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THE MEDIATING EFFECT OF AUDIT QUALITY ON THE RELATIONSHIP BETWEEN EARNINGS AND EARNINGS VALUATION IN IRAN

ABSTRACT

The main objective of the current study is to evaluate the relationship between earnings, its components and earnings valuation and, at the same time, to assess the impact of audit quality on these variables of companies listed on the Tehran Stock Exchange.

The data used in this study were collected for a sample of 141 listed companies on the Tehran Stock Exchange from 2010 to 2016. Research hypotheses were analyzed using panel data by means of the panel method.

Research findings indicated no relationship between earnings, its components and earnings valuation. By analyzing the effect of audit quality variables, we have also observed that audit firm size has a positive and significant effect on the relationship between earnings, its components and earnings valuation. Moreover, the obtained results substantiated the positive and significant effect of auditor tenure on the relationship between earnings, total discretionary accruals, operational cash flow, non-discretionary accruals, and earnings valuation. In addition, findings revealed that auditor industry specialization has a negative and significant effect on the relationship between earnings, its components and earnings valuation.

The study aims to investigate the mediating effect of audit quality on the relationship between earnings and earnings valuation in Iran, so the outcomes of the current study may be helpful to the developing nations.

Keywords: Audit quality, earnings valuation, earnings elements

1. Introduction

Accounting profit comprises cash flow and accruals. The accruals could be divided into discretionary and non-discretionary accruals. The related literature on earnings management considers discretionary accruals as opportunistic (Moradi et al., 2015), a feature that undermines the informativeness of

earnings. However, managers use discretionary accruals for transferring confidential and inaccessible information to the users of financial information, which would allow them to evaluate the future economic value of a company more precisely (Habib et al., 2014). Subramanyam (1996) indicated a positive correlation between market return and discretion-

ary accruals. His findings showed that discretionary accruals provide useful information in the market. However, such relationship could not display clearly which discretionary accrual has more disclosure power.

According to Newman et al. (2005), since the credibility of financial statements, including earnings, becomes highly dependent on the applied audit, the cooperation of market participation and audit quality during the valuation of earnings and its components is a matter of importance. Auditing, in addition to its significant role in enforcing and preserving investors' rights through the identification of equity ownership, could also yield benefit to the management through transfer of reliable financial information (Habib et al., 2014). Krishnan (2003) argued that high quality auditors are more concerned with proper accounting procedures, reporting of financial errors and irregularities than their low quality counterparts. Professional auditors are expected to segregate the useful information on discretionary accrual components from the worthless data. This could magnify the value of discretionary accruals. "Income reporting" is one of the items of financial statements, which is considered as a criterion for performance evaluation and earnings capability of a non-profit unit. On the one hand, since most managers are aware of their company's status, it is expected to provide and present information in a way that best reflects the status quo of a company. On the other hand, due to certain reasons, like staying in the company, getting a reward, etc., the management of a non-profit unit may un/willingly manipulate the earnings to characterize the situation as desirable. Under these circumstances, the real earnings are incompatible with the reported one in the financial statements, which is called earnings management (Habib et al., 2014).

Announcing the accounting profit provokes a market reaction, which shows the effect this component has on stock return and decisions of financial statement users. The higher the earnings stability, the more the company is able to maintain its current earnings and the earnings quality is assumed to be higher (Perotti, Wagenhofer, 2014).

We could also declare how much future value the earnings have generated for a certain company and how earnings affected the stock return. On the other hand, quality, which determines the audit performance, depends on several factors, namely auditor capability (e.g. knowledge, experience, matching

power, technical efficiency) and professional performance (independence, objectivity, due diligence, no conflict of interest, and judgment). "Auditor size" is the most important quantitative index for auditor quality measurement, which has a direct relationship with the auditor quality, in a way that larger size would lead to higher audit quality. "Auditor tenure" is another quantitative index of audit quality measurement for the range of auditor's due diligence and his/her surveillance capability. A longer period of tenure could cause the auditor to be better acquainted with a client and the relevant industry specialization, which could improve the audit quality (Myers et al., 2003). Habib et al. (2014) find that although earnings and its components are priced positively by the Chinese stock market, Big 4 audit does not provide any incremental benefit to clients in terms of market pricing of clients' financial numbers. Their research indicates a negative impact of local Top10 audit on the pricing of earnings in China. However, their results show no incremental effect of local Top 10 audit on the market pricing of earnings components.

We extend this stream of research using data from Iran. No research study has been carried out so far on the relationship between earnings, its components and earnings valuation and no project investigated the effect of audit quality on this relationship in a developing country. Therefore, the main objective of the present article is to evaluate the effect of audit quality on the relationship between earnings, its components and earnings valuation in companies listed on the Tehran Stock Exchange and we tried to establish whether audit quality of these companies could affect such a relationship or not.

2. Theoretical issues

2.1 The relationship between cash and accrual components and stock valuation

Accounting profit, which is recognized as an accrual, is dividable into two components of cash and accrual. Accrual accounting is used in the process of profit measurement, through which discretionary accruals modify the recognition of cash flow over a period to better evaluate the firm value by the modified figures. The said discretionary accruals are based on estimations and in case they are not correct, they should be modified in future discretionary accruals and future profits. The estimation error and

its subsequent modification decrease the usefulness of discretionary accruals. According to Dechow and Dichev (2002), the quality of discretionary accruals decreases with the increase of range of estimation error. The study of Ball and Brown (1968) indicates that by announcing the accounting profit the stock price of the firm undergoes a change. This suggests that accounting profit has information content. Since discretionary accruals contribute to the calculation of the reported profit, we expect the quality of reported profit and discretionary accruals to stimulate the market response. Richardson et al. (2005) found that there is a negative and significant relationship between the discretionary accruals and future stock return. Hirshlifer et al. (2009) discovered a positive relationship between the size of discretionary accruals and the stock return and noticed that the relationship between the size of cash flows and stock return is negative. Habib et al. (2014) declared that with the increase of abnormal discretionary accruals, the possibility of earnings management goes up and consequently the earnings quality would be lower. Under such circumstances, the investors are less likely to rely on the disclosed profit. In other words, such a situation could depreciate the information value of the earnings. The inverse is true about cash components of profit. Dechow et al. (2008) perceived that the cash component of profit has a significant relationship with the stock price. Kothari et al. (2005) declared statistically that higher cash component of profit could bring about more earnings stability.

2.2 *The relationship between audit quality and earnings valuation*

Accounting profit is one of the important pieces of information provided in the financial statements, which is known as a factor for measuring the firm performance. Most of financial analysts use this figure in the valuation models of the stock market and models of corporate performance evaluation (Gutierrez, Pombo, 2008). Investors, creditors, and others who use earnings and its components through various methods and for different evaluation purposes, including the outlook of cash flow in investments or granted loans, and for making investment decisions, think of profit more than any other criteria (Perotti, Wagenhofer, 2014). In addition to this problem, which is seen today despite the rising awareness and general knowledge of financial statement users, there is also overreliance on accounting report figures (especially accounting profit as one of the major criteria of performance evaluation) when

making investment decisions. Such an illogical reliance provides a plethora of motivations for managers to manipulate (manage) the figures to their own benefit or, more specifically, to embark on the earnings management. In case managers have some specific purposes to mislead the users of financial statements through exercising their own power in accounting selection, the earnings management is more probable (Markarian, Santalo, 2014). In fact, earnings management is used as an effective factor to misrepresent the economic performance (Chen, Hsu, 2009). Perotti and Wagenhofer (2014) believe that announcing the firm profit leads to the market response, which is indicative of the earnings value in the capital market. Hence, the reported profit should be evaluated by an institution independent of the firm. Generally, auditors and audit firms take on the responsibility. In fact, by evaluating the firm performance, in terms of the authenticity of the disclosed information, they propose their professional opinions. Since the reported profit is of the utmost importance for the investors and on the other hand, audit quality is effective in the increase of profit value in the public opinion, a number of scholars carried out a study on this topic. For example, Gul et al. (2009) noticed that the profits valued by major audit firms are evaluated positively in the market. Krishnan (2003) also reported the same results. Jenkins et al. (2006) stated that by employing specialized auditors in the industry, the response coefficient would decline. Garcia-Blendon and Argiles-Bosch (2017) showed that there is no significant relationship between employing specialized industry auditor and audit quality. Habib et al. (2014) studied the impact of audit quality on profit valuation and found that there is a significant relationship between audit quality and profit valuation.

3. *Research methodology*

3.1 *Research hypotheses*

Given the theoretical issues and the proposed literature, the following hypotheses are postulated in the study:

- H₁: There is a significant relationship between earnings and earnings valuation.
- H₂: There is a significant relationship between accruals, operational cash flows and earnings valuation.

H₃: There is a significant relationship between nondiscretionary accruals, operational cash flow and earnings valuation.

H₄: Audit firm size has a significant effect on the relationship between earnings and earnings valuation.

H₅: Auditor tenure has a significant effect on the relationship between earnings and earnings valuation.

H₆: Auditor industry specialization has a significant effect on the relationship between earnings and earnings valuation.

H₇: Audit firm size has a significant effect on the relationship between accruals, operational cash flow and earnings valuation.

H₈: Auditor tenure has a significant effect on the relationship between accruals, operational cash flow and earnings valuation.

H₉: Auditor industry specialization has a significant effect on the relationship between accruals, operational cash flow and earnings valuation.

H₁₀: Audit firm size has a significant effect on the relationship between non/discretionary accruals, operational cash flow and earnings valuation.

H₁₁: Auditor tenure has a significant effect on the relationship between non/discretionary accruals, operational cash flow and earnings valuation.

H₁₂: Auditor industry specialization has a significant effect on the relationship between non/discretionary accruals, operational cash flow and earnings valuation.

The present article is an ex-post facto (quasi-experimental) research that is based on the analysis of the previous and historical information (financial statements of companies). Moreover, the project is a type of library research and causal analysis and is based on the panel data. This paper is called functional, in terms of objective and regression descriptive method. After performing the necessary corrections and classification, the data were gathered by the Excel Software based on the variables under study and were put in Eviews 9 and Statal 2 for further processing.

3.2 Statistical population and sampling method

The statistical sample of the study consists of all manufacturing listed companies on the Tehran Stock Exchange. Using the systematic elimination method, the sample was selected among the companies that:

1. Their end of fiscal year was on March 19;
2. Had no change in their fiscal year during the study period (2010-2016);
3. Their financial information was available;
4. Were active during the research period.

3.3 Research models

A) The following models, adapted from Habib et al. (2014), were used to analyze the relationship between earnings, its components, and earnings valuation:

- 1) $RET_{it} = \alpha_0 + \alpha_1 Earning_{it} + \alpha_2 LNAssets_{it} + \alpha_3 Leverage_{it} + \alpha_4 Growth_{it} + \epsilon_{it}$
- 2) $RET_{it} = \beta_0 + \beta_1 ACC_{it} + \beta_2 OCF_{it} + \beta_3 LNAssets_{it} + \beta_4 Leverage_{it} + \beta_5 Growth_{it} + \epsilon_{it}$
- 3) $RET_{it} = \mu_0 + \mu_1 DA_{it} + \mu_2 NDA_{it} + \mu_3 OCF_{it} + \mu_4 LNAssets_{it} + \mu_5 Leverage_{it} + \mu_6 Growth_{it} + \epsilon_{it}$

B) The following models, adapted from Habib et al. (2014), were used to analyze the effect of audit quality on the relationship between earnings, its components, and earnings valuation:

- 4) $RET_{it} = \alpha_0 + \alpha_1 Earning_{it} + \alpha_2 BIG_{it} + \alpha_3 BIG_{it} * Earning_{it} + \alpha_4 ADTNR_{it} + \alpha_5 ADTNR_{it} * Earning_{it} + \alpha_6 ADEXP_{it} + \alpha_7 ADEXP_{it} * Earning_{it} + \alpha_8 LNAssets_{it} + \alpha_9 Leverage_{it} + \alpha_{10} Growth_{it} + \epsilon_{it}$
- 5) $RET_{it} = \beta_0 + \beta_1 ACC_{it} + \beta_2 OCF_{it} + \beta_3 BIG_{it} + \beta_4 BIG_{it} * ACC_{it} + \beta_5 BIG_{it} * CFO_{it} + \beta_6 ADTNR_{it} + \beta_7 ADTNR_{it} * ACC_{it} + \beta_8 ADTNR_{it} * CFO_{it} + \beta_9 ADEXP_{it} + \beta_{10} ADEXP_{it} * ACC_{it} + \beta_{11} ADEXP_{it} * CFO_{it} + \beta_{12} LNAssets_{it} + \beta_{13} Leverage_{it} + \beta_{14} Growth_{it} + \epsilon_{it}$
- 6) $RET_{it} = \mu_0 + \mu_1 DA_{it} + \mu_2 NDA_{it} + \mu_3 OCF_{it} + \mu_4 BIG_{it} + \mu_5 BIG_{it} * DA_{it} + \mu_6 BIG_{it} * NDA_{it} + \mu_7 BIG_{it} * CFO_{it} + \mu_8 ADTNR_{it} +$

$$\mu_9 \text{ADTNRit}^* \text{DAit} + \mu_{10} \text{ADTNRit}^* \text{NDAit} + \mu_{11} \text{ADTNRit}^* \text{CFOit} + \mu_{12} \text{ADEXPit} + \mu_{13} \text{ADEXPit}^* \text{DAit} + \mu_{14} \text{ADEXPit}^* \text{NDAit} + \mu_{15} \text{ADEXPit}^* \text{CFOit} + \mu_{16} \text{LNAssetsit} + \mu_{17} \text{Leverageit} + \mu_{18} \text{Growthit} + \varepsilon_i$$

3.4 Measuring the research variables

Dependent variables:

RET: is earnings valuation, which is achieved by adjusting the annual stock return.

Independent Variables:

Earnings: the net profit of a company, which is adjusted by its assets at the beginning of the year.

ACC: the net profit minus the company's operational cash flow, which is adjusted by its assets at the beginning of the year.

DA: the residual of adjusted Jones' model by Kothari et al. (2005).

NDA: the total accrual minus discretionary accruals.

OCF: company's net cash flow adjusted by its assets at the beginning of the year.

BIG: equal to 1, if the company is audited by an organization, otherwise it is 0.

ADTNR: the number of years an auditor has been in charge of auditing in a company.

ADEXP: equal to 1, if the auditor is industry specialist, otherwise it is 0.

Control variables:

LNASSET: the natural logarithm of total firm assets.

LEVERAGE: total firm debts on total firm asset.

Growth: the stock market value on stock book value.

4. The results

4.1 Descriptive statistics

Table 1 displays the obtained descriptive results of the research, involving mean, median, standard deviation, minimum and maximum observation, skewness and kurtosis.

Table 1 Descriptive statistic of research variables

Variable	Observation No.	Mean	Median	Standard deviation	Maximum	Minimum	skewness	kurtosis
RET	987	0.163	0.088	0.701	2.929	-1.740	0.774	5.117
Earning	987	0.163	0.130	0.173	0.98	-0.35	1.318	6.051
ACC	987	0.011	-0.003	0.162	1.058	-0.731	0.770	8.063
DA	987	0.005	0.003	0.279	4.183	-5.133	-2.965	6.123
NDA	987	0.006	-0.004	0.253	4.954	-3.522	2.177	8.759
OCF	987	0.152	0.123	0.162	0.977	-0.482	1.130	6.262
BIG	987	0.210	0	0.408	1	0	1.418	3.012
ADTNR	987	3.234	3	2.11	10	1	1.106	3.814
ADEXP	987	0.098	0	0.297	1	0	2.698	8.284
LNAssets	987	13.899	13.727	1.155	19.009	10.031	0.659	3.799
LEVERAGE	987	0.597	0.611	0.201	1.099	0.012	-0.134	2.909
Growth	987	2.414	2.018	1.550	7.935	0.061	1.161	4.010

Source: Research findings

As can be seen in Table 1, the mean adjusted stock return for dependent variable is about 0.163. In the sample companies, the earnings is 0.163 on average and earnings components, including accrual and operational cash flows have the mean value of 0.011 and 0.152, respectively. Accruals, which are divided into discretionary and nondiscretionary accruals, have the mean value of 0.005 and 0.006, respectively. In this case, the total means of earnings components (accruals and operational cash flows) is the mean earnings and the total means of non/discretionary accruals is mean accruals. The calculated audit quality, audit firm size, auditor tenure, and auditor industry specialization have the mean

of 0.210, 3.234, and 0.098, respectively. The variable of size in sample companies is 13.899 on average, and financial leverage and growth have the respective mean of 0.597 and 2.414 in the sample.

Results of the hypotheses

Since hypothesis testing is performed using a combined-data regression model, F-Limer test should be administered initially to determine an appropriate estimation.

F-Limer (Chao) for the models of research hypotheses

Table 2 The results of F-Limer test

F-Limer Test	F statistic	Range of probability	Result
Model 1	1.159	0.0001	Panel model is appropriate
Model 2	1.59	0.0001	Panel model is appropriate
Model 3	1.58	0.0001	Panel model is appropriate
Model 4	1.58	0.0001	Panel model is appropriate
Model 5	1.54	0.0001	Panel model is appropriate
Model 6	1.53	0.0001	Panel model is appropriate

Source: Research findings

The results of the F-Limer test for research models indicated that the data related to these models follow the panel method.

Hausman test for models related to research hypotheses

After establishing the panel data model, it is required to determine whether the model has fixed effects or whether it has random effects. For this purpose the Hausman test was employed, the results of which are depicted in Table 3.

Table 3 The results of the Hausman test

Hausman Test	Chi-square statistic	Range of probability	Result
Model 1	25.98	0.0000	Fixed effect panel method
Model 2	26.09	0.0000	Fixed effect panel method
Model 3	25.73	0.0002	Fixed effect panel method
Model 4	24.85	0.0056	Fixed effect panel method
Model 5	24.32	0.0419	Fixed effect panel method
Model 6	29.01	0.0482	Fixed effect panel method

Source: Research findings

After establishing the required model for testing research hypotheses, we performed the final fitting for each hypothesis.

Estimation of the first hypothesis parameters

Table 4 The results of final fitting of the first hypothesis model

Variable	Symbol	Coefficient	Standard deviation	t statistic	P-value
Constant value	c	-4.557	0.679	-6.709	0.0000
Earnings	Earning	-0.002	0.045	-0.046	0.9627
Firm size	LNAsset	0.328	0.047	6.926	0.0000
Financial leverage	LEVERAGE	0.112	0.162	0.689	0.4904
Firm growth	Growth	0.060	0.010	5.476	0.000
Coefficient of determination		0.195			
F statistic		1.0423			
F significance level		0.0017			

Source: Research findings

As can be seen, the coefficient of determination indicates that the variable of profit accounts for 19% of changes of earnings valuation. The significance of F statistic (1.0423) is indicative of general significance of the first hypothesis model. In the following, given the t statistic at the significance level of coefficients and the symbol of regression coefficient of each vari-

able, we could conclude that there is no relationship between earnings and earnings valuation. Therefore, the first hypothesis is rejected. In addition, the variables of firm size and firm growth have a positive and significant relationship with earnings valuation, whereas there is no such relationship between financial leverage and earnings valuation.

Estimation of the second and third hypothesis parameters

Table 5 The results of final fitting of the second hypothesis

Variable	Symbol	Coefficient	Standard deviation	t statistic	P-value
Constant value	c	-4.493	0.684	-6.568	0.0000
Accruals	ACC	0.0504	0.0808	0.624	0.5327
Operational cash flow	OCF	-0.008	0.0457	-0.184	0.8540
Firm size	LNAsset	0.323	0.0478	6.765	0.0000
Financial leverage	LEVERAGE	0.119	0.163	0.731	0.4646
Firm growth	Growth	0.060	0.0109	5.512	0.0000
Coefficient of determination		0.196			
F statistic		1.4173			
F significance level		0.0019			

Source: Research findings

As can be seen, the coefficient of determination indicates that the variable of accruals and operational cash accounts for 19% of changes of earnings valuation. The significance of F statistic (1.417) is indicative of general significance of the second hypothesis. In the following, given the t statistic at the significance level of coefficients and the symbol of regression coefficient of each variable, we conclude

that there is no relationship between the variable of accruals and operational cash and earnings valuation. Therefore, the second hypothesis is rejected. In addition, the variables of firm size and firm growth have positive and significant relationship with earnings valuation, whereas there is no such relationship between financial leverage and earnings valuation.

Table 6 The results of final fitting of the third hypothesis

Variable	Symbol	Coefficient	Standard deviation	t statistic	P-value
Constant value	c	-4.487	0.686	-6.537	0.0000
Discretionary accruals	DA	0.038	0.103	0.377	0.0705
Nondiscretionary accruals	NDA	0.063	0.126	0.502	0.615
Operational cash flow	OCF	-0.010	0.047	-0.217	0.828
Firm size	LNAsset	0.323	0.047	6.739	0.0000
Financial leverage	LEVERAGE	0.115	0.163	0.709	0.478
Firm growth	Growth	0.060	0.011	5.476	0.0000
Coefficient of determination		0.196			
F statistic		1.407			
F significance level		0.0023			

Source: Research findings

As can be seen, the coefficient of determination indicates that the variable of accruals and operational cash accounts for 19% of changes of earnings valuation. The significance of F statistic (1.407) is indicative of general significance of the third hypothesis. In the following, given the t statistic at the significance level of coefficients and the symbol of regression coefficient of each variable, we could

conclude that there is no relationship between the discretionary accruals, nondiscretionary accruals, and operational cash flow and earnings valuation. Therefore, the third hypothesis is rejected. In addition, the variables of firm size and firm growth have positive and significant relationship with earnings valuation, whereas there is no such relationship between financial leverage and earnings valuation.

Estimation of the third hypothesis parameters

Table 7 The results of final fitting of the hypothesis 4, 5 and 6

Variable	Symbol	Coefficient	Standard deviation	t statistic	P-value
Constant value	c	-4.423	0.674	-6.557	0.0000
Earnings	Earning	0.1096	0.182	0.600	0.5486
Auditor size	BIG	0.426	0.170	-2.500	0.0126
Auditor size* earnings	BIG* Earning	2.088	0.485	4.303	0.0000
Auditor tenure	ADTNR	0.025	0.014	-1.754	0.0798
Auditor tenure* earnings	ADTNR* Earning	-0.042	0.059	-0.713	0.4755
Auditor industry specialization	ADEXP	0.416	0.189	2.198	0.0282
Auditor industry specialization* earnings	ADEXP* Earning	-1.855	0.500	-3.705	0.0002
Firm size	LNAsset	0.320	0.047	6.764	0.0000
Financial leverage	LEVERAGE	0.238	0.162	1.464	0.1435
Firm growth	Growth	0.0564	0.0113	4.991	0.000
Coefficient of determination		0.215			
F statistic		1.5320			
F significance level		0.0001			

Source: Research findings

As can be seen in Table 7, the coefficient of determination indicates that the independent and control variables account for 21% of changes of earnings valuation. The significance of F statistic (1.5320) is indicative of general significance of the model. Concerning the t statistic at the significance level of coefficients and the symbol of regression coefficient of each variable, we could conclude that like the first research model, there is no relationship between the variable of earnings and earnings valuation. In the following, the findings indicate that there is a positive and significant relationship between auditor size and earnings valuation. Furthermore, the effect of auditor size is positive and significant on the relationship between earnings and earnings valuation. Therefore, the fourth hypothesis is accepted at 99% of confidence level. Auditor tenure also has a positive and significant relationship with earn-

ings valuation and the effect of this variable is not significant for the relationship between earnings and earnings valuation. Thus, the fifth hypothesis is rejected. In the following, the analysis of audit quality variables substantiates a positive and significant relationship between auditor industry specialization and earnings valuation. In addition, the effect of auditor industry specialization is negative and significant on the relationship between earnings and earnings valuation. Therefore, the sixth hypothesis is accepted at 99% of confidence level. As to the applied control variables and like the previous hypotheses, the variables of firm size and firm growth have a positive and significant relationship with earnings valuation, whereas there is no such a relationship between financial leverage and earnings valuation.

Estimation of the third hypothesis parameters

Table 8 The results of final fitting of the seventh, eighth and ninth hypotheses

Variable	Symbol	Coefficient	Standard deviation	t statistic	P-value
Constant value	c	-3.987	2.186	-1.823	0.0685
Accruals	ACC	0.123	0.174	0.705	0.4805
Operational cash flow	OCF	-0.258	0.109	-2.364	0.0183
Auditor size	BIG	-0.278	0.180	-1.541	0.1236
Auditor size* accruals	BIG* ACC	1.299	0.450	2.887	0.0040
Auditor size* operational cash flow	BIG* OCF	1.357	0.353	3.845	0.0001
Auditor tenure	ADTNR	0.040	0.015	-2.684	0.0074
Auditor tenure* accruals	ADTNR* ACC	-0.0320	0.054	-0.602	0.543
Auditor tenure*operational cash flow	ADTNR* OCF	0.081	0.037	2.154	0.0315
Auditor industry specialization	ADEXP	0.217	0.100	2.160	0.0310
Auditor industry specialization* accruals	ADEXP* ACC	-1.088	0.571	-1.903	0.0573
Auditor industry specialization* operational cash flow	ADEXP* OCF	-1.724	0.337	-5.116	0.0000
Firm size	LNAsset	0.291	0.162	1.800	0.0721
Financial leverage	LEVERAGE	0.266	0.102	2.611	0.0092
Firm growth	Growth	0.0590	0.020	2.943	0.0033
Coefficient of determination		0.213			
F statistic		1.465			
F significance level		0.0005			

Source: Research findings

Table 8 shows the coefficient of determination indicates that the independent and control variables account for 21% of changes of earnings valuation. The significance of F statistic (1.465) is indicative of general significance of the model. Concerning the t statistic at the significance level of coefficients and the symbol of regression coefficient of each variable, we could conclude that like the second research model, there is no relationship between the variable of accruals and earnings valuation. In the following, findings indicate that there is a negative and significant relationship between auditor tenure and earnings valuation, as well as a positive and significant relationship between auditor industry specialization and earnings valuation. However, in this model, firm size has no relationship with earnings valuation. The obtained results indicate the positive

and significant effect of firm size on the relationship between accrual and operational cash flow and earnings valuation. Therefore, the seventh hypothesis is accepted at 99% of confidence level. Auditor tenure has a positive and significant effect on the relationship between operational cash and earnings valuation as well. Thus, the eighth hypothesis is accepted at 99% of confidence level. In the following, the analysis of audit quality variables substantiates the negative and significant effect of auditor industry specialization on the relationship between accruals and operational cash flows and earnings valuation. Therefore, the ninth hypothesis is accepted at 99% of confidence level. Concerning the applied control variables, the variables of firm size, firm growth, and financial leverage have a positive and significant relationship with earnings valuation.

Table 9 The results of final fitting of the tenth, eleventh and twelfth hypotheses

Variable	Symbol	Coefficient	Standard deviation	t statistic	P-value
Constant value	c	-4.025	2.188	-1.838	0.0663
Discretionary Accruals	DA	0.0130	0.370	0.035	0.9720
Nondiscretionary Accruals	NDA	0.347	0.180	1.918	0.0554
Operational cash flow	OCF	-0.275	0.162	-1.695	0.0904
Auditor size	BIG	-0.296	0.185	-1.595	0.1110
Auditor size* discretionary Accruals	BIG* DA	1.401	0.504	2.780	0.0056
Auditor size* nondiscretionary Accruals	BIG* NDA	1.462	0.401	3.647	0.0003
Auditor size* operational cash flow	BIG* OCF	1.006	0.339	2.961	0.0031
Auditor tenure	ADTNR	-0.038	0.162	-2.385	0.0173
Auditor tenure* discretionary Accruals	ADTNR* DA	0.002	0.099	0.029	0.9764
Auditor tenure* nondiscretionary Accruals	ADTNR* NDA	0.086	0.052	1.651	0.0990
Auditor tenure* operational cash flow	ADTNR* OCF	-0.114	0.053	-2.139	0.0327
Auditor industry specialization	ADEXP	0.230	0.095	2.428	0.0154
Auditor industry specialization* discretionary Accruals	ADEXP* DA	-1.092	0.607	-1.798	0.0724
Auditor industry specialization* nondiscretionary Accruals	ADEXP* NDA	-1.721	0.335	-4.839	0.0000
Auditor industry specialization* operational cash flow	ADEXP* OCF	-0.052	0.938	-0.055	0.9558
Firm size	LNAsset	0.293	0.161	1.815	0.0699
Financial leverage	LEVERAGE	0.275	0.105	2.615	0.0091
Firm growth	Growth	0.059	0.019	3.021	0.0026
Coefficient of determination		0.214			
F statistic		1.431			
F significance level		0.0010			

Source: Research findings

Table 9 shows the coefficient of determination indicates that the independent and control variables account for 21% of changes of earnings valuation. The significance of F statistic (1.431) is indicative of general significance of the model. Concerning the t statistic at the significance level of coefficients and the symbol of regression coefficient of each variable, we could conclude that like the third research model, there is no relationship between discretionary accruals and earnings valuation. The non-discretionary accruals and operational cash flows, however, unlike the third hypothesis model, have a positive and a negative relationship, respectively. In the following, findings indicate that there is a negative and significant relationship between auditor tenure and earnings valuation, as well as a positive and significant relationship between auditor industry specialization and earnings valuation. However, in this model, firm size has no relationship with earnings valuation. The obtained results indicate the positive and significant effect of firm size on the relationship between non/discretionary accruals and operational cash flow and earnings valuation. Therefore, the tenth hypothesis is accepted at 99% of confidence level. Auditor tenure has a positive and significant effect on the relationship between nondiscretionary accruals and earnings valuation, as well as a negative and significant effect on the relationship between operational cash flow and earnings valuation. Thus, the eleventh hypothesis is accepted at 99% of confidence level. In the following, the analysis of audit quality variables substantiates the negative and significant effect of auditor industry specialization on the relationship between non/discretionary accruals and earnings valuation. Therefore, the twelfth hypothesis is accepted. Concerning the applied control variables, like the previous model, the variables of firm size, firm growth, and financial leverage have a positive and significant relationship with earnings valuation.

5. Discussion and conclusion

The main goal of the present article is to evaluate the relationship between earnings, its contributing components and earnings valuation and to assess the effect of audit quality on the relationship between earnings components and valuation in companies listed on the Tehran Stock Exchange. The first hypothesis was concerned with the existence of a relationship between earnings and earnings valuation. The results of this hypothesis showed no sig-

nificant relationship between these two variables. Habib et al. (2014) found that the coefficient on EARN is significantly positive and earnings components are positive and statistically highly significant as well.

The second and third hypothesis dealt with the relationship between earnings components and earnings valuation. The results of hypothesis testing for the first, second and third subsidiary hypothesis, which was between accruals (non/discretionary) and operational cash flow and earnings valuation revealed no significant relationship and the hypothesis was rejected. This result is in contrast with that of Habib et al. (2014).

In this study, we assessed the effect of audit quality (audit firm size, auditor tenure, and auditor industry specialization) on the relationship between earnings and earnings valuation. The obtained results showed the positive and significant effect of audit quality variables on the relationship earnings and earnings valuation. Furthermore, the results showed the positive and significant effect of audit firm size on the relationship between accrual and earnings valuation. This result is in contrast with that of Habib et al. (2014), who found a negative effect of audit firm size on the relationship between accruals and earnings valuation. Prior research has found evidence suggesting that high-quality auditors constrain opportunistic earnings management (Becker et al., 1998) and increase the informativeness of earnings and its components (Krishnan, 2003). Habib et al. (2014) find that audit quality does not play any incremental role in enhancing such an effect.

In addition, auditor tenure had no effect on the relationship between accruals and earnings valuation. We have also observed that auditor industry specialization has a negative and significant effect on the relationship between accruals and earnings valuation.

On the other hand, the test results on the effect of variables of audit firm size, auditor tenure, and auditor specialization on the relationship between operational cash flow and earnings valuation indicated a positive and significant effect of audit firm size on the relationship between these variables. This result is in contrast with that of Habib et al. (2014), who found a negative effect of audit firm size on the relationship between operational cash flow and earnings valuation.

Furthermore, auditor tenure has a positive and significant effect on the relationship between accruals and earnings valuation. We have established that auditor industry specialization has a negative and significant effect on the relationship between operational cash flow and earnings valuation.

The test results on the effect of variables of audit firm size, auditor tenure, and auditor specialization on the relationship between discretionary accruals and earnings valuation indicated a positive and significant effect of audit firm size on the relationship between these variables. This result is in contrast with that of Habib et al. (2014), who found a negative effect of audit firm size on the relationship between discretionary accruals and earnings valuation. Auditor tenure has no significant effect on the relationship between discretionary accruals and earnings valuation. In contrast, auditor industry specialization has a negative and significant effect

on the relationship between discretionary accruals and earnings valuation.

In conclusion, the test results on the effect of variables of audit firm size, auditor tenure, and auditor specialization on the relationship between nondiscretionary accruals and earnings valuation indicated a positive and significant effect of audit firm size on the relationship between these variables. This is in contrast with the result of Habib et al. (2014) who found a negative effect of audit firm size on the relationship between nondiscretionary accruals and earnings valuation. Auditor tenure has no positive and significant effect on the relationship between nondiscretionary accruals and earnings valuation. Lastly, auditor industry specialization has a negative and significant effect on the relationship between nondiscretionary accruals and earnings valuation.

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UTJECAJ KVALITETE REVIZIJE NA ODNOS IZMEĐU DOBITI I VREDNOVANJA DOBITI U IRANU

SAŽETAK

Glavni je cilj ovoga rada analizirati odnos između dobiti, njezinih komponenti i vrednovanja dobiti te istodobno procijeniti utjecaj kvalitete revizije na te varijable kod trgovačkih društava izlistanih na Teheranskoj burzi.

Upotrijebljeni podatci odnose se na uzorak od 141 društva izlistanog na Teheranskoj burzi od 2010. do 2016. Istraživačka hipoteza analizirana je na panel podatcima upotrebom panel metode.

Rezultati istraživanja nisu pokazali povezanost između dobiti, njezinih komponenti i vrednovanja dobiti. Analizirajući varijable kvalitete revizije utvrdili smo da veličina revizorskog društva ima pozitivan i značajan utjecaj na odnos između dobiti, njezinih komponenti i vrednovanja dobiti. Nadalje, rezultati su pokazali pozitivan i značajan utjecaj duge povezanosti osoblja s klijentom revizije na odnos između dobiti, ukupnih diskrecijskih obračunanih obveza, operativnog novčanog toka, nediskrecijskih obračunanih obveza i vrednovanja dobiti. Uz to je utvrđeno da specijalizacija revizorskog društva na određeni sektor ima negativan i značajan utjecaj na odnos između dobiti, njezinih komponenti i vrednovanja dobiti.

Cilj je istraživanja ispitati kako se kvaliteta revizije odražava na odnos između dobiti i vrednovanja dobiti u Iranu, a rezultati se mogu primijeniti i na druge zemlje u razvoju.

Ključne riječi: kvaliteta revizije, vrednovanje dobiti, elementi dobiti

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