TO STUDY THE RELATIONSHIP BETWEEN EARNING QUALITY AND CORPORATE GOVERNANCE MECHANISMS WITH STOCK RETURN IN THE COMPANIES LISTED ON TEHRAN STOCK EXCHANGE

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Abstract: *The main goal of the research is to study the relationship between earning quality and corporate governance with stock return in Iran's capital market. The statistical population is all the companies accepted in stock exchange, so that needed information is available to calculate the variables from 2009 to 2013. The sample consists of 98 companies which have been selected using random sampling. The independent variables are related to earning quality and corporate governance mechanisms. Quality index was used to measure earning quality through the model developed by Dechow and Dechev (2002) and independent members and ownership percentage of institutional investors were used to measure corporate governance mechanisms. Control variables of the research consisted of company size and sale growth ratio. Among three hypotheses, one hypothesis was rejected and two hypotheses were supported. The results of testing first hypothesis indicated that there is a significant relationship between earning quality and stock return. The results of testing second hypothesis indicated that there is a positive significant relationship between independent CEO and stock return and finally the results of testing third hypothesis indicated that there is a positive significant relationship between ownership of institutional investors and stock return.*

Keywords: *earning quality, corporate governance, stock return*

1. INTRODUCTION

One of the main criteria to make decision in stock exchange is stock return. Stock return contains information content and more potential and actual investors use it for financial analysis and predictions (Ghaemi & Tosi, 2006). There are various factors affecting on future stock return such as earning quality and corporate governance mechanisms. Profit is one of the most important criteria of management

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performance evaluation and is regarded as a determining criterion of firm's value. The profit realized in the financial period, but not received, has not good quality. In recent years, corporate governance mechanisms and earning quality have been received more attention, because the awareness of shareholders from earning quality can affect demand level and finally stock price and its return (Haghighat & Panahi, 2011: 31 – 50). Financial reporting is important for those who use it to contract or take financial decisions. Additionally, of standard – setters' perspective, the quality of financial reporting is regarded as an indirect criterion from the quality of financial reporting standards (Yazdani, 2010).

Financial reporting is one of the most important processes of accounting system. One of the main goals of financial reports is to provide needed information for evaluating performance and profitability of business unit. For the first time, earning quality theory was proposed by financial analyzers and stock brokers. Because they felt that reported earning does not show company' profitability as they expected. They found that it is very difficult to predict future profits based on reported results. Meanwhile, analysts found that it is very hard to analyze companies' financial statements because of various weaknesses in accounting information measurement.

Accrual quality implies potential ground of profit growth and the probability of future earnings. In the other words, the value of a share does not depend only on earnings per share in current year, rather it depends on our expectations of the future and profitability power in future years and confidence ratio to future earnings (Jahan khani & Zarif Fard, 1995). There are different perspectives among accountants and financial analysts about profit term (Esmaeli, 2007). Generally, financial analysts consider that reported earnings (accounting earning) differs actual profit. Although evidence suggests that earnings are a good indicator of stock returns, but using trading approach and conservative limitation and the importance of determining accounting profit have been led that some analysts to conclude that economic profit, instead of accounting earnings, is better indicator to predict cash flows (Rahimian & Jafari, 2006).

One reason for this difference of opinion is that analysts reckon profit can be manipulated by managers. This manipulation through the use of different methods of accounting is possible by management such as inventory assessment change, depreciation of key money, current or capital costs as R&D costs are the approaches which managers can change profit via them (Esmaeli, 2007). Reviewing on described issues, the research studies components of accrual quality and corporate governance mechanisms and the analysis of their relationships with stock return in the companies listed on Tehran Stock Exchange.

2. RESEARCH BACKGROUND

Lin *et al* (2014) studied corporate ownership, corporate governance modification and timely profit using panel data of 1276 Malaysian companies from 1996 to 2009. The results indicated there is a non-linear relationship between ownership concentration and delay in reporting, but there is not a relationship between ownership concentration and timely profit. As the biggest shareholders of price discovery, family and foreign companies are timely less. When delay in reporting is shorter in the period after the integration of corporate governance law in Malaysia in stock regulations, its effect is mainly unimportant on discovery timely of price.

Tariq Bhutta and Ali shah investigated the effect of corporate governance on investor's reaction in non – financial companies from 2005 to 2010 using 125 Pakistani companies. Investor's reaction was measured by stock return. Their results indicated there is not a relationship between CEO size and investors' reaction, while ownership structure has effect on investors' reaction, indicating the weakness of economic market and the existence of disturbance in business.

Elsayed and Wahba studied the relationship between ownership structures and inventory management in 1076 companies from 2000 to 2004. Their results indicated that there is a significant relationship between institutional investment, managerial ownership, CEO structure and CEO size with inventory management.

Gol Arzi and Zangori (2013) examined the relationship between earning quality and stock return with intermediary of institutional ownership in the companies listed on Tehran Stock Exchange from 2007 to 2011. The results of the research indicated that there is a significant relationship between earning quality and stock return and a stronger relationship is built between earning quality and stock return by increasing ownership level of institutional investors.

3. RESEARCH METHOD

In terms of correlation and methodology, the research is a quasi – experimental and post – event in the field of in the field of Positive Accounting Research. Since the research uses real information and it can be applied in real world, so the research is an applied research. Statistical population is all industry groups operating at Tehran Stock Exchange from 2009 to 2013.

3.1. Research Hypotheses

1. There is a significant relationship between earning quality and stock return of companies.

2. There is a significant relationship between non – aligned members of CEO and stock return of companies.

3. There is a significant relationship between ownership level of institutional shareholders and stock return of companies

3.2. Research Variables

The under – studied variables consist of dependent variable, independent variable and control variable as follows:

3.2.1. Dependent Variable

The dependent variable of the research is stock return which is measured using following equation based on conducted researches by Tariq Bhutta and Ali shah (2014) and Basilico (2013).

$$R_{i,t} = \frac{P_{i,t} - P_{i,t-1} + DPSi.t}{P_{i,t-1}}$$

Where:

R_{it} : stock return of company *i* in year *t*

P_{it} : stock price of company *i* at the end of year *t*

$P_{i,t-1}$: stock price of company *i* in year *t* – 1

$DPS_{i,t}$: divided profit of any share of company *i* in year *t*

3.2.2. Independent Variable

The independent variables of the research consist of advantage quality and corporate governance and later it will be explained how each of them is measured.

1. **Accrual Quality:** In accordance with previous studies such as Chan *et al* (2006), the research uses accrual quality index, measured by Dchaw & Dchew (2002) to calculate advantage quality using following formula :

$$\frac{\Delta WC_{i,t}}{Assets_{i,t}} = \beta_{0,i} + \beta_{1,i} \frac{CFO_{i,t-1}}{Assets_{i,t}} + \beta_{2,i} \frac{CFO_{i,t}}{Assets_{i,t}} + \beta_{3,i} \frac{CFO_{i,t+i}}{Assets_{i,t}} + \varepsilon_{i,t}$$

Where:

"$WC_{i,t}$: change in working capital of company *i* in year *t*

CFO_{it-1} : operational cash flow of company *i* in year *t* – 1

$CFO_{i,t}$: operational cash flow of company *i* in year *t*

CFO_{it+1} : operational cash flow of company *i* in year *t* + 1

$Assets_{i,t}$: the average of total assets of company i from t to $t-1$

$\varepsilon_{i,t}$: residual error of the model for company i in year t

After estimating above model for each year – company, amounts of error model was calculated too, indicating error model is a part of changes in working capital which has not been explained by cash flows in current, previous and future years. Then negative absolute value of errors of above model for any company – year is used as a criterion of accrual quality (AQ), it means:

$$AQ_{i,t} = -|\varepsilon_{i,t}|$$

2. **Corporate Governance Mechanisms:** In accordance with Basilico' research (2013) and Tariq Bhutta and Ali shah (2014), following variables have been used as elements of criteria of corporate governance measurement:

   (a) **Non–aligned member ratio:** It is calculated to divide non – aligned members by total CEO members. It means a member who has not executive position in the company.

   (b) **Ownership of Institutional Investors:** Ownership percentage of institutional investors is calculated to divide total stocks owned by banks and insurance companies, investment companies, pension fund, finance companies and investment funds and state entities and organizations by total issued stocks.

3.3. Research Model

Basiloco' model (2013) was used to test the hypotheses.

The model related to test first hypothesis:

$R_{i,t} = \beta_0 + \beta_1\, AQ_{i,t} + \beta_2\, Size_{i,t} + \beta_3\, Gwth_{i,t} + \text{€}_{i,t}$

The model related to test second hypothesis:

$R_{i,t} = +\beta_1\, IND_{i,t} + \beta_2\, Size_{i,t} + \beta_3\, Gwth_{i,t} + \text{€}_{i,t}$

The model related to test third hypothesis:

$R_{i,t} = +\beta_1\, INST_{i,t} + \beta_2\, Size_{i,t} + \beta_3\, Gwth_{i,t} + \text{€}_{i,t}$

Where:

$R_{i,t}$: stock return of company i in year t

$AQ_{i,t}$: accrual quality of company i in year t

$IND_{i,t}$: non–aligned member ratio of company i in year t

$INST_{i,t}$: ownership ratio of institutional investment of company i in year t

$SIZE_{i,t}$: the size of company *i* in year *t*

$GWTH_{i,t}$: growth ratio of company *i* in year *t*

$\varepsilon_{i,t}$: error statement

4. EMPIRICAL RESULTS

4.1. Testing Hypotheses

The section considers the results of implementing models and testing hypotheses. For each hypothesis, the full details obtained from the software in certain tables will be provided to facilitate the comparison and evaluation of the hypotheses.

4.4.1. Testing First Hypothesis and its Results

First hypothesis states that there is a significant relationship between accrual quality and stock return of companies. Following equation has been estimated to test the hypothesis:

$$R_{i,t} = \beta_0 + \beta_1 AQ_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GWTH_{i,t} + \varepsilon_{i,t}$$

H0: $\beta_1 = 0$ there is not a significant relationship between two variables.

H1: $\beta_1 \neq 0$ there is a significant relationship between two variables.

Diagram 1 provides the results of testing first hypothesis based on above model

Comparing *F*-statistics amount (9.313) in above diagram with F amount in the table indicated that there is totally significantly in fitted regression model at 1% error level. According to adjusted determination coefficient, it can be concluded that about 50 percent of changes in stock return of the company are explainable by the independent variables of the model.

Also, calculated amount of Watson – Durbin statistics was 1.989, Due to its proximity to the number 2, it can be found that this statistics is placed in the field of lack of autocorrelation and the model does not disturb autocorrelation between model components.

As it can be concluded from the results of the diagram, estimated coefficient and t-statistics related to accrual quality are positive, but not significant. According to the evidence, H0 hypothesis is supported and first hypothesis is rejected at 5% error level. It implies it can be said that there is not a significant relationship between accrual quality of the companies and their stock returns.

Diagram 1: Statistical Results of Testing First Hypothesis

Dependent Variable: *R*
Method: Panel EGLS (Cross-section weights)
Sample: 1495
Periods included: 5
Cross-sections included: 99
Total panel (balanced) observations: 495
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.573511	0.462098	3.405146	0.0008
AQ	0.004594	0.003111	1.476559	0.1408
SIZE	0.090578	0.039849	2.273045	0.0237
GWTH	0.025290	0.010067	2.512229	0.0125

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.513526	Mean dependent var		0.644120
Adjusted R-squared	0.498642	S.D. dependent var		0.541021
S.E. of regression	0.145097	Sum squared resid		6.273817
F-statistic	9.313461	Durbin-Watson stat		1.989431
Prob (*F*-statistic)	0.000000			

4.4.2. Testing Second Hypothesis and its Results

Second hypothesis states that there is a significant relationship between percentage of independent members in CEO and the stock return of the companies. Following model has been estimated to test the hypothesis:

$R_{i,t} = \beta_0 + \beta_1 \, IND_{i,t} + \beta_2 \, SIZE_{i,t} + \beta_3 \, GWTH_{i,t} + \varepsilon_{i,}$

H0: $\beta_1 = 0$ there is not a significant relationship between two variables.

H1: $\beta_1 \neq 0$ there is a significant relationship between two variables.

Diagram 2 provides the results of testing second hypothesis based on above model

Comparing *F*-statistics amount in above diagram with *F* amount in the table indicated that there is totally significantly in fitted regression model at 1% error level. According to adjusted determination coefficient, it can be concluded that about 56 percent of changes in stock return of the company are explainable by the independent variables of the model. Reviewing the amount of Watson – Durbin statistics indicated that there is not autocorrelation between model components because of being closer to number 2.

Diagram 2: Statistical Results of Testing Second Hypothesis

Dependent Variable: *R*
Method: Panel EGLS (Cross-section weights)
Sample: 1495
Periods included: 5
Cross-sections included: 99
Total panel (balanced) observations: 495
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.689210	0.463019	3.648252	0.0003
IND	1.068491	0.383843	2.783667	0.0057
SIZE	0.098157	0.039690	2.473090	0.0140
GWTH	0.023232	0.010334	2.248074	0.0253

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

R-squared	0.584231	Mean dependent var	0.636662
Adjusted R-squared	0.562137	S.D. dependent var	0.497915
S.E. of regression	0.144580	Sum squared resid	6.229180
F-statistic	10.32054	Durbin-Watson stat	2.042568
Prob(F-statistic)	0.000000		

As it can be concluded from the results of the diagram; estimated coefficient and t-statistics related to percentage of independent members in CEO are positive significant at 1% error level. According to the evidence, H_0 hypothesis is rejected and second hypothesis is supported at 1% error level. It implies it can be said that there is a significant relationship between percentage of independent members in CEO of the companies and their stock returns.

4.4.3. *Testing Third Hypothesis and its Results*

Third hypothesis states that there is a significant relationship between ownership percentage of institutional investors and stock return of the companies. Following equation has been estimated to test the hypothesis:

$$R_{i,t} = \beta_0 + \beta_1 \, INST_{i,t} + \beta_2 \, SIZE_{i,t} + \beta_3 \, GWTH_{i,t} + \varepsilon_{i,t}$$

$H_0: \beta_1 = 0$ there is not a significant relationship between two variables.

$H_1: \beta_1 \neq 0$ there is a significant relationship between two variables.

Diagram 3 provides the results of testing third hypothesis based on above model

Diagram 3: Statistical Results of Testing Third Hypothesis

Dependent Variable: *R*
Method: Panel EGLS (Cross-section weights)
Sample: 1495
Periods included: 5
Cross-sections included: 99
Total panel (balanced) observations: 495
Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.689451	0.467450	3.614186	0.0004
INST	0.157872	0.075450	2.092417	0.0372
SIZE	0.097325	0.040011	2.432423	0.0156
GWTH	0.015281	0.010523	1.452058	0.1475
Effects Specification				
Cross-section fixed (dummy variables)				
Weighted Statistics				
R-squared	0.553267	Mean dependent var		0.629525
Adjusted *R*-squared	0.520841	S.D. dependent var		0.470395
S.E. of regression	0.144804	Sum squared resid		6.248489
F-statistic	10.11256	Durbin-Watson stat		2.102488
Prob (*F*-statistic)	0.000000			

Comparing *F*-statistics amount in above diagram with *F* amount in the table indicated that there is totally significantly in fitted regression model at 1% error level. According to adjusted determination coefficient (0.520), it can be concluded that about 52 percent of changes in stock return of the company are explainable by the independent variables of the model. Reviewing the amount of Watson – Durbin statistics indicated that there is not autocorrelation between model components because of being closer to number 2.

As it can be concluded from the results of the diagram; estimated coefficient and t-statistics related to ownership percentage of institutional investors are positive significant at 1% error level. According to the evidence, H_0 hypothesis is rejected and third hypothesis is supported at 1% error level. It implies it can be said that there is a significant relationship between ownership percentage of institutional investors and their stock returns.

5. CONCLUSION

Undoubtedly, one of the most important world developments in the eighteen century, industrial revolution, was the rise of stock corporations and the separation of ownership from management. Up until then, commercial and economic activities

carried out in the form of individual ownership and there was not a separation of ownership and management. In result of these developments, corporations were turned into the place of gathering beneficiaries' interests including shareholders, managers, creditors, employees and other beneficiaries. Following it, organized financial markets were built in most countries. Since there is no possibility of the participation of all stakeholders in the company, therefore, managers handle company affairs and are responsible for beneficiaries against resources on behalf of them. Stakeholders want to maximize the company's profits, but managers want to maximize rewards, then their benefits are not aligned with each other. This is where the conflict of interest arises. The conflict of interests will be led in turn representative problem. Different solutions have been put in financial literatures to reduce representative problem which one of the main solutions is company governance. The mechanism focuses on the control and management company, makes a relationship among beneficiaries to maximize their benefits and also avoids the conflict of interest and loss of rights in favor of another.

The main goal of the research is to study the relationship between accrual quality and corporate governance mechanisms with stock return in Iran's capital market. Statistical population is all the companies listed on Tehran Stock Exchange from 2009 to 2013, so that there is needed information to calculate its variables. Under–studied sample consists of 98 companies which have been selected using random sampling among different industries.

This section interprets the results of testing the hypotheses based on theoretical framework and research background:

First hypothesis states that there is a relationship between accrual quality and stock return of companies. The results obtained from testing the hypothesis indicate that there is not a significant relationship between accrual quality and stock return of companies. In other words, it can be claimed that accrual quality has not significant effect on stock return.

To reject above hypothesis indicates investors in the stock exchange do not show reaction to the quality of reported profits of companies and stock return of the companies is affected by the feature. This could be due to lack of enough awareness of investors in Tehran Stock Exchange with the concept of accrual quality for various reasons.

Second hypothesis states that there is a relationship between independent member percentage in CEO and stock return of companies. The results obtained from testing the hypothesis indicate that there is a significant positive relationship between the percentage of independent members in CEO and stock return.

It implies that the existence of independent managers in the composition of board of directors and their monitoring performance as independent people leads to reduce conflict of interest and representative problem among managers and owners, in turn, it will be followed investors' positive reaction and finally increased stock return. The findings of the research are compatible with the results of the research conducted by Hayat *et al* (2010) and Shijun (2007).

Third hypothesis of the research claims that there is a significant relationship between ownership of institutional investors and stock return. The results of testing above hypothesis indicate that there is a positive significant relationship between ownership of institutional investors and stock return. Third hypothesis of the research is supported too. It implies that with increasing the ownership of institutional shareholders, with respect to its role in reducing representative problem, stock return amount will be increased and improves the performance of investable companies, applies effective monitoring operations on managers and persuade managers to take optimal decision. The results of the current research are compatible with the findings of the researches conducted by Hayat *et al* (2010) and Shijun (2007).

Reference

Esmaeili, Sh, (2007). "accrual quality", auditing and accounting magazine, June 1386, No.184, (27-38).

Jahan Khani, A; Zarif Fard, A, (1995). "Do managers and shareholders use proper criteria to measure company value?", financial studies, Tehran University, 2nd year, NO. 7 & 8, (41-66).

Haghighat, H, Panahi, M, (2011)." To study the relationship accrual quality and future stock return in the companies listed on Tehran Stock Exchange", journal of accounting knowledge, 2nd year, No.5, summer 1390, (31-50).

Rahimian, N; Jafari, M, (2006). "criteria and structures of accrual quality", accountant magazine, August 2006, No. 174, (18 – 21 & 53 – 57).

Ghaemi, M. H; Tossi, S, (2006). " to study effective factors on common stock return of the companies listed on Tehran Stock Exchange", journal of management message, No. 17 & 18, winter 2005 and spring 2006, (159 – 175).

Gol Arzi, Gh.; Sayed Zangori, S., (2013). "to study the relationship between accrual quality and stock return with intermediating of institutional ownership in the company listed on Tehran Stock Exchange", management college of Tehran University, Vol.2, No.2, p.p 65–86

Yazdani, S, (2010). "accrual quality", the second international conference of consulters and financial managers.

Basilico.E. (2013), The Relationship between Earnings Quality, Control Mechanisms of Corporate Governance, and Future Stock Price Returns. The case of the Netherlands., Corporate Ownership and Control Journal, Vol. 10 (forthcoming)

Chan, K., Chan, L., Jagadeesh, N., and Lakonishok, J. (2006). Earning Quality and Stock Returns. Journal of Business, 43 (3): 1-47.

Dechow and Dechev, (2002), "The quality of accuals and earning: the role of accrual estimation errors", the Accounting Review, No 77, (supplement), (35-59).

Elsayed, kh., Wahba, H., (2013). Reinvestigating the relationship between ownership structure and inventory management: a corporate governance perspective, Intenational Journal of production Economics.

Hayat M.A., Khuram S. B., & Rameez M.A. (2010). Corporategovernance practices and their impact on firm's capital structure and performance; case of Pakistanitextile sector. Proceedings 8th AFC samos, volume-1.

Kanagaretnam, K., and Lobo, Gerald J., and Whalen, Dennis J., (2007). "Does Good Corporate Governance Reduce Information Asymmety Around Quarterly Earnings nnouncements?" Journal of Accounting and Public Policy,Vol. 26, No. 4, pp. 497-522.

Lim, Mable; How, Janice and Peter Verhoeven (2014), corporate ownership, corporate governance reform and timeliness of earnings: Malaysian evidence, Journal of Contemporary Accounting & Economics.

Shijun, Che., (2007). "Board size and the variability of corporate performance". Journal of Financial Economics, forthcoming.

Tariq Bhutta, Nousheen, Syed Zulfiqar Ali Shah,(2014), "Investors'Reaction to the Implementation of Corporate Governance Mechanisms",Open Journal of Accounting, 2014, 3, 3-8.