ain and Panya (2012) examined the relationship between corporate governance mechanisms and accruals quality in Thailand. The results indicate that companies with a greater number of institutional investors are likely to manage earnings through discretionary accruals. In addition, the companies that are active in the fierce market competition are likely to have a high quality of accruals.

In a study conducted by Pooja and Aarti (2014), the relationship between corporate governance and the performance of companies in India was explored to find out whether better and higher corporate governance leads to better performance or not. The results showed that corporate governance had a limited impact on corporate performance.

Jung Ho and Li-yu (2014) assessed the impact of corporate governance on the value of stakeholders in Taiwan. In this study, stakeholders were mainly shareholders or owners of the company. The results showed that there is a significant positive relationship between corporate governance and shareholders' revenue.

Qasim Osmani et al., (2011) studied the inhibitory effect of corporate governance mechanisms on financial distress in companies listed in the Tehran Stock Exchange. The variables such as percentage of institutional investors, the percentage of non-executive members of the Board of Directors and the auditor type were considered as corporate governance mechanisms. Based on the results, there was a negative and significant relationship between the percentage of non-executive members and financial distress. In addition, the percentage of institutional investors and the auditor type were found to have a significant relationship with financial distress.

Mansourfar et al., (2013) conducted a study to make a distinction between financial distress and bankruptcy by explaining a new concept of financial distress. They also predicted financial distress by cash flow constituents. Unlike previous studies in Iran that used Article 141 of the Commercial Code to classify companies, the authors used new financial indicators to identify distressed companies. They took positive or negative sign of the net operating cash flow, investing and financing cash flow statement as a warning about the company's future financial situation. To this end, the binary logistic regression was used for 59 distressed companies and 59 healthy companies with time series data for 2001 to 2010. Their results showed that some constituents of cash flows can be used to assess the company performance and predict financial distress.

Rahimian and Janfada (2014) studied corporate governance systems and financial restrictions (sensitivity of investment to cash flow) in a sample of 102 companies listed on the Tehran Stock Exchange over the period from 2007 to 2011. Their results showed that the number of major shareholders and board independence had a significant incremental impact on financial restrictions in the companies listed on the Tehran Stock Exchange.

Dastgir and Honarmand (2014) examined the impact of corporate governance mechanisms on the efficiency of working capital management. Variables such as the percentage of institutional shareholders' ownership, institutional shareholders' ownership concentration, the number of board members, board members' independence, the segregation of duties of the CEOs and the chairmen (vice chairmen) of the board were taken as corporate governance mechanisms. Results showed that corporate governance mechanisms are effective in increasing the efficiency of working capital management.

Fallah (2014) in a section of his PhD dissertation titled "*Measuring and evaluating the corporate financial health based on components of corporate governance and intellectual capital*" investigated whether the corporate governance mechanisms affect financially healthy and distressed companies or not.

The results showed that in the Iranian companies working in the stock market, corporate governance mechanisms have an insignificant impact on healthy and distressed companies.

Conceptual model of the study

The conceptual model of the study was developed based on the theoretical framework and the research background as shown in Fig. 1:

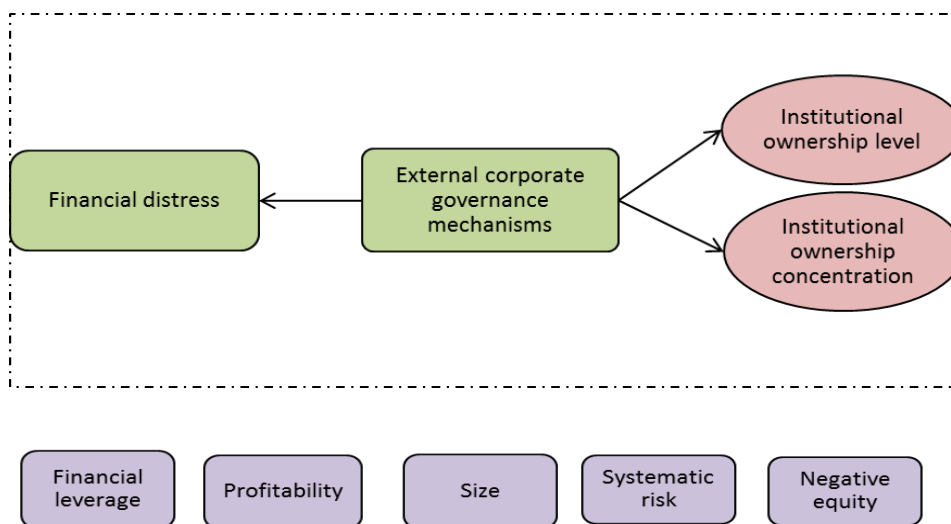


Fig. 1. The conceptual model of the study

Research objectives

Main objective: To explain the impact of external corporate governance mechanisms on financial distress

Objective I: To determine the impact of institutional ownership level on financial distress

Objective II: To determine the impact of institutional ownership concentration on financial distress

Research hypotheses

Main hypothesis: External corporate governance mechanisms have a significant effect on corporate financial distress.

Hypothesis I: Institutional ownership level has a significant effect on corporate financial distress.

Hypothesis II: Institutional ownership concentration has a significant effect on corporate financial distress.

Operational definition and measurement of research variables

Institutional ownership level and institutional ownership concentration were taken as independent variables in this study. In addition, financial leverage, profitability, corporate size, negative equities, and systematic risks were used as control variables.

Institutional ownership (INSOWN): One of the important mechanisms affecting corporate governance is the emergence of institutional investors as the owners of companies. According to Gilan and Astareks (2003), institutional owners play a significant role in many changes made in corporate governance systems. Laurie and Jenkins (2006) also suggest that such changes are made by regulatory activities that are done by owners based on the representation theory to monitor the management. As shown in research

by Rubin (2007) and Quito (2009), institutional ownership level can be calculated as the total shares owned by banks and insurance companies, holdings, investment companies, retirement funds, financing firms, investment funds, and public organizations, institutions, and companies divided by all shared issued. Institutional ownership level was calculated in this study as follows:

$$\text{Ownership level} = (\text{Sum of shared owned by institutional owners}) / (\text{Total shared issued}) \quad (1)$$

Institutional ownership concentration (OWNCON): Institutional ownership concentration is a situation where a significant part of the company's shares are held by major shareholders. Institutional ownership concentration shows the percentage of the company that is owned by a few shareholders. Following Rubin (2007), Mehrani et al., (2010), and Moradzadeh et al., (2009), the ownership concentration was estimated in this study as follows:

$$\text{OWNCON} = \frac{\text{Sum of shares held by institutional owners}}{\text{Total shares issued}}$$

Corporate financial leverage (LEV): The financial leverage is one of control variables of the study, showing that what percentages of the corporate assets are financed through debts. The financial leverage is calculated as the ratio of total liabilities to total assets at the end of the fiscal year (Fernando et al., 2008):

$$\text{LEV} = \frac{\text{Total liabilities}}{\text{Total assets}}$$

Profitability (PROFIT): It is one of control variables of the study and is calculated as follows (Kavshvly & Knchl, 2012):

$$\text{ROFIT} = \frac{\text{Operative profit (profit before interest and taxes)}}{\text{Total assets}}$$

Corporate size (SIZE): Another control variable in this study is the corporate size which is calculated as the natural log of total assets and the greater the assets, the greater the corporate size would be (Fernando et al., 2012):

$$\text{SIZE} = \ln(\text{Total assets})$$

Negative equity (NEGEQ): Another dummy variable in this study is the negative equity. In the case that the book value of equities is negative it will be set as 1, otherwise it will be 0 (Kavshvly & Knchl, 2012).

Corporate systematic risk (BETA): The systematic risk shows that the sensitivity of the corporate returns to the market portfolio return. In other words, the systematic risk is the slope of equity market line, which is calculated as follows:

$$\text{BETA}_i = \frac{\text{COV}(R_i, R_m)}{\sigma^2(R_m)}$$

Financial distress (FINDIS): Financial distress was used in this study as the dependent variable which is measured using Altman's (1983) bankruptcy model:

$$Z^{\circ} \text{ Score} = 0.717 * X_1 + 0.847 * X_2 + 3.107 * X_3 + 0.42 * X_4 + 0.998 * X_5$$

Where, X1 is the ratio of working capital to total assets, X2 is the ratio of accumulated profit to total assets, X3 is the earnings before interest and tax to total assets, X4 is the ratio of book value of equities to total assets, and X5 is the ratio of total sales to the total assets.

If the calculated Z-score in the model is less 1.33, the corporate is very likely to go bankrupt and if the resulting value is between 1.33 and 2.9, the corporate is at the bankruptcy area and if the calculated Z-score is greater than 2.9, the corporate is less likely to go bankrupt:

- Safe area (corporates with financial health) - Z-score > 2.9
- Grey area (corporates with financial distress) – 2.9 > Z-score > 2.9
- Bankruptcy area (bankrupt corporates) - Z-score > 2.9

In this study, financial distress was used as a dummy variable. In the case that the calculated Z-score is less than 2.9, financial distress is set as 1, otherwise it will be 0. To investigate the impact of external corporate governance mechanisms on the financial distress, the following regression model was used:

$$\text{FINDIS}_{it} = \beta_0 + \beta_1 \text{INSOWN}_{it} + \beta_2 \text{OWNCON}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{PROFIT}_{it} + \beta_5 \text{SIZE}_{it} + \beta_6 \text{NEGEQ}_{it} + \beta_7 \text{BETA}_{it} + \varepsilon_{it}$$

Research methodology

The present study is an applied research using a descriptive method with a focus on correlational analysis as at one hand it explores the status quo and determines the relationships between different variables using regression analysis on the other hand. In addition, this study is an ex post facto research (that uses historical data) based on the actual data from the financial statements in companies listed in the Tehran Stock Exchange and other real information that can be generalized to the whole population using inductive methods.

The locational scope of the study included companies listed in the Tehran Stock Exchange and the temporal scope of the study is an eight year period based on the financial statements from the sample companies for the time period 2006 to 2013. To this end, the companies that met the following requirements were included in the sample and the rest were excluded:

- The fiscal year of the company ended in March.
- The fiscal year of the company did not change in the period under study.
- The company data for the period under study were available.
- The company stock transactions were taken place in the Tehran Stock exchange without any interruption exceeding three months.

Given the above requirements, of all companies listed in the Tehran Stock Exchange, a total of 118 companies were included in the research sample.

The data needed to calculate research variables were extracted from TadbirPardaz and RahavardNovin databases. In the case that the data in these databases were insufficient, manual archives in the Stock Exchange Library and the website of Research, Development, and Islamic Studies Management of the Stock Exchange Organization were used. The collected data were analyzed using Eviews8 and Excel. Since the instruments used to collect data were the databanks developed by the Tehran Stock Exchange and the Stock Exchange Library, the validity of the instruments can be confirmed.

Research Findings

Table 1 shows the descriptive statistics for research variables including mean, median, minimum, maximum, and standard deviation. The main central dispersion index is mean which shows the gravity center of the distribution and can be used to show the centrality of the data. For instance, the mean for financial leverage in Table is 0.6134 which shows that the data are mainly distributed around this point. Median is another central dispersion index that shows the distribution of the sample. As can be seen in Table 1, the median for financial leverage in Table is 0.6214 showing that half of the data is less than this

value and the other half is higher than the same value. Standard deviation is one of the most important dispersion parameters, which shows how observations are deviated from the mean. The standard deviation for financial leverage is equal to 0.2014.

Table 1: Descriptive statistics for research variables

Variable	Symbol	Observations	Mean	Median	Max	Min	SD
Financial distress	FINDIS	944	0.5583	1.0000	1.0000	0.0000	0.4969
Institutional ownership level	INSOWN	944	57.332	58.982	88.777	21.353	14.085
Institutional ownership concentration	OWNCON	944	40.212	38.267	86.360	0.7000	18.002
Financial leverage	LEV	944	0.6136	0.6214	1.0775	0.1046	0.2014
Profitability	PROFIT	944	0.1545	0.1346	0.6757	-0.3211	0.1287
Corporate size	SIZE	944	13.542	13.404	18.455	10.785	1.3149
Negative equity	NEGEQ	944	0.0202	0.0000	1.0000	0.0000	0.1405
Systematic risk	BETA	944	0.5478	0.3875	8.2749	-5.1264	0.6495

Correlation coefficients between variables

How intense is the relationship between two variables is called correlation. Generally, correlation coefficients vary -1 to +1, suggesting that the relationship between two variables may be either positive or negative. The closer the correlation coefficient to one, the more intense would be the relationship. This correlation is not the same as a cause and effect relationship as it does not show which variable is the cause and which one is the effect. The correlation analysis is used to examine the initial relationships among variables and how they are related to each other. The results presented in Table 2 show that there is a positive relationship between institutional ownership level and financial distress. However, there is no positive relationship between institutional ownership level and financial distress.

Table 2: correlation coefficients among research variables

No.	Variable	Symbol	1	2	3	4	5	6	7	8
1	Financial distress	FINDIS	1.000							
2	Institutional ownership level	INSOWN	0.003	1.000						
3	Institutional ownership concentration	OWNCON	-0.004	0.942	1.000					
4	Financial leverage	LEV	0.216	-0.025	0.007	1.000				
5	Profitability	PROFIT	0.279	-0.035	-0.038	-0.534	1.000			
6	Corporate size	SIZE	-0.151	-0.021	-0.005	0.168	-0.008	1.000		
7	Negative equity	NEGEQ	-0.131	-0.081	-0.055	0.415	-0.221	0.037	1.000	
8	Systematic risk	BETA	0.039	-0.018	-0.031	-0.049	0.043	0.119	-0.051	1.000

Assumptions of linear regression model

Variance equality of the error term (residuals)

The equality assumption of residual variances was assessed using White test. As can be seen in Table 3, the significance level is greater than 0.05, therefore there is no reason to reject the null hypothesis at the

confidence level of 95%. As such, one of the regression assumptions, i.e. variance equality of the error term (residuals) is established.

Table 3: Testing variance equality of the error term

Statistics	Value	Probability	Result
F	1.2759	0.2337	Variance equality of the error term is confirmed.

Inexistence of autocorrelation between error terms

According to this assumption of the classical regression model, there is no correlation between the regression residual terms. To check the dependence of error terms, serial autocorrelation test was used. In this test, the null hypothesis shows the inexistence of autocorrelation between error terms while the alternative hypothesis indicates the existence of serial autocorrelation between error terms. As can be seen in Table 4, as the probability of F statistic at the confidence level of 95% is greater than 0.05, the null hypothesis is conformed, so there is no reason to reject the null hypothesis. In other words, the inexistence of autocorrelation between error terms in the research model is established.

Table 4: Testing autocorrelation between error terms

Statistics	Value	Probability	Result
F	0.7154	0.4911	Inexistence of autocorrelation between error terms is confirmed.

Inexistence of colinearity between explanatory terms

Colinearity means the existence of an intense relationship between independent and control variables in the model. In the case of colinearity, the estimated coefficients show high standard errors and thus this reduces the number of significant variables in the model. To test colinearity, variance inflation factor (VIF) was used. If VIF is less than 10 the colinearity exists. The results of VIF in Table 5 show that variance inflation of independent and control variables is at the acceptable level and there is no colinearity problem.

Table 5: Testing colinearity between explanatory terms

Variable	Symbol	Variance	VIF
Institutional ownership level	INSOWN	0.000107	2.976035
Institutional ownership concentration	OWNCON	0.000065	3.942309
Financial leverage	LEV	0.009770	1.682658
Profitability	PROFIT	0.020178	1.419426
Corporate size	SIZE	0.000144	1.058602
Negative equity	NEGEQ	0.014544	1.219145
Systematic risk	BETA	0.000573	1.022788

Normality of error terms

One of the important assumptions concerning the error terms is that they should have a normal distribution. Jarco-Bra test was run to ass the normality of error terms. As it can be seen in Table 6, the Jarco-Bra value for the model is 1.6595 with a probability of 0.4362. Therefore, the null hypothesis which states the normality of error terms is confirmed for the model under study.

Table 6: Testing the normality of error terms

Statistics	Value	Probability	Result
Jarco-Bra	1.6595	0.4362	Normality of error terms is confirmed.

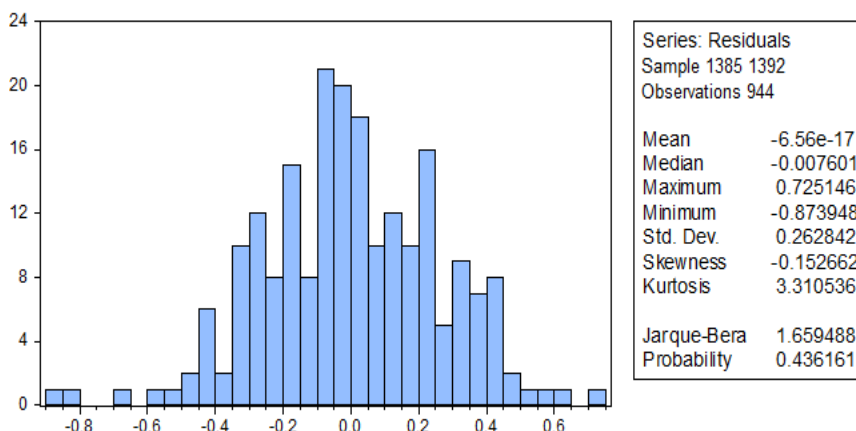


Figure 2: Histogram of error term normality

Assessing the stationary of research variables

The results of assessing the stationary of research variables are shown in Table 7. Based on Loin, Lin, and Cho test, since the probability of all variables is less than 0.05, all independent, dependent, and control variables are stationary in the period under study. Stationary means that the means and variances of variables over time and the covariance of variables for different years have been fixed. As it is shown in Table 7, all variables are stationary and there is no need for cointegration test.

Table 7: Testing stationary of research variables

Variable	Symbol	Loin, Lin, Cho		Result
		Statistic	Prob.	
Financial distress	FINDIS	-9.1981	0.0000	Stationary
Institutional ownership level	INSOWN	-9060.97	0.0000	Stationary
Institutional ownership concentration	OWNCON	-13914.6	0.0000	Stationary
Financial leverage	LEV	-11.9969	0.0000	Stationary
Profitability	PROFIT	-12.2154	0.0000	Stationary
Corporate size	SIZE	-11.3503	0.0000	Stationary
Negative equity	NEGEQ	-6.1833	0.0000	Stationary
Systematic risk	BETA	-42.9151	0.0000	Stationary

Research hypotheses

Hypothesis I: Institutional ownership level has a significant effect on corporate financial distress.

The results of testing this hypothesis are presented in Table 8. As it can be seen, the likelihood ratio (LR) is 75.6829 with the probability value of 0.000 at the confidence level of 0.95. This shows that the research model is significant. In addition, the McFadden coefficient of determination indicate that almost 95% of variances can be explained by independent and control variables in the model.

Based on the results, 95% of Z-scores except for institutional ownership level, corporate size, negative equity, and systematic risk fall under null hypothesis rejection area. In other words, except for the mentioned variables, all other variables in the model are significant. The results for control variables indicate that at the confidence level of 95% financial leverage has a positive effect on corporate financial distress, while profitability negatively affects financial distress.

In addition, the coefficient for institutional ownership level is -0.503918 which shows that institutional ownership level has a negative impact on financial distress. However, as the Z-score for institutional ownership level is significant, the alternative hypothesis cannot be confirmed at the confidence level of 95%, implying that institutional ownership level does not affect corporate financial distress.

Hypothesis II: Institutional ownership concentration has a significant effect on corporate financial distress.

The results of testing this hypothesis are presented in Table 8. As it can be seen, the coefficient for institutional ownership concentration is -2.297545 which shows that institutional ownership concentration has a negative impact on financial distress. However, as the Z-score for institutional ownership level is significant, the alternative hypothesis is confirmed at the confidence level of 95%, implying that institutional ownership concentration has a negative significant effect on corporate financial distress.

Table 8: Model estimation

FINDIS_it= β_0 + β_1 INSOWN_it+ β_2 OWNCON_it+ β_3 LEV_it+ β_4 PROFIT_it+ β_5 SIZE_it+ β_6 NEGEQ_it+ β_7 BETA_it+ ϵ _it					
Variable	Symbol	Estimated value	Std. error	Z-score	Probability
Intercept (constant)	C	4.846399	4.977389	0.973683	0.3302
Institutional ownership level	INSOWN	-0.503918	0.296876	-1.697402	0.0896
Institutional ownership concentration	OWNCON	-2.297545	0.955046	-2.405691	0.0161
Financial leverage	LEV	1.487418	0.461790	3.220983	0.0013
Profitability	PROFIT	-0.447009	0.063835	-7.002518	0.0000
Corporate size	SIZE	-0.002217	0.014325	-0.154740	0.8770
Negative equity	NEGEQ	-0.066436	0.062246	-1.067320	0.2858
Systematic risk	BETA	0.050460	0.038964	1.295028	0.1953
McFadden coefficient of determination		0.09			
Likelihood ratio (LR)		75.6829			
LR probability		0.0000			

Generally, it is expected that external corporate governance mechanisms affect corporate financial distress. The results of testing the research hypotheses indicated that of external corporate governance mechanisms, institutional ownership concentration has a negative significant effect on financial distress. However, institutional ownership concentration was not found to have a significant effect on financial distress.

Conclusion

The findings of the study concerning the significant effect of institutional ownership level and institutional ownership concentration on corporate governance are consistent with the results of a study conducted by Ciampi (2015) but contrary to the results observed by Qasim Osmani et al., (2013).

Suggestions

The results of the study showed that as institutional ownership concentration increases corporate financial distress decreases. In other words, when the company is held by a few shareholders, they are able to exert more control on managers and this may reduce opportunistic behaviors committed by managers. Accordingly, investors, creditors, analysts, and other users of the corporate financial statements are suggested to pay attention to the role of institutional ownership concentration in aligning owners' and beneficiaries' interests as an increase in institutional ownership concentration reduces the conflict in owners' and beneficiaries' interests thereby reducing the corporate financial distress.

Future research can also take into account the following ideas:

1. Investigating the effect of other corporate features (e.g., firm size, industry type, and corporate lifecycle) on corporate financial distress.
2. Investigating the impact on external corporate governance mechanisms on the bankruptcy likelihood.
3. Analyzing and rating factors affecting corporate financial distress.

References

- Altman, E. (1968) 'Financial ratios, Discriminant analysis and the prediction of corporate bankruptcy,'
- Byrd, J. and K. Hickman (1992), "Do outside directors monitor managers? Evidence from tender offer bids", *J. of Financial Economics*, Vol. 32, P 195-21.
- Dastgir, M. & Honarmand, M. (2014). The impact of corporate governance mechanisms on the efficiency of working capital management. *Quarterly of Accounting Management*, No. 22.
- Fallah, R. (2014). Assessing corporate financial health based on corporate governance components and intellectual capital: Case of Iran's environmental conditions. PhD Dissertation: Islamic Azad University, Tehran Science and Research Branch.
- francesco ciampi, (2014), Corporate governance characteristics and default prediction modeling for small enterprises. An empirical analysis of Italian firms. *Journal of Business Research* 68 (2015) 1012–1025
- Gilan stuart Astareks laura, (2003), Corporate Governance, Corporate Ownership, and the Role of Institutional Investors: A Global Perspective. *ssrn.com*. pp1-71.
- Hassas Yeganeh, Y.; Baqumian, R. (2006). The role of board of directors in corporate governance. *Journal of Accounting*, N0o. 173, Pp. 60-65.
- Hassas Yeganeh, Y.; Raisi, Z.; Hosseini, S. M. (2009). The relationship between corporate governance quality and performance of companies listed in the Tehran Stock Exchange. *Quarterly of Iran's Management Sciences*, No. 2. Pp. 75-100.
- Journal of Finance* ,4 (September):pp54-89.
- Jung-Ho Lai, Li-Yu Chen and I-Ju Chen,(2014) The value of outside director experience to firm strategies: Evidence from joint ventures, *Journal of Management & Organization / Volume 20 / Issue 03 / May 2014*, pp 387-409.
- Kalatzis, A. G., Pellicani, A. D., and Moccellini, J. V., (2010), The impact of corporate governance on financial constraint: evidence from Brazilian firms, *International Conference on Applied Economics – ICOAE 2010*, pp. 389-395.

- Keats, B. W. and J. S. Bracker (1988). "Toward a theory of small firm performance: A conceptual model". *American Journal of Small Business*, Vol. 12, Pp. 41-58
- Mahdavi, G.; Hossini, S. M.; & Raisi, Z. (2013). The effect of corporate governance features on the quality of earnings predicted by the management of companies listed in the Tehran Stock Exchange. *Quarterly of Accounting Management*, Pp. 123-146.
- Mousavi, Z.; Moayedi Pour, H.; Jari, A. (2010). The impact of corporate strategic regulatory mechanisms on the performance of companies listed in the Tehran Stock Exchange. *Financial Accounting*, 2(6), Pp. 141-155.
- Noravesh, I.; Karami, G. (2009). Corporate governance mechanisms and representation costs in companies listed in the Tehran Stock Exchange. *Accounting Research*, No. 1, Pp. 4-27.
- Pooja and Aarti,(2014), A Study of the Impact of Corporate Governance Practices on Firm Performance in Indian and South Korean Companies , *Procedia - Social and Behavioral Sciences*
- Qasim Osmani, M.; Javid, D.; Rahimi, S. (2011). The preventive effect of corporate governance mechanisms on financial distress among companies listed in the Tehran Stock Exchange. *Accounting Research*, No. 12.
- Rahimian, N. & Janfada, R. (2014). Corporate governance system and financial constraints (investment sensitivities to cash flows). *Knowledge of Investment*, No. 10.
- Rajabi, R. & Ganji, A. (2010). The relationship between the strategic system and corporate financial performance. *Financial Accounting Research*, No. 4. Pp. 22-34.