Auditor Tenure, CEO Compensation and Earnings Management: Evidence from Jordan

HAMZEH FATHI ALSHARE[1], MOHD RIZUAN BIN ABDUL KADIR[2],
KHAIRUL ANUAR KAMARUDIN[3], HASMAIZAN BINTI HASSAN[4]
[1]College of Management, Universiti Tenaga Nasional (UNITEN), MALAYSIA
[2]College of Graduate Studies, Universiti Tenaga Nasional (UNITEN), MALAYSIA
[3]Faculty of Business, University of Wollongong, Dubai, UNITED ARAB EMIRATES
[4]College of Energy Economics & Social Science, Universiti Tenaga Nasional (UNITEN), MALAYSIA

Abstract: - The purpose of this study is to examines the impacts of auditor tenure on earnings management and if the CEO remuneration moderates this relationship. The sample includes all firms listed on the Amman Stock Exchange from 2015 to 2019 with the exclusion of the financial sector. The fixed-effect model, robustness testing to ensure data integrity and alternative measurements to ensure reliable results were used in this study. After examining the auditor tenure in this study, the study found that there is a negative and significant association with earnings management. In additional, this study showed that the combined influence of CEO compensation and auditor tenure had a negative and significant impact on earnings management. In order to reduce earnings management by decreasing opportunistic behavior and conflicts of interest, this study emphasizes the importance of high CEO compensation and auditor tenure, which is advantageous to investors, shareholders, political, and stakeholders in Jordanian firms as well as auditing firms.

Key-Words: - Auditor tenure, CEO compensation, Earnings management.

Received: August 27, 2022. Revised: September 5, 2022. Accepted: September 25, 2022. Available online: October 11, 2022.

1 Introduction

This study is considered important in the Jordanian context to provide solutions to stakeholders about limiting the manipulation of financial statements and to find a solution to the problem of earnings management spread in Jordanian companies [1]. There is a lot of evidence that has occurred recently in the Jordanian market of scandals and bankruptcy of companies whose earnings management was the main reason for their occurrence, such as United Group Holdings., Al-Barakat Group Co., Al-Jamil for Investment Co., Industrial Investment) [2].

The previous cases raised many questions about the quality of the audit process in the Jordanian environment and its ability to detect such manipulations in the financial statements. Kamarudin, Ismail and Ariff [3] pointed that the audit quality might be reflected by the auditor tenure in the firm. But the long period of auditor tenure can lead to many risks, including the relationship between the auditor and the executive director, and thus reduce the independence of the auditor. This long period may lead to a decrease in the number of evidence collected by the auditor during the audit process and his dependence on his personal knowledge The company, given his complete knowledge of the company as a result of the long period spent by the auditor in auditing the same company [4].

From another point of view, the auditor tenure for a long period can present growth in the auditor's knowledge of the company, as he can become a specialist in it and increase his ability to know the strengths and weaknesses of the company, as this helps him in detecting financial misshaping [5].

Many efforts have been made to establish the so-called mandatory rotation of audit firms because of its influence on enhancing the audit quality [6]. But in the Jordanian market, there is no application by all companies of the mandatory rotation of audit firms [2].

The agency theory will be used in this study, as it assumes that opportunistic behavior is used in their work and they are interested in their personal gains at the expense of the company's gains, and thus a conflict of interest and information asymmetry arises where there is information that the manager hides from the owners and stakeholders. Where this refers to the manager's practice of earnings management in the company [7], [8].

Bedard [9] pointed out that the external audit is more effective than the internal audit in reducing the problems of earnings management. Guindy and Basuony [10] has emphasized the significance

of using the auditor tenure in studies that focus on CEO conduct due to his capacity to lower the CEO's opportunistic behavior and lower the issues with agency theory. The Jordanian market is characterized by weak investor protection and thus provides an incentive for the CEO to practice opportunistic behavior and engage in earnings management [11]. Previous studies indicated that the company that records large earnings uses CEO compensation in a large proportion, this indicates opportunistic behavior by manipulating the company's earnings [12], [13]. This gives evidence that this study is extremely important in the Jordanian market and deserves study.

2 Literature Review and Hypothesis Development

In the examination of earnings management, prior research suggested that the administrative and professional sides be used [14]. In response to these recommendations, this study used auditor tenure and whether CEO compensation moderates the relationship between auditor tenure and earnings management.

2.1 Auditor Tenure and Earnings Management

The duration of an auditor's employment with a company is referred to as their auditor tenure. Academics and decision-makers paid attention to the auditor tenure and used it in their studies because of its great importance to the quality of the audit process, also Harber & Maroun, [15] indicated that auditor tenure cannot be excluded from the quality of the audit process, Qudah et al [11] indicated that the length of auditor tenure period indicates more auditor independence and increased the auditor's experience, as this benefits the auditor's acquisition of sufficient knowledge that enables him to complete his work to the fullest and with high quality.

another point of view, Kim et al [16] indicated that the auditor tenure, if it is long, affects the quality of the audit process negatively. In other words, the long relationship between the auditor and management leads to the auditor's inability to discover errors or discover financial manipulation. Claims have increased to prevent the existence of this relationship, so the so-called auditor rotation, as the Jordanian Corporate Governance Law forced the replacement of the auditor every three years [17].

Qawqzeh [14] documented that auditor rotation benefits the company in terms of the fact that the new auditor has more doubts and a more accurate view of the financial statements and does not easily succumb to any pressures from the management. On the contrary, Habbash & Alghamdi [18] indicated in his study that changing the auditor occurred in a large percentage of firms that suffer from financial problems, with the aim of appointing a more cooperative auditor to cover the financial problems.

Arguments in favor of and against the length of the auditor's employment, i.e., whether the length risks the auditor's objectivity and professional judgement or broadens their knowledge and expertise of the company. This conflict becomes important for studying the relationship between the TENURE and EM.

Studies have shown that the TENURE has a significant negatively impact on EM [19], [20] [21]. Lin & Hwang [22] showed the existence of a significantly and negatively correlation between TENURE and EM. However, research have documented that the TENURE positively and significantly effects on EM [23], [24], There are also studies that indicated the existence of an insignificant positive association between TENURE and EM [25], [26]. The following hypothesis will be set forth in light of the preceding findings:

H1: There is a significant relationship between auditor tenure and earnings management practices.

2.2 CEO Compensation and Earnings Management

The conflict of interest between CEOs and investors is one of the most important reasons for the emergence of the agency theory problem. CEOs are responsible for accounting policies, payment methods, and decisions related to investment in the firm. Thus, CEOs tend to make such decisions in a manner that serves their personal interests, regardless of the risks that could That confront or harm the interest of the company [27].

Therefore, the so-called CEO compensation related to the firm performance appeared and they are two types of long-term compensation through the firm shares, where the CEO is compensated based on CEO performance by granting CEO shares in the firm [28]. The second type is short-term compensation through the salary and bonuses received by the CEO during Year [29]. In this study, short-term compensation will be relied on to measure the CEO compensation, as it is difficult to obtain data on long-term compensation

and it is also not widely applied in Jordanian companies.

One of the corporate governance instruments is the COMP [30]. It is expected it will have a significant impact on the earnings management. Healy [28] indicated the CEO compensation is only an incentive for the CEO to achieve earnings for the firm in the short term. It soon appeared that these incentives allow the CEO Practicing opportunistic behavior, as it was clarified [31] in his study that earnings management practiced in a high percentage in firms in which the CEO has multiple options within the firm with high compensation, and they also suggested that these compensations when monitored by the board of directors and monitoring the reports of the CEO contribute significantly to reducing earnings management.

The conflict of opinions about the CEO compensation have makes a great importance to study the joint effect with the TENURE on EM as it reflects the administrative aspect within the firm. The finding of the previous studies demonstrated that these findings are different, as the reason for this may be due to the nature of the markets in which the studies were conducted. Therefore, this study reviewed some of the results of these studies, where [32], [33], [34] documented the existence of a significant positive association between COMP and EM. Hassen [35] informed that the CEO compensation negatively affects the earnings management. As for the most noticeable result in previous studies, the COMP has positive effects on EM [36], [37], [38], [39], [40]. The following is the proposed hypothesis based on the prior findings:

H2: The CEO compensation moderates relationship between audit tenure and earnings management practices.

3 Research Methodology

3.1 The Sample of Study and Data Collection

the association between TENURE and EM is examined in this study, also determines whether COMP influences that relationship, this study primarily focuses on data from service and industrial corporations enlisted on the ASE that were posted between from 2015 until 2019. The financial firms were excluded due to their own circumstances in preparing their financial statements [41], while they produce their financial statements using various standards and accounting standards [42].

The 81 service and industrial firms were used to conduct this research during the study period. The number of observations recorded from the panel data reached 405 observations.

3.2 Measurement of Variables

Mcnichols & Wilson [43] technique is used in this research to measure the EM by using discretionary accruals. The Kothari 2005 model was applied in this research [44] to quantify discretionary accruals using the equation below, which is expressed in the study as KDA, that was likewise employed by [45], [46], [47].

$$KDA_{i,t} = (NI_{i,t} - OCF_{i,t}) - (\beta 0 + \beta 1(1/ TA_{i,t-1}) + \beta 2 (\Delta REV_{i,t} / TA_{i,t-1} - \Delta REC_{i,t} / TA_{i,t-1}) + \beta 3(PPE_{i,t} / TA_{i,t-1}) + \beta 4(ROA_{i,t} / TA_{i,t-1})) \quad (1)$$

The modified Jones model as an alternative measure for EM [48], which is referred to in the paper as JDA. The discretionary accruals have been determined using the following equation. This study follows [49], [50].

$$JDA_{i,t} = (NI_{i,t} - OCF_{i,t}) - (\beta 0 + \beta 1(1/ TA_{i,t-1}) + \beta 2 (\Delta REV_{i,t} / TA_{i,t-1} - \Delta REC_{i,t} / TA_{i,t-1}) + \beta 3(PPE_{i,t} / TA_{i,t-1})) \quad (2)$$

Table 1. Measurement of Variables

Variables	Indicators
dependent variables	
discretionary accruals *(KDA, JDA)*	Where: TA= total assets; NI= net income; OCF= operating cash flows; REV= operating revenues; REC= net receivables; PPE= gross property, plant and equipment; ROA= return on assets.
Independent variables	
Auditor tenure (*TENURE 1*)	If the client firm has employed an auditor for longer than three years it takes a dummy value of 1, otherwise 0.
Auditor tenure (*TENURE 2*)	The natural logarithm of the number of years that the firm has kept its auditor.
Moderating variable	
CEO compensation (*COMP*)	The natural logarithm of total CEO compensation on the year
Control variables	
LEV	Total debt/ total assets
FSIZE	The natural logarithm of total assets
ROA	Net income/ total assets
MTB	Market to book ratio
CURRENT	Current assets
CFO	Cash flow from operation/ total assets
INV	Inventory/ total assets

3.3 Model of the Study

In order to examine the association between TENURE and EM and whether COMP has a moderating impact between TENURE and EM, and to test the hypotheses, the following regressions were estimated:

KDA = β0 + β1 TENURE 1 + β2CEO + β3TENURE 1 * CEO + β4LEV + β5ROA + β6FSIZE + β7MTB + β8CURRENT + β9CFO + β10INV + $e_{i,t}$ (MODEL 1)

JDA = β0 + β1 TENURE 2 + β2CEO + β3TENURE 2 * CEO + β4LEV + β5ROA + β6FSIZE + β7MTB + β8CURRENT + β9CFO + β10INV + $e_{i,t}$ (MODEL 2)

4 Results

4.1 Statistics Analysis

The descriptive analysis for the study's variables is shown in Table 2. The mean value of *JDA* is 0.03; mean value of *KDA* is 0.111, similar to Jordanian evidence [52].

The mean value of *TENURE 1* is 0.479 this indicates that 47.9% of Jordanian firms keep the auditor for more than 3 years. Besides, the table 2 shown the mean value of *TENURE 2* is 0.514, this indicates the convergence of the result with *TENURE 1*, which is considerably similar to Jordanian evidence by [14]. The mean for *CEO* is 77446JD, which is quite comparable by [53], which considered that this value is high in the Jordanian environment. the mean value for *LEV* is 0.353 which shows that 35% of a firm's assets are financed by debt. The table also shows that the mean value for *ROA*, *FSIZE*, *MTB, CURRENT, CFO* and *INV* are 0.016, 4.889, 1.239, 7.695, 0.015 and 0.048, respectively.

The dependent and independent variables' Pearson correlation analysis is shown in Table 3. The findings indicate that the majority of the independent variables have a positive relationship with one another. Tables 3 shown the TENURE 1 and TENURE 2 have positive correlation with *KDA* and *JDA.* CEO has a positive and significant correlation with *KDA* and *JDA.*

Table 2. Descriptive Statistics

Variables	Minimum	Maximum	Mean	Std. Deviation
KDA	-0.356	1.748	0.111	0.204
JDA	-0.365	2.106	0.030	0.231
TENURE 1	0.000	1.000	0.479	0.500
TENURE 2	0.000	0.903	0.514	0.244
CEO	400	533335	77446	3
LEV	0.001	0.959	0.353	0.228
ROA	-0.613	0.387	0.016	0.097
FSIZE	2.602	5.727	4.889	0.493
MTB	0.117	12.410	1.239	1.252
CURRENT	0.021	902.166	7.695	59.856
CFO	-0.689	0.835	0.015	0.123
INV	0.000	0.536	0.048	0.085

Table 3. Correlation Analysis

Probability	KDA	JDA	TENURE 1	TENURE 2	CEO	LEV	ROA
KDA	1.000						
JDA	0.708***	1.000					
TENURE 1	0.074	0.091*	1.000				
TENURE 2	0.104**	0.112**	-0.609***	1.000			
CEO	0.128***	0.143***	-0.066	0.083*	1.000		
LEV	0.045	0.035	-0.079	0.048	0.388***	1.000	
ROA	0.063	0.185***	0.062	-0.002	0.284***	-0.241***	1.000
FSIZE	0.048	0.095*	0.002	0.020	0.317***	0.144***	0.099**
MTB	-0.063	0.045	-0.029	0.695***	0.137***	0.095*	0.329***
CURRENT	-0.010	0.035	-0.032	0.038	-0.228***	-0.161***	-0.020
CFO	-0.053	0.012	-0.015	0.009	-0.141***	-0.085*	-0.136***
INV	-0.064	-0.057	0.084*	-0.082	-0.263***	-0.012	-0.040
	FSIZE	MTB	CURRENT	CFO	INV		
FSIZE	1.000						
MTB	0.020	1.000					
CURRENT	0.003	0.061	1.000				
CFO	-0.082	-0.027	0.052	1.000			
INV	0.099	-0.069	0.061	0.015	1.000		

*, ** and *** represent significance at p<0.10, <0.05 and <0.01, respectively

4.2 Main Empirical Results

Table 4 presents the fixed effect model to test hypothesis of the study. Table 4 provides the regression estimates for model 1 (KDA). also provides the regression estimates of model 2 (JDA). Table 4 indicates a negative and significant association between TENURE 1, TENURE 2 and discretionary accruals (KDA and JDA), meaning the auditor tenure can decrease the earnings management practices when the firm keeps the same auditor for a long time. This result agrees with the agency theory that auditor tenure limits earnings management due to auditor tenure increasing audit quality [11]. Moreover, this result consists with [19], [20], [21]. The first hypothesis was accepted by this finding, which states that there is a significant relationship between TENURE and EM.

The COMP result in Table 4 demonstrated a positive and significant association with EM (JDA and KDA), this result contradicts the agency theory because it shows that CEO compensation cannot be increased while EM practices remain unchanged. However, this finding is in line with earlier research [32], [33], [34].

The findings in Table 4 reveal that the combined impact of TENURE and COMP on EM has a negative and significant relationship, for the main and alternative measurement. This indicates the longer the auditor's tenure period, with the CEO receiving high compensation, can less opportunistic behavior practices and thus reducing the EM. This finding is consistent with the agency theory, which maintained that utilizing COMP with high audit quality helps prevent conflicts of interest and agency problems. The findings of the control variables are also listed in Table 4; the bulk of these data revealed a significant association between LEV, ROA, CURRENT, and INV on EM.

Table 4. Fixed Effect Model

Variables	KDA	JDA
TENURE 1	-0.027*** (2.066)	
TENURE 2		-0.482** (2.322)
CEO	0.308*** (-2.146)	0.316*** (-2.331)
TENURE 1 *	-0.041** (2.141)	
TENURE 2 *		-0.065** (2.771)
LEV	0.202*** (4.385)	0.115** (3.355)
ROA	0.466*** (0.126)	0.714*** (0.186)
FSIZE	0.004 (-0.727)	0.003 (0.689)
MTB	-0.005** (2.646)	-0.002 (2.190)
CURRENT	0.001*** (0.829)	0.001*** (2.329)
CFO	-0.026 (2.595)	-0.027 (-0.744)
INV	0.388*** (-3.617)	0.367*** (3.205)
R- squared	0.324	0.319
F- Statistic	819.354***	1003.5***
No. of obs	405	405

*, ** and *** represent significance at p<0.10, <0.05 and <0.01, respectively

4.3 Robustness Analysis

To demonstrate that the results are consistent, this study contains tests. The tests include the heteroscedasticity test, the serial correlation test and the feasible generalized least square test. To investigate whether the dataset had a problem with heteroscedasticity, this study applied the Modified Wald test for GroupWise heteroscedasticity. The p-value in table 5 is higher than 0.1, it indicates that there is no heteroscedasticity issue with the panel data used for this analysis.

Table 5. Modified Wald Test

H0: there is no heteroscedasticity issue	
Chi2 (81) = 1.01e+03	Prob>chi2 = 0.204

*, ** and *** represent significance at p<0.10, <0.05 and <0.01, respectively.

In this study, the serial correlation issue was explored in this study by using the Wooldridge test analysis. Table 6 displayed the Wooldridge test findings; the result demonstrates that there is no serial association in this study.

Table 6. Wooldridge Test for Autocorrelation

H0: no first order autocorrelation	
F(4,368) = 0.001	Prob>f = 0.362

*, ** and *** represent significance at p<0.10, <0.05 and <0.01, respectively.

The results of the feasible generalized least square (FGLS) method are shown in Table 7. The study used the (FGLS) method to examine the veracity of the results presented above. According to Bekhet et al [51] FGLS can solve issues like heteroscedasticity, serial correlation, and panel error structure.

According to the FGLS findings, TENURE significantly and negatively impacts on EM. In addition, the result shown the COMP has a positive significant effect on EM. in addition, Table 6's findings revealed that they concurred with the study's findings when FEM was used, demonstrating the validity of the research's findings.

Table 7. FGLS Results

Variables	KDA	JDA
TENURE 1	-0.031*** (2.128)	
TENURE 2		-0.362** (2.161)
CEO	0.213** (-1.782)	0.244** (-3.002)
TENURE 1 * CEO	-0.123** (3.561)	
TENURE 2 * CEO		-0.742** (3.114)
LEV	0.402** (3.678)	0.179** (3.382)
ROA	0.721*** (1.249)	0.321** (1.731)
FSIZE	0.012 (-1.329)	0.011 (-0.592)
MTB	-0.025** (1.862)	-0.319* (1.059)
CURRENT	0.120*** (0.763)	0.338*** (0.652)
CFO	-0.093 (2.562)	-0.023 (2.003)
INV	0.494** (-2.102)	0.319** (-1.876)

*, ** and *** represent significance at p<0.10, <0.05 and <0.01, respectively.

5 Conclusions

This study investigated the association between TENURE and EM and whether COMP moderates the association between TENURE and EM. An alternative method was used to measure TENURE and EM to verify the results of the study.

The study's findings showed a significant and negative association between TENURE and EM, when we used the main measure and alternative measurement, The reason for this is that 50% of Jordanian firms keep the auditor for a period of more than 3 years, as this helps the auditor to acquire the necessary experience and increases his independence, as this leads to an increase the quality of the audit process and thus reducing earnings management. It is possible that the reason, in addition to the increase in the auditing quality and depending on the findings of the study, which indicate that the size of companies in Jordan is not large, as well as the business and growth of the company is low, so it is easier for the auditor when he has been in the firm for more than 3 years to know all the work of the firm and thus be able to spot errors and opportunistic behavior.

The study revealed a significant and negative relationship between TENURE and COMP on EM, based on the investigation's findings, the reason for this is the CEO receives high compensation compared to the firm's performance and the small profit that the company obtains, where the CEO is cooperating with the auditor who audits the company for a long time in detection of any errors and abuses and thus limits the earnings management. This study recommends companies to retain the auditor for a long period and at the same time give the CEO high compensation coupled with performance in order to be able to eliminate this opportunistic behavior. The study also recommends using real earnings management in future studies.

References:

[1] I. Z. Ramadan, "Creative accounting: Theoretical framework for dealing with its determinants and institutional investors' involvement," Cardiff Metropolitan University, 2017.

[2] H. K. Qawqzeh, "The Mediating Effect Of Audit Quality On The Relationship Between

Corporate Governance Mechanisms And Financial Reporting Quality," phd Thesis 2021.

[3] K. A. Kamarudin, W. A. W. Ismail, and A. M. Ariff, "Auditor tenure , investor protection and accounting quality : international evidence," *Account. Res. J.*, vol. 35, no. 2, pp. 238–260, 2021.

[4] A. Ghosh and S. Siriviriyakul, "Quasi rents to audit firms from longer tenure," *Account. Horizons*, vol. 32, no. 2, pp. 81–102, 2018.

[5] B. E. Daugherty, D. Dickins, R. C. Hatfield, and J. L. Higgs, "An Examination of Partner Perceptions of Partner Rotation: Direct and Indirect Consequences to Audit Quality," *Audit. A J. Pract. Theory*, vol. 31, no. 1, pp. 97–114, 2012.

[6] F. Ball, J. Tyler, and P. Wells, "Is audit quality impacted by auditor relationships?," *J. Contemp. Account. Econ.*, vol. 11, no. 2, pp. 166–181, 2015.

[7] E. F. Fama, "Agency Problems and the Theory of the Firm," *J. Polit. Econ.*, vol. 88, no. 2, pp. 288–307, 1980.

[8] C. Jensen and H. Meckling, "Theory of the firm: managerial behavior, agency costs and ownership structure," *J. financ. econ.*, vol. 3, pp. 305–360, 1976.

[9] J. C. Bedard, "Detection and Severity Classifications of Sarbanes-Oxley Section 404 Internal Control Deficiencies," *Account. Rev.*, vol. 86, no. 3, pp. 825–855, 2011.

[10] M. N. El Guindy and M. A. K. Basuony, "Audit Firm Tenure And Earnings Management : The Impact Of Changing Accounting Standards In UK Firms," *J. Dev. Areas*, vol. 52, no. 4, pp. 167–181, 2018.

[11] L. Qudah, M. Hamidat, and Y. Alhrout, "The impact of the size of the audit office and the period of customer retention in reducing the practice of earnings management (An Empirical study on the Industrial companies listed on the Amman Stock Exchange: Jordan)," *J. Econ. Adm. Sci. / Qassim Univ.*, vol. 10, no. 2, pp. 171–205, 2018.

[12] V. de F. Santana and R. W. Sarquis, "Earnings management to avoid earnings decreases and losses," *Rev. Catarinense da Ciência Contábil*, vol. 20, p. e3153, 2021.

[13] P. J. Baldacchino, "External auditing and corporate governance perspectives in a small state : the case of Malta," 2017.

[14] H. K. Qawqzeh, W. A. Endut, N. Rashid, and M. Dakhlallh, "Impact of the external auditor ' s effectiveness on the financial reporting quality : the mediating effect of audit quality," *J. Crit. Rev.*, vol. 7, no. 6, pp. 1197–1208, 2020.

[15] M. Harber and W. Maroun, "Mandatory audit firm rotation: a critical composition of practitioner views from an emerging economy," *Manag. Audit. J.*, vol. 35, no. 7, pp. 861–896, 2020.

[16] H. Kim, H. Lee, and J. E. Lee, "Mandatory audit firm rotation and audit quality," *J. Appl. Bus. Res.*, vol. 31, no. 3, p. 1089, 2015.

[17] Jordanian Securities Commission, "Corporate Governance Instructions for Jordanian Joint Stock Companies for the year 2017," 2017.

[18] M. Habbash and S. Alghamdi, "Audit quality and earnings management in less developed economies : the case of Saudi Arabia," *J. Manag. Gov.*, vol. 21, no. 2, pp. 351–373, 2016.

[19] M. E. Nawaiseh, "Impact of External Audit Quality on Earnings Management by Banking Firms : Evidence from Jordan," *Br. J. Appl. Sci. Technol.*, vol. 12, no. 2, pp. 1–14, 2016.

[20] S. Rad, H. Salehi, and H. V. Pour, "The Impact of Audit Quality and Ownership Structure on Earnings Management of Listed Firms on Tahran Stock Exchange," *Int. Bus. Manag.*, vol. 10, no. 10, pp. 1827–1832, 2016.

[21] A. O. Silvestre, C. M. Costa, and C. A. Kronbauer, "Audit Rotation And Earnings Quality: An Analysis Using Discretionary Accruals," *Brazilian Bus. Rev.*, vol. 15, no. 5, pp. 410–426, 2018.

[22] J. W. Lin and M. I. Hwang, "Audit Quality , Corporate Governance , and Earnings Management : A Meta-Analysis," *Int. J. Audit.*, vol. 14, no. 3, pp. 57–77, 2010.

[23] A. Isiaka, "Effect of audit quality on earnings management of listed manufacturing firms in nigeria," Master thesis, Kwara State University, 2019.

[24] S. Yasser and M. Soliman, "The effect of Audit Quality on Earnings Management in Developing Countries : The Case of Egypt," *Int. Res. J. Appl. Financ.*, vol. IX, no. October, pp. 216–232, 2018.

[25] K. Tran Duc, "Audit firm rotation and audit firm tenure, improvement or deterioration of

the financial reporting quality for Dutch listed firms?," 2016.

[26] C. P. Ching, B. H. Teh, O. T. San, and H. Y. Hoe, "The Relationship among Audit Quality, Earnings Management, and Financial Performance of Malaysian Public Listed Companies.," *Int. J. Econ. Manag.*, vol. 9, no. 1, 2015.

[27] R. K. Aggarwal and A. A. Samwick, "Why do managers diversify their firms? Agency reconsidered," *J. Finance*, vol. 58, no. 1, pp. 71–118, 2003.

[28] P. M. Healy, "The effect of bonus schemes on accounting decisions," *J. Account. Econ.*, vol. 7, no. 1–3, pp. 85–107, 1985.

[29] G. Abdelwahed, "Earnings Management Constraints in the UK and the US The Moderating Role of CEO Compensation," 2018.

[30] M. M. Cornett, A. J. Marcus, and H. Tehranian, "Corporate governance and pay-for-performance: The impact of earnings management," *J. financ. econ.*, vol. 87, no. 2, pp. 357–373, 2008.

[31] N. Burns and S. Kedia, "The impact of performance-based compensation on misreporting," *J. financ. econ.*, vol. 79, pp. 35–67, 2006.

[32] C. Cella, A. Ellul, and N. Gupta, "Earnings Management and CEO Compensation over Tenure," *Riksbank Res. Pap. Ser. Forthcom.*, vol. 15–18, 2017.

[33] F. Lin, S. Lin, and W. Fang, "How CEO narcissism affects earnings management behaviors," *North Am. J. Econ. Financ.*, 2019.

[34] K. Park, "Does peer firm executive compensation affect earnings management?," *Manag. Financ.*, vol. 45, no. 1, pp. 54–71, 2019.

[35] R. Ben Hassen, "Executive Compensation and Earning Management," *Int. J. Account. Financ. Report.*, vol. 4, no. 1, p. 84, 2014.

[36] M. Almadi and P. Lazic, "CEO incentive compensation and earnings management The implications of institutions and governance systems," *Implic. institutions Gov. Syst.*, vol. 54, no. 10, pp. 2447–2461, 2016.

[37] L. Li and C. Kuo, "CEO equity compensation and earnings management : The role of growth opportunities," *Financ. Res. Lett.*, vol. 20, pp. 289–295, 2016.

[38] B. H. Kim, "Is Narcissism Sustainable in CEO Leadership of State-Owned Enterprises?," *Sustainability*, vol. 10, no. 7, pp. 1–13, 2018.

[39] Y.-Y. Chou and M.-L. Chan, "The impact of CEO characteristics on real earnings management: Evidence from the US banking industry," *J. Appl. Financ. Bank.*, vol. 8, no. 2, pp. 17–44, 2018.

[40] O. Assenso, M. J. Ali, and K. Ahmed, "The effects of global financial crisis on the relationship between CEO compensation and earnings management," *Int. J. Account. Inf. Manag.*, vol. 28, no. 2, pp. 389–408, 2020.

[41] N. Sun, A. Salama, K. Hussainey, and M. Habbash, "Corporate environmental disclosure , corporate governance and earnings management," *Manag. Audit. J.*, vol. 25, no. 7, pp. 679–700, 2010.

[42] A. Kouaib and A. Jarboui, "External audit quality and ownership structure: interaction and impact on earnings management of industrial and commercial Tunisian sectors," *J. Econ. Financ. Adm. Sci.*, vol. 19, no. 37, pp. 79–89, 2014.

[43] M. Mcnichols and G. P. Wilson, "Evidence of earnings management from the provision for bad debts," *J. Account. Res.*, pp. 1–31, 1988.

[44] S. P. Kothari, A. J. Leone, and C. E. Wasley, "Performance matched discretionary accrual measures," *J. Account. Econ.*, vol. 39, no. 1, pp. 163–197, 2005.

[45] S. Abdallah, "External auditor type , discretionary accruals and investors ' reactions," *J. Account. Emerg. Econ.*, vol. 8, no. 2, pp. 352–368, 2018.

[46] N. Orazalin and R. Akhmetzhanov, "Earnings management , audit quality , and cost of debt : evidence from a Central Asian economy," *Manag. Audit. J.*, vol. 34, no. 6, pp. 696–721, 2019.

[47] T. S. Almarayeh, B. Aibar-Guzmán, and M. Abdullatif, "Does audit quality influence earnings management in emerging markets? Evidence from Jordan," *Rev. Contab. Account. Rev.*, vol. 23, no. 1, pp. 64–74, 2020.

[48] P. M. Dechow, R. G. Sloan, and A. P. Sweeney, "Detecting earnings management," *Account. Rev.*, pp. 193–225, 1995.

[49] R. M. Alqatamin, Z. A. Aribi, and T. Arun, "The effect of the CEO's characteristics on EM: Evidence from Jordan," *Int. J. Account. Inf. Manag.*, vol. 25, no. 3, pp.

356–375, 2017.

[50] S. C. Anagnostopoulou and A. E. Tsekrekos, "The effect of financial leverage on real and accrual-based earnings management," *Account. Bus. Res.*, vol. 47, no. 2, pp. 191–236, 2017.

[51] O. Harris, J. B. Karl, and E. Lawrence, "CEO compensation and earnings management: Does gender really matters?," *J. Bus. Res.*, vol. 98, no. February 2018, pp. 1–14, 2019.

[52] E. S. S. Alzoubi, "Audit quality, debt financing, and earnings management: Evidence from Jordan," *J. Int. Accounting, Audit. Tax.*, vol. 30, no. 12, pp. 69–84, 2018.

[53] M. H. Bani Khaled, "The relationship between CEO compensation and financial performance in Jordanian public shareholding industrial companies," *Invest. Manag. Financ. Innov.*, vol. 17, no. 2, pp. 240–254, 2020.

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

The authors equally contributed in the present research, at all stages from the formulation of the problem to the final findings and solution.

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

No funding was received for conducting this study.

Conflict of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.