Indian Journal of Fundamental and Applied Life Sciences ISSN: 2231– 6345 (Online)
An Open Access, Online International Journal Available at www.cibtech.org/sp.ed/jls/2015/01/jls.htm
2015 Vol.5 (S1), pp. 4100-4106/Mehdi and Turan
Research Article

THE RELATIONSHIP BETWEEN THE PRINCIPLES OF CORPORATE GOVERNANCE AND FIRM VALUE: AN APPLICATION OF ISE-LISTED COMPANIES

[*]Mehdi Aghabeigi[1] and Turan ONDES[2]
[1]Department of Accounting, Malekan Branch, Islamic Azad University, Malekan, Iran
[2]Ataturk University, Turkey
[*]Author for Correspondence

ABSTRACT
The aim of present investigation is to study the effects of corporate governance factors on firm values of companies listed in Istanbul Stock Exchange (ISE). Data from 60 companies listed in ISE in time interval of 2008-2012 were used. Their corporate governance index was graded by firms such as ISS, SAHA, Kobirate and JCR-ER. Moreover data related to firm value were analyzed by Q-Tobin ratio which is considered as measurement criteria of firm value. Research method of present study is descriptive-analytical based on analysis result obtained from panel data. Multivariate regression method was used in panel data analysis. Results obtained from present study indicated that cooperate governance factors has positive significant relationship with firm value of ISE-listed companies. ROE controlling variables has positive and significant relationship with dependent variables. This is while the relationship of two other controlling variables (Size and Leverage) is not significant statistically.

Keywords: *Cooperate Governance, Firm Value, Q-Tobin Ratio, Panel Data*

INTRODUCTION
Following economic collapse and financial crisis in most developing and developed countries, the concept of corporate governance has become more important in recent decades. Corporate governance with its emphasis on accountability to all beneficiaries is a key factor in economic growth and improving actual and potential investors' trust. Its aim is rethinking about relationships among stockholders, board of directors and beneficiaries. In fact corporate governance targets the relationships among a set of people and agencies including: stockholders, board of directors, management, personnel, investors, and governmental and legal agencies which play an important role in organizations' efficiency and orientation. The aim of corporate governance is observing and applying principles which establish appropriate balance among mangers' freedom of action, accountability, observing interests of different beneficiaries including observation of equity, fair treatment with stockholders, transparency, responsibilities of board of directors and ethics. Development in the field of corporate governance is seen at world level, recently. International organizations including world network of corporate governance, World Bank, corporate governance commonwealth association and corporation organization and economic development have provided acceptable international standards in the field. Newly, the issue of corporate governance has been considered widely at international levels (Gaa, 2007). The accurate financial reporting is common concern among codifiers and those who are employed in the field. This has been more important especially after financial scandals in reputed and well known companies such as Anron and Worldcom. Regarding Asian Countries, weak corporate strategy is considered as one reason of financial crisis of Asia in 1997 (Chen, 2008). Developed countries are continuously improving their corporate governance system, paying more attention to stockholders, their relationships, accountability, improving board of directors' performance, board of directors committee, auditory committee, auditors, accounting systems and internal control. Moreover, accountants and auditors and other role players of money, market and capital scenario are aware of existentialism philosophy of permanent improvement of corporate governance. Corporate governance, targets life of business at long term more than other thing, and it attempts to protect stockholders' profits against organizations management. The two main objectives of corporate governance are (Keasey *et al.,* 2005).

© Copyright 2015 | Centre for Info Bio Technology (CIBTech)

1- Reducing risk of business through improving accountability and transparency
2- Improving long term efficiency of the organization through prevention of Authoritarianism and not responsibility taking of administrative management

Studies in the field of corporate governance rely on representation theory, emphasizing on the issue of conflict of interest. Conflict of interest happens when interest of owners and managers are not in balance. According to representation theory companies with better corporate governance structure, have higher value and this is due to lower costs of representation. Representation theory also mentions that companies are better supervised and controlled when they have concentration of ownership, because major stockholders have enough motivation and ability for management supervision and increasing company efficiency (Wang *et al.,* 2009).

Research Literature

Theory of representation is generally used as starting point of describing the concept of company's governance system in financial academic literature and accounting. Because the foundation of corporate governance which is developed based on representation theory, is a set of contracts between risk takers (stockholders) and enterprises managers. In this relation, providing appropriate return and stable value for the firm is among duties of managers and bonus and wage payment are stockholders' obligations. Such attitude relies on a limited perspective of representation theory. In a wider perspective, in addition to stockholders, a wide range of beneficiaries including board of directors, expert executive managers, personnel, customers, auditors, accountants, financial analyzers, creditors, lawyers … are considered in such contract (Lawrence, 2009).

Corporate governance system of each country is determined through different domestic factors including companies' ownership, legal frameworks, economic conditions, governmental policies, culture, and also some foreign factors such as foreign capital flows to the country, world economy condition, stock supply to the markets of other countries and international organizational investment. The ownership structure is much important in corporate governance issues. If we consider major stockholders out of the company as bronze factors, it cannot be further claimed that different ownerships are indicating stockholders benefits. Rather it can be logically claimed that company has major stockholders with better performance than company with major stockholders who have few stock. Even if distribution of stocks creates the opportunity for professional managers to use company resources for their own interests, it seems that distribution in ownership context or structure protects stockholders benefits more appropriately than when the structure is concentrated.

Review of Related Literature

Ami and Mart (2006) through studying two criteria of corporate governance and its relationship with company's market value, recognized that 1 $ change in cash of the company results in charge of about 0.42 to 0.88 in market value in companies with weaker governance, this is while this price is double in companies with good governance.

Black *et al.,* (2006) in a study in Russia recognized there is a relationship between corporate governance and companies' performance. Using time series and regression he found that there is a strong relationship between size of board of directors and stock market value.

In a similar study carried out in the U.S.A, Gompers, Ishii and Metrick (2003) also concluded these results. Jae-Seung *et al.,* (2004) obtained following results: more qualified managers because better corporate governance, paying more attention to their beneficiaries and companies' value has positive relationship with corporate governance. Yermak (2004) in his research from 1991-2003 concluded that: when company has individual managing director and head of board of directors, then it has more value. In a study carried out by Garcia and Sa'nchez (2011) in Spain, they concluded that only ownership concentration has positive and significant relationship with calculated Q-Tobin of company which is considered as measurement criteria for firm value.

Bai *et al.,* (2004) studied the relationship between corporate governance and market value of Loursi companies in China. Their findings indicated that there is a negative relationship between state ownership and firm market value.

© Copyright 2015 | Centre for Info Bio Technology (CIBTech)

Kapopoulos and Lazaretou (2007) studied the effect of ownership structure on company performance using data from 175 Greek companies. Results obtained from their study indicated that more concentrated ownership structure has significant and positive relationship with company's profitability.

Wang *et al.,* (2009) proceeded on studying the effects of corporate governance characteristics on the companies' performance. Results of their study indicated that companies with better corporate governance system have better performance and higher value. Moreover there is a significant and positive relationship among ownership concentration, institutional investors with company's performance and market value.

Winsent and Nichol (2010) studied the relationship between company's performance with size and makeup of board of directors. They used profit before tax and interest to total Tobin were used to evaluate performance of the company. Results of their study indicated that size of board of directors, Q of assets and performance are interrelated reversely and this negative effect is less for small firms. Percent of non-executive managers has positive effect on corporate performance.

Sanghoon (2009) proceeded on investigation of the relationship between corporate governance system and corporate performance. He studied corporate governance in his study, from two aspects of stockholders' approach and beneficiaries approach. Results of Sangon Lee's study indicated that ownership concentration can act as appropriate mechanism of corporate governance criteria, having positive effect on corporate performance and also he observed that controlling stockholders tend to increase their wealth through exploitation and use of minor stockholders' rights. So it is proposed that a legal system to be applied to supervise these stockholders' actions.

Schmid *et al.,* (2011) in a study titled "corporate governance and firm value" observed the effect of relationship between corporate governance and firm value of 6663 companies (company-year) among 22 developed countries using Q-Tobin index since 2003 to 2007. Data of corporate governance used for research hypothesis test obtained from international index for corporate governance website (GMI). These indexes are divided into 6 subcategories including accountability of board of directors, financial revelation, internal control, equity, and managing director's wage, board of directors' wage, foreign control and social behavior of the company.

Their findings indicated a positive significant relationship between all characteristics of corporate governance and social behavior of the company with firm value.

In a study titled "corporate governance mechanisms and firm value" Matt and Solung (2010) studied the effect of corporate governance mechanism including dividends, ownership concentration, institutional ownership, foreign ownership, board of director's stocks' percent, duality of managing director's responsibilities, and percent of unobligated members in board of directors on firm value of 403 companies in Malaysia Stock Exchange during 2002-2005. They used multivariate regression model to test hypothesis and to determine firm value of studied companies they used Q-Tobin simple model. They also considered firm size (natural logarithm of total assets of the company) and debt ratio (ratio of total debt to company assets) as controlling variables. Their findings indicated that there is a positive and significant relationship between institutional ownership and firm value.

Harford *et al.,* (2008) concluded that there is a reverse relationship between weak corporate governance and firm value and this reverse relationship is highlighted with increase of cash balance.

Banerjee *et al.,* (2009) in his study in India sought to find answer to the question that "do companies with higher corporate strategy level enjoy higher value and consequently higher stock price? Data of corporate governance of this study were obtained from corporate governance index ranking of "S & P" as corporate governance quality index since 2000-2008. The relationship between corporate governance index and calculated Q-Tobin for firms was studied using multi regression model. In his multi regression, he used firm net sale, firm life and financial leverage as controlling variables. Findings of his study indicated that after controlling factors of firm life and financial lever, there is a significant and positive relationship level of corporate governance and firm value.

Research Hypothesis

There is a significant relationship between combined index of corporate governance and firm value.

© Copyright 2015 | Centre for Info Bio Technology (CIBTech)

Indian Journal of Fundamental and Applied Life Sciences ISSN: 2231– 6345 (Online)
An Open Access, Online International Journal Available at www.cibtech.org/sp.ed/jls/2015/01/jls.htm
2015 Vol.5 (S1), pp. 4100-4106/Mehdi and Turan
Research Article

MATERIALS AND METHODS

Research Methodology

Statistical Population and Choosing Firms

Statistical population of present investigation involves all ISE-listed companies which were operating since 2008 to 2012 in this stock exchange and their corporate governance were graded by firms such as ISS (Institutional Shareholder Services), Corporate Services, SAHA, Kobirate and JCR-ER.

Data Collection Method

In this research, data required for corporate governance were obtained from website of firms such as ISS (21), SAHA (22), Kobirate (23) and JCR-ER (24). Moreover data related to firm value and controlling variables all were obtained from bills of statement, annual reports and websites of these companies during above mentioned years and also websites of Borsaistanbul (25) nadKAP (26). Data analysis tool was Eviews version 7.

Research Model

Following model was used for hypothesis test:

……

Where:

Q_i is ratio of Q-Tobin which is measurement criteria for firm value, defined as:

Tobin's Q=assets market vale/assets replacement value

Assets market value=stock market value+ Book value of debts

Assets replacement value=book value of assets

CGI: Combined Governance Index which is measurement criteria of efficiency of corporate governance structure and total transparency index in information revelation, indices of board of directors structure and indices of control and ownership structure and they are measured as follows:

CGI=TRANS+BOARD+OWN

TRANS; is indices of transparency in information revelation

BOARD: is the indices of structure of board of directors

Own: is indices of ownership structure and stockholders rights

X_i: is control variables which are:

SIZE: company size

SIZE=Ln(total assets)

Leverage (Financial leverage) which is equal to company's debt ratio. It is also indicator of percent of assets provision from debts. This ratio is obtained from dividing total debts to total assets indicating amount of assets obtained from debts. Mentioned ratio is calculated as:

Ration of debt: total debts/total assets

ROE: Return of Equity:

Is indicator of company's power in obtaining profit from resources provided by stockholders to the company? Net income and average equity are used to calculate this ratio.

In other words, it investigates efficiency rate of a company in creating net income for stockholders. In other words, this ratio shows that how much net income is obtained by firm to stockholders per each unit of investment.

Hence, calculation relation of above mentioned ration is as follows:

Equity= net income/book value of equity

In this relation, the calculated return is related to all resources of stockholders. Hence, in addition to company capital the equity return involves, resources obtained from undivided profits (retained earnings), financial ratios and other savings.

Data Analysis and Hypothesis Test

Using panel data, present investigation studies effects of corporate governance factors on ISE-listed companies. Research method of present investigation is descriptive-correlational based on results obtained from panel data analysis. Panel data analysis used multivariate regression and fixed effects estimation methods, random effects and Minimum Square by Eview version 7.

© Copyright 2015 | Centre for Info Bio Technology (CIBTech)

F-Limer Test
In this method, first F-limer test should be used to choose between panel data and pool data. Intercept was equal for all section in panel data model, while in pool data, intercept was different for all sections. If calculated F-limer was less that table F-limer, panel data model was used; otherwise pool data model was used.

Table 1: F-Limer Test

	Statistic	d.f	Prob.
Cross-section	5.154044	(11,44)	0.0000
Cross-section Chi-Square	49.674085	11	0.0000

As it can be seen in table 1, p-value for F-limer is 0.0000<0.05. In other words calculated F-limeris, more than table F-limer, hence data panel method is used to test this relation. Next, Huntsman test is used to study different states of panel data.
Huntsman Test to Choose between Random Effects and Fixed Effects in Panel Studies
Huntsman is one of the main tests in panel studies. Using this test we can discuss about pattern of fixed effects and random effects. The main assumption in pattern of fixed effects is that error part can be coefficient with descriptive variables, of course with fixe error part in time (i.e. time invarying). But, in random effects pattern it is assumed that, there is no coefficient between error part and descriptive variables. Huntsman test uses Chi-square criteria. If probability of tests statistic is more than 0.1, we can prefer fixed effects to random effects at level of significance of 90%, otherwise fixed effects are chosen.
Huntsman test hypothesis is used as follows to choose between pattern of fixed effects or random effects.
H_0=there is random effects
H_1=there is no random effect
Huntsman Test Results

Table 2: Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.218483	4	0.3772

Considering results of table 2 of Huntsman test, since prob=0.3772 is more than 0.5% so H_0 hypothesis is accepted and the model is with random effects.
Panel Data Analysis Results
In this study, Huntsman test was used to choose appropriate analysis method in data panel analysis. Results of Huntsman test indicated use of model with random effects.
According to the results of Table (3), combined index variable of corporate governance has positive relation with firm value of ISE-listed companies. This relationship is significant with probability of higher than 95%. There is a positive and significant relationship between control variables of ROE and independent variable. This is while; there is no statistically significant relationship between two other control variables (SIZE and LEVERAGE). Results of above table indicates that calculated F is more than table F (p<0.5). So it can be claimed that: this model is significant with probability of 95%, in other words, this model has higher reliability. Hence our null hypothesis is rejected and contrary hypothesis, the relationship between combined index of corporate governance and firm value is accepted.
When dependent variable treatment is studied in a time interval in regression analysis, it is expected to confront with the problem of independency of errors. Such data relation is called self-coefficient. Linear regression cannot be used in the case of self coefficient in errors. It is possible that data changes follow special pattern through time.

© Copyright 2015 | Centre for Info Bio Technology (CIBTech)

Research Article

Table 3: Panel Data Analysis Results

Dependent Variable: Tobin Q
Method: Panel Least Squares
Sample: 2008- 2012
Periods included: 5
Cross-sections included: 12
Total panel (balanced) observations: 60
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.296590	2.573351	-2.058246	0.0443
SCI	0.657268	0.268277	2.449956	0.0175
SIZE	0.088713	0.084816	1.045951	0.3002
LEVERAGE	-0.130779	0.589609	-0.221806	0.8253
ROE	0.737847	0.191961	3.843731	0.0003
R-squared	0.373591	Mean dependent var		0.708175
Adjusted R-squared	0.328034	S.D. dependent var		0.820760
S.E. of regression	0.672806	Sum squared resid		24.89672
F-statistic	8.200523	Durbin-Watson stat		1.673811
Prob(F-statistic)	0.000029			

Watson camera test is used to determine this pattern. Independency means that result of an observation has no effect on result of other observations. Statistic of Watson camera is between 0-4. If there is no frequent coefficient among residues, this statistic value should be close to 4. If it is close to 0 then it shows positive correlation and if it is close to 4, it shows negative correlation. Considering results of table (3), Watson Camera statistic is 1.673811 and since it is close to 2, so there is no self-correlation in this test.

Conclusion and Discussion

The aim of present study was to proceed on investigation of effects of corporate governance on firm value of ISE-listed companies. Combined index of corporate governance including transparency index in information revelation, board of director's structure index and index of ownership structure and equity were used to study corporate governance factors. Moreover Q-Tobin was used to determine firm value. Results obtained from present study indicated that there is a significant positive relationship between cooperate governance factors and firm value of ISE-listed companies. There is also a positive and significant relationship between ROE control variables and dependent variable. This is while the relationship of tow other control variable, SIZE and LEVERAGE, is not significant statistically. Evaluation of companies' performance and their managers is of great importance in financial decision making being interested by different groups including creditors, owners and even managers. Appropriate system of corporate governance assures that firms are using their capital in the best way possible. Moreover they include interest of wide variety of beneficiaries and societies in which they are acting and they are accountable to company and stockholders. Corporate governance is a mechanism for managing, leading and supervising company activities with the aim of value creation for stockholders. On the other hand when distinguishing between ownership and management, the issue of representation is considered as the main problem. Corporate governance tries to solve the problem through supervising and reducing the distance between management and ownership. Corporate governance influences firm value through three mechanisms of ownership and control, structure of board of directors and transparency in information revelation as follows: first mechanism is the structure of control and ownership. The problem of contracts between company and beneficiaries is solved through internalization of the relationship between company and beneficiaries through ownership. In other words, beneficiaries are involved in company ownership. In fact they give more importance to their relations and contracts with the company through such internalization. Moreover firm value is increased due to benefits obtained for these

© Copyright 2015 | Centre for Info Bio Technology (CIBTech)

beneficiaries. Second mechanism of firm value is the structure board of directors. With involvement of beneficiaries in the board of directors, firm value is increased. Third mechanism is transparency of information revelation with increased reliability. In other words with increase of information transparency and reliability of beneficiaries to the company, the firm value is increased.

Hence, observation of principles and mechanisms of appropriate corporate governance in the companies improves firm value and performance. Moreover it is proposed to the investors to consider corporate governance characteristic when making their decisions for investment and sock exchange. Since, according to results of present study corporate governance influences firm value and performance.

REFERENCES

Bai C, Liu Q, Lu J, Song F and Zhang J (2004). Corporate governance and market valuation in China. *Journal of Comparative Economics* **32** 599-616.

Banerjee A, Gokarn S and Pattanayak M (2009). Corporate Governance and Market Value:Preliminary Evidence from Indian Companies. *Standard and Poor's Financial Services LLC* 1-10.

Black B, Jang H and Kim W (2006). Does corporate governance predict firms' market values? Evidence from Korea.

Chen Y (2008). International Dual Listing: An Analytical Framework Based on Corporate Governance Theory. *Journal of American Academy of Business* 187-194.

Ditmar A and Mahrt-Smith J (2006). Corporate governance and the value of Cash holdings. *Journal of Financial Economics*.

Gaa J (2007). Corporate Governance, Transparency and Secrecy: The Ethics of Earnings Management. Working Paper: University of Alberta.

Garcı´a Meca E and Sa´nchez Ballesta JP (2011). Firm Value and Ownership Structure in the Spanish Capital Market. *Corporate Governance* **11**(1) 41-53.

Gompers P, Ishii J and Metrick A (2003). Corporate governance and equity prices. *Quarterly Journal of Economics* **118** 107– 155.

Harford J, Mansi SA and Maxwell W (2008). Corporate governance and firm cash holdings in the US. *Journal of Financial Economics* **87** 535–555.

Jae-Seung B, Jun-koo K and Kyung-Suh P (2004). Corporate governance and firm value: evidence from Korean financial crisis. *Journal of Financial Economics* **71** 265-313.

Justin T, Wang Heibatollah Sami and Haiyan Zhou (2009). Corporate Governance and Operating Performance of Chinese Listed Firms. Available: www.ssrn.com.

Kapopoulos P and Lazaretou S (2007). Corporate Ownership Structure and Firm Performance: Evidence from Greek Firms. *Corporate Governance: An International Review* **15**(2) 144-158.

Keasey K, Thompson S and Wright M (2005). *Corporate Governance* (John Wiley & Sons Inc.).

Lawrence P Kalbers (2009). Fraudulent financial reporting, corporate governance and ethics. *Review of Accounting and Finance* **8**(2) 187-209.

Mat Nor F and Sulong Z (2010). Corporate Governance Mechanisms and Firm Valuation in Malaysian Listed Firms. *Journal of Modern Accounting and Auditing* **6**(1) 18-36.

Sanghoon Lee (2009). Corporate governance and firm performance, A dissertation submitted to the faculty of The University of Utah.

Schmid MM, Oesch D and Ammann M (2011). Corporate Governance and Firm Value: International Evidence. *Journal of Empirical Finance* **18** 36-55.

Vincent O_Connell and Nicole Cramer (2010). The relationship between firm performance and board characteristics in Ireland. *European Management Journal* **28** 387– 399.

Yermack D (2004). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics* **40**(2) 185-215.

© Copyright 2015 | Centre for Info Bio Technology (CIBTech)