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Investigating the relationship between expertise of CEO and expertise of CEO with earnings management of accepted companies in stock exchange of Tehran

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Key words: Earning management, Financial expertise of CEO, Financial leverage, Systematic risk.

Abstract

Earning is the final result of economic activities and accounting processes, affected by different trends exerted by the managers of the companies. They try to change their financial earnings via different accounting methods. This study aims to investigating the relationship between mechanisms of corporate governance and company size with earning management of accepted companies in Stock Exchange of Tehran. Dependent variable includes discretionary accruals for measuring earning management, financial expertise of CEO is independent variable. Variables of financial leverage and systematic risk are control variables. Statistical population of the study includes all accepted companies in Stock Exchange of Tehran. Using systematic omission method, statistical sample of the study includes 91 companies in Stock Exchange of Tehran, active from 2003-2013. To gather information, in theoretical section, library method and for hypothesis test, studying financial statements of accepted companies in Stock Exchange of Tehran was utilized. To analyze data, correlation method and multiple regressions were used. The results showed that financial expertise of CEO, and have a negative and significant correlation with earning management.

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Introduction

Earning management is one of the most controversial issues in accounting researches. Since investors concern earnings amount as an important factor in decision-making, these researches get great significance. Researchers have shown that low volatility and persistent earnings indicate quality. Thus, investors invest on the companies with more consistent earnings with more confidence (Noravesh *et al.,* 2006). Investigating the relationship between discretionary accruals and future earnings ability by Sirgar, the effect of they examined the effects of discretionary accruals on 3 variables of future operational cash flows, net income without future discretionary accruals, and changes in future incomes. Testing the effect of discretionary accruals on future earnings ability, they examined if earnings management is opportunistic or efficient. Their studies showed that in Indonesian companies, earnings management tends to be efficient.

Earning management occurs in the companies in which there are not qualitative mechanisms for supporting investors and controlling opportunistic behaviors of managers. Corporate ownership is one of those mechanisms. From the other hand, recent scandals of big companies in the world have caused other companies pay more attention to improving the mechanisms of corporate ownership and increasing transparency in accounting information. Structure and efficiency of ownership, its type, company size, and combination of CFO as the mechanisms of corporate ownership in public joint stock companies are different; thus, the quality of monitoring managers' activities among different companies is different (Noravesh *et al.* 2010). The aim of this paper is investigating the relationship between expertise of CEO and expertise of CEO with earnings management of accepted companies in stock exchange of Tehran.

Material and methods

Research Theories

Earning management is a form of earnings management that may decrease accountability of earnings. In that case, they will contain less useful information. But, when opportunistic earnings management is controlled using monitor systems, accounting earnings become more reliable with more useful information (Dichow *et al.,* 1995). Earning management includes a wise and proper activity that includes a part of financial management process and reviving stockholders' value. Good earning management starts with running a company with perfect management in which management identifies reasonable budget and positively reacts to unexpected threats and opportunities and fulfils most or all of his obligations. Most of the time, good earning management refers to operational earning management in which the manager does some attempts for creating consistent financial performance (using acceptable and volunteer decisions) (George, 1999). In opportunistic earning management which is improper earning management, real operational performance of the company is concealed using artificial accounting records or estimation changes. Concealing real operational trends using artificial and undisclosed accounting cambiums are examples of opportunistic earning management which are illegal (Noravesh *et al.,* 2006). Generally, if the manager uses personal judgments and screen earnings in transferring his information to stockholders outside the organization about future earnings ability of the company in disclosed earnings based on histories, earning management will be efficient. But, if the manager uses personal judgments for his benefits and manipulate earnings, earning management will be opportunistic. In other words, if company value increases as a result of manager's action, earning management will be efficient; otherwise, earning management for the desires of managers will be opportunistic (Subramanyam, 1996). One important factor in testing earning management of the companies is estimating discretion factor and managers' ideas in identifying earnings. One important approach in estimating and measuring discretion of manager in earnings identification is based on accruals as an index for identifying and discovering earning management in business units.

Dichow *et al.* (1995) introduced modified model of Jones. He concluded that modified model of Jones has higher ability in discovering earning management of business units. In 1991, Jones offered a model for earning management of business units, divided into discretionary and non- discretionary accruals and non- discretionary accruals were supposed to be fixed. In that model, sale earnings are non-discretionary if earnings are managed via discretionary incomes. However, this model eliminates a part of managed earnings which is its limitation. Dichow *et al.* (1995) modified Jones model, correcting income changes via reducing changes corresponding to receipts. In modified model of Jones, income changes are modified through the changes in received accounts. It is also supposed that all changes in credit sale results from earnings management (Rasaiyan and Hoseini, 2009). Earnings management occurs in the companies without quality mechanisms for supporting stockholders' benefits and controlling opportunistic behaviors of managers. Thus, it is expected that corporate ownership mechanisms decrease earnings management opportunities, increasing earnings quality and offered information (Kordtabar and Rasaiyan, 2011).

Backgrounds

Siregar *et al.* (2008) examined the effect of earnings management on future earnings ability. Investigating the relationship between discretionary accruals and future earnings ability, the effect of they examined the effects of discretionary accruals on 3 variables of future operational cash flows, net income without future discretionary accruals, and changes in future incomes. Testing the effect of discretionary accruals on future earnings ability, they examined if earnings management is opportunistic or efficient. Their studies showed that in Indonesian companies, earnings management tends to be efficient.

In a study titled "earnings management and accounting quality in European private companies", B. Tendello & Vanstraelen (2008) considered 4big auditing companies as qualitative auditors and examined earnings management in audited companiesby these 4 companies and compared their earnings management. They concluded that there is a significant correlation between earnings management and accounting quality. High quality auditing in the companies with similar tax rules decreases earnings management.

Hypotheses

H1. There is a correlation between financial expertise of CEO and earnings management of accepted companies in Tehran Stock Exchange.

Subjects of this study include all accepted companies in Tehran Stock Exchange from 2004-2013. To select the sample, systematic omission method was used. The companies with the following features were selected as the sample:

1. The companies were manufacturing.

2. To select active companies, they should be selected before 2004 in Stock Exchange and have transactions from 2004-2013 without interruptions over 3 months.

3. Their fiscal year should end at the last month of winter.

4. Financial statements and notes of the companies should be available.

To gather data, extant documents of the companies including financial statements and reports of CFO using Tadbirpardaz and Rahavard Novin were studied. To gather data, the data were shown in Excel sheets and were tested using Eviwes software. This study is correlation, using descriptive methods with applied goals in capital market. In this study, variables of corporate ownership percentage, private ownership, percentage of non-executive CEO, financial expertise of CEO, and company size are independent variables; earnings management is

dependent variable. Variables of financial leverage and systematic risk are control variables.

Result and discussion

Earning Management

Earning management. This variable is measured by discretionary accruals (Subramaniam, 1996; Krishnan, 2003).

Discretionary accruals: accruals don't have direct cash consequences and are the most important opportunistic earning management. They result from the difference between operational earnings and cash from operational activities. They have 2 types of discretionary and non- discretionary accruals. Discretionary accruals are representatives of earning management (Agahayi and Chalaki, 2010).

Discretionary accruals result from the difference of net operational cash flow and net operational earnings.

ACCR = EARN – CFO

Non- discretionary accruals result from modified Jones model.

$ACCR_{it} = \alpha_0 + \alpha_1 [\Delta REV_{it} - \Delta REC_{it}] + \alpha_2 PPE_{i,t} + \varepsilon_{it}$

Discretionary accruals result from the difference of total accruals and non- discretionary accruals.

1: Financial expertise of CEO: It refers to some CEO with BA or higher degrees in accounting, management, and banking (Izadinia and Rasaiyan, 2011). Systematic risk variable and financial leverage are control variables of this study.

5. Financial leverage

These ratios examine the relationship between financial resources used by business units regarding debts or stockholders equity or their combination (Aghayiand Chalaki, 2010).

In this study, to measure financial leverage of the company, book value of long term debt was divided into total assets (Sinayi and Nysi, 2004):

FL=BV/TOTL ASSETS

Systematic risk

To measure systematic risk, company coefficient was used. Simply put, risk (β) of systematic sensitivity of each share identifies return rate which the shareholder of it should expect it (Pinov, 2003). βiscovariance of stock return with

To calculate β, Rahavadnovin software was used. Conceptual model of this study is shown in Fig.1.

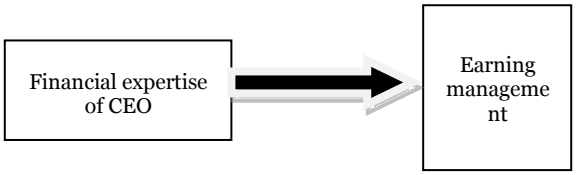

Fig. 1. Conceptual model of the study.

Descriptive findings

Descriptive statistics including financial expertise of CEO, discretionary accruals (DAC), financial leverage (FL), and systematic risk (β) are shown in Table.

Table 1. Descriptive analysis of research variables.

Kurtosis	Skewness	Variance	Sd	Mean	Max	Min	No	Variable
-.029	.184	.392	.0375	.786	1	.67	910	FE
.655	.966	.035	.15818	.14789	332980433	1245366331	910	DAC
.354	.404	.008	.08683	.02983	3.937	-.250	910	FL
.109	-.513	.024	.15366	-2.021	4.99	-7.631	910	BET

Number of year-company observations based on balanced combined data (91 companies in 10 years) is 910. Distribution index of these variables is low in different companies. Maximum standard deviation relates to company size and minimum standard deviation relates to financial expertise of CEO.

Testing data normality

For testing data normality, Kolmogorov-Smirnov (K-S) test was used. The results of testing data normality are shown in Table 2.

Table 2. The results of data normality test.

Sig	Z	Variables
.549	1.836	FE
.642	1.741	DAC
.582	1.777	FL
.094	1.235	BET

As seen in Table 2, since significance level of all variables is above 0.05%, variables of this study have normal distribution.

Correlation test

Before testing hypotheses, the correlations of variables need to be examined. For data normality, Pearson correlation coefficient was used. The results of Pearson correlation coefficient for the variables are shown in Table 3. In Table 3, correlations of variables at 1% error level and at 5% error level are shown.

Table 3. The results of Pearson correlation coefficient for the variables.

BET	FL	DAC	FE	variable
.574	.763	-.325**	1	FE
.371**	.068*	1	.407**	DAC
.311	1	.068*	.196**	FL
1	.311	.371**	.008	BET

** Significance at 1% error level *Significance at 5% error level.

a) significance test of regression, Since F statistics in all regression tables are below 0. 05, regression model for all hypotheses is significant, b) co-linearity test. Co-linearity test of research variables is shown in Table 4.

Table 4. Co-linearity test results.

Status index	Specific value	Row	Model
9.462	**.339**	**1**	
10.693	**.275**	**2**	**1**
11.775	**.198**	**3**	

Specific value shows internal correlation likelihood for the variables. Since all status indices are below 15, co-linearity of independent variable is rejected.

Testing the lack of self-correlation

Durbin-Watson statistics for each hypothesis shows self-correlation between variables. Since these statistics in regression tables have the values between 1.5 and 2.5, there is no problem of self-correlation between variables.

Limer and Hausman test

The question posed in most applied studies is that "Is there any evidences for merging data or the model is different for cross-sectional units?"First, it must be studied if there is heterogeneity or differences among cross-sections. If there is heteroscedasticity, panel data method will be used. Otherwise, combined data method with least squared approach is used for model estimation. For this purpose, Limer test (F) is used. H0 implying homogeneity of intercepts (using combined data) is against H1 implying heteroscedasticity of intercepts (panel data method). To select between fixed and random effects, Hausman test was used. Statistic of Hausman test is calculated for identifying fixed or random differences of cross-units and has squared-chi distribution with freedom degree equal to the number of independent variables. The results of Limer F are shown in Table 5.

Table 5. The results of Limer F (intercept homogeneity).

Test result	P-value	df	F	Models	H_0
H_0 is rejected	0.000	3	1.685	Model 5	Intercepts are homogeneous

Based on Table 5, cross-sections are heterogeneous. Thus, panel data is proper. Then, Hausamn test is used. If H0 is accepted, random effects model will be used and if it is rejected, fixed effects model will be used.

Based on Table 6, *P* values for each model are significant (p-value<.05) . Thus, H0 is rejected at 95% significance level and fixed effects model should be used.

Table 6. Hausamn test results (selection between fixed and random effects).

Test result	P-value	df	X^2	Models	H_0
H_0 is rejected	0.000	3	10`1.1057	Model 5	No difference in systematic risk

Results of H5 test

Results of H5 test, implying the significant correlation between the expertise of CEO and earning management, are shown in Table 11.

Table 11. Results of multivariable regression between the expertise of CEO and earning management.

Sig	t	Coefficient	Variable	Symbol	Variable type
_	_	_	earning management	Y	dependent variable
0/001	**1/775**	**1/354***	alpha	**α**	Fixed value
0/000	**-1/398**	**-0/446***	expertise of CEO	X1	independent variable
0/000	**1/376**	**0/564***	financial leverage	financial leverage	
0/097	**1/216**	**0/329**	Systematic risk		Control variables
_	_	**1/945**	Durbin-Watson		
0/000	_	**36/718**	F		
_	_	**0/684**	Correlation coefficient		R
_	_	**0/467**	Determination coefficient		R Square
_	_	**0/466**	Modified determination coefficient		Adjusted R Square

*significance level is 0.05

As seen in Table 10, expertise of CEO and financial leverage have significant correlation with earning management (p-value<5%). Variables coefficients show that the correlation between financial leverage and earning management is higher than other variables. Financial leverage variable has a significant correlation with earning management and expertise of CEO has significant correlation with earning management. Based on achieved F value, measured regression pattern is significant. Regarding determination coefficient, these variables explain 46.7% of earning management changes. Durbin-Watson value is between 1.5 and 2.5. Thus, there is no self-correlation between variables.

Conclusion

This study examines the relationship between experienced financial one of corporate ownership mechanisms earning management of accepted companies in Tehran Stock Exchange from 2004-2013. Dependent variable of the study includes discretionary accruals as the variable of measuring earning management, financial expertise of CEO is independent variables. Financial leverage and systematic risk are control variables. Testing H5 showed a negative and significant correlation between earning management and financial expertise of CEOs. This shows that CEO should have skills in accounting, banking, and law to effectively monitor management decisions. Experienced members in accounting have low ability in discovering extant problems in financial reporting. Also, the presence of an experienced financial officer can alert other members. This result agrees with Kaplan and Minton (1994) and Ericson *et al.* (2005). Considering H5, financial expertise helps information transparency and decreasing information asymmetry between managers and stockholders. Therefore, stockholders should use independent and expert members in their CEOs. Since the hypotheses of this study have not considered companies, differentiating industries, it is suggested that earnings managements of the companies be considered regarding their industries and their features. This study used discretionary accruals for measuring earnings management .future studies can use other criteria for measuring earnings changes. Since the ability of Jones model and its modified version in dividing discretionary and non-discretionary accruals is doubted, there is the likelihood of incorrect classification of discretionary and non-discretionary accruals. Future studies can use other models such as modified Casnik model with higher predictability.

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