Journal of Financial, Accounting and Managerial Studies
ISSN 2352-9962/E-ISSN 2572-0147
Volume09 Number 02– December 2022

OEB Univ. Publish. Co.

The Relationship between Audit Quality and Earnings Management: Evidence from Jordan

Mohannad Mohammad Ebbini [1*]

Muhammad Fahad Al-Ajmi[2*]

[1] Assistant Professor, Jordan, Ajloun National University, Accounting Department, Mohebinni@yahoo.com

[2] Senior Auditor, Kuwait, Kuwait Ports Authority,

Received: **2022-08-06** **Date of revision*:*** **2022-08-08** **Date of acceptation*:*** **2022-12-09**

Abstract

Audit plays a major role in creating confidence in the financial statements, which influences the decisions of its users. Which led to increased interest in the concept of audit quality and measuring its impact on earnings management practices. This study aims to examine the impact of audit quality on earnings management for industrial companies listed on the ASE for the period 2015-2019. To measure audit quality, three indicators were used, audit firm size, audit fee, and non-audit service fee. The results of the analysis showed that audit fees are significantly negatively related to earnings management. As for the size of the audit firm, it is significantly positively related to earnings management. On the other hand, non-audit services have insignificant impact on earnings management.

Keywords: Audit Quality, Earnings Management, Jordan, Audit Fees, Non-audit Fees, Audit Firm Size

Jel Classification Codes: XN1, XN2.

1. Introduction

Many financial crises and scandals have rocked the global economy, including WorldCom's bankruptcy in 2002 and Enron's bankruptcy in 2001, making financial statement reliability and credibility a critical issue of debate. The goal of international accounting standards is to minimize prejudice and objectivity in accounting measurement and present financial data in a transparent manner. However, the flexibility with which these standards has allow management to choose between accounting rules and processes has led to management abusing this flexibility to achieve their purposes and aims, thus jeopardizing the credibility of financial reports and, by extension, stakeholders. As a result, the term of earnings management was born.

Earnings management (EM) strategies primarily lead to a misrepresentation of a company's actual financial status. According to Rankin et al. (2012), the collapse of global enterprises was caused by an imbalance of funding structures, the inability to meet outstanding commitments, the lack of supervisory systems, and the financial and administrative corruption of audit firms. Consequently, many accounting scandals have befallen the credibility of the audit function (such as the reputation of the auditor and the independence of the auditor) and the quality of the financial reports published by companies.

Earnings management, according to Kitiwong (2014), indicates a faulty audit, which could contribute to greater fraud accounting. In other words, the auditor is viewed as a valuable third party who limits earnings management, hence improving the accuracy of accounting data. Therefore, this study focuses on audit quality as a critical issue in limiting earnings management practices.

2. Theoretical Framework

2.1 Audit Quality

During the period (1995-2005), many companies were subjected to bankruptcy and collapse, and this was accompanied by the filing of many cases against the accounting and auditing offices that took over the review of these companies. There have been many attempts to define "audit quality" in the past; however, these attempts did not reach a single definition that would be universally recognized and accepted, as the concept of audit quality is a complex and multifaceted concept that is subject to many direct and indirect influences. On the other hand, Developed legal activities on strengthening auditor regulation are motivated mainly by the desire to increase audit quality; nevertheless, it is unclear if regulators, stakeholders, and auditors all agree on what audit quality implies and the appropriate method to measure it (Gros & Worret, 2014).

DeAngelo (1981) for example, define the audit quality as the opportunity or possibility for auditors to identify and report major errors. Flint (1988) defined audit quality also as an external indicator of the auditor's ability to carry out his professional duties. Furthermore, audit quality is described by Teoh and Wong (1993) as the procedure that results in high-quality financial reporting.

2.2 Earnings Management

Earning Management is a type of creative accounting that entails manipulating accounting numbers in order to create a fictitious influence on a company's financial performance. Earnings management divided into two categories: real earnings management, which influences cash flow, and discretionary accruals, which involves changing accounting estimates and procedures. The second

form is the most common techniques followed by managers to influence earnings of firm (Abu Arish, 2016).

Earnings management is defined as management activities that aim to impact the income presented in financial statements without achieving a true economic advantage at long-term (Merchant and Rakness, 2002). Besides, Tarif, (2012) define earnings management as the administration's legal or illegal tactics and measures to sway the company's earnings.

2.3 Agency Theory

Agency theory has been employed extensively by researchers in a variety of fields, including accounting, economics, finance, marketing, political science, and sociology (Clark, 2004). The relationship between the principal and the agent is referred to as agency theory. The principal (shareholders) delegate or employs the agent (managers) to handle his work in the best possible way, according to agency theory. The process of delegating decision-making by the principal to the agent, as well as the separation of management and ownership, can provide managers motivation to decline in work efficiency and effectiveness, as a results the agency problem has born.

3. Literature Review

In the literature, the evidence regarding the impact of audit quality on earnings management are mixed. It can explain inconclusive results in the literature due to methodological approaches, differences in conceptualization of the studies variables and differences in contextual settings of the studies. As in the literature the researchers uses different measures for audit quality and earnings management.

3.1 Audit Firm Size and Earnings Management

Many prior studies have utilized the size of the audit firm as one of the major factors to demonstrate the quality of the auditing process of financial statements. Many researchers try to verify whether large audit firms with world-famous names that are more conservative in expressing their views on the fairness and credibility of the financial statements of the companies under review are more conservative in expressing their views on the fairness and credibility of the financial statements of the companies under review, as a result of the doubts left by the scandals and major financial crises that many companies have been exposed to in many countries around the world about the reliability of large and internationally known audit firms such as Arthur Anderson, as a (Piot and Janin, 2005).

Big audit firms, according to Islam and Shukeri (2010) have the necessary resources and materials, technical and technological capabilities, and professionally and scientifically qualified personnel to complete the audit process in a high-quality manner. Furthermore, when compared to other audit companies, big audit firms perform higher-quality audits because they want to maintain their reputation and grow their market share. Larger audit firms, on the other hand, may face substantial reputational risk, according to DeAngelo (1981). As a result, in order to limit any potential risk, larger audit firms provide high audit services. Many studies have looked at the differences between top corporations and mid-/small-tier companies, such as the Big Four versus Non-Big Four or their successors. Nguyen & To (2020) utilize audit firm size as a proxy for audit quality. Larger audit firms provide superior audit quality than smaller audit firms, according to these research.

Regarding to empirical evidence the results are mixed. For example, Rahman et al. (2020) found that Big 4 auditor has a significant and negative relation with real earnings management in the

context of Malaysia. Furthermore, Lopes (2018) found that when a company hires a Big 4 audit firm, the level of earnings management is substantially lower than when a company hires a non-Big 4 audit firm. However, Sharf & Abu-Nassar (2021) found insignificant relation of audit company size with earnings management in Jordan. Besides, Abid et al. (2018) also found insignificant impact of firms that audited by big four firms on earnings management practices at firms listed on the Karachi Stock Exchange. Therefore, depending on the majority of empirical evidence the researcher propose the following hypothesis:

H_1: Audit firm size has a significant negative related with earnings management.

3.2 Non-Audit Services and Earnings Management

According to Ruddock and Taylor (2005), the non-audit services has gotten a lot of attention recently, owing to the widely held belief that non-audit services have a better profit margin than audit services. As a result, significant fees from non-audit services may compromise audit independence and, as a result, earnings quality. In other words, as non-audit fees rise, auditors are allowing more discretionary accruals.

Kang et al. (2019) argued about the issue of non-audit services and their impact of independence of the auditor. Despite concerns that non-audit services would jeopardize an external auditor's independence and therefore audit quality, the accounting literature found mixed results regarding the consequences of non-audit services. Carmona and Momparler (2012) for example, studied the impact of non-audit services on earnings management. They found that there is no significant association between abnormal accruals and consulting services provided by auditors, that is, the findings support the idea that auditor independence is not compromised by the provision of

non-audit services. Therefore, depending on the above debate the researcher proposes the following hypothesis:

H_2: Non-audit services has a significant positive related with earnings management.

3.3 Audit Fees and Earnings Management

Audit fees have been used in several studies to assess audit quality (Gandía & Huguet 2021; Nguyen & To, 2020; Ganesan et al., 2019). The argument for using this indicator is based on the notion that higher audit fees show the auditor's attempt to do the audit and its implicit quality; thus, larger audit fees can signal a higher-quality audit (e.g., O'Sullivan, 2000; Francis, 2004). Palmrose (1986), on the other hand, claims that audit firms charge more prices in exchange for increased audit quality. Increased audit fees under market system, according to Huang et al. (2015), will successfully boost audit quality. Furthermore, according to Yatim, Kent, and Clarkson (2006), the higher the audit cost, the higher the audit quality required by the investor. In other words, audit firms that offer a lower fee for their services are more flexible about their clients' earnings management (Martinez & Moraes, 2017).

In a study conducted over Nigerian Listed Firms by Mustapha et al. (2019) they found that audit quality measured by audit fees have a significant negative impact on earnings management. Besides, Sitanggang et al. (2019) found that audit fees have a significant negative impact on earnings management in UK manufacturing sector. Furthermore, Gandía & Huguet (2021) found that audit fees are negatively associated with earnings management. Therefore, depending on the above debate the researcher proposes the following hypothesis:

H_3: Audit fees have a significant negative related with earnings management.

4. Methodology

4.1 Sample Selection

All industrial joint-stock businesses operating in Jordan between 2015 and 2019 are included in the study population. The

Securities Depository Center (SDC) reported that industrial sector in Jordan included 52 companies. This research is confined to industrial businesses who were listed on the Amman Stock Exchange (ASE) between 2015 and 2019. As a result, during the study period, there were 32 industrial enterprises listed on the Amman Stock Exchange with financial statements available.

4.2 Study Variables

Earnings Management

Earnings management can be accomplished in two ways: first, using actual activity manipulation, in which management adjusts a firm's actual performance to mislead users, and second, using accounting accruals (Debnath, 2017). In the literature, discretionary accrual is a common proxy for determining earnings management strategies. This study uses Modified Jones Model (MJM) to measure discretionary accruals since MJM is widely used in the literature (Debnath, 2017). Measurement of discretionary accruals using the modified Jones model, as described by Dechow et al. (1995) as follow:

Step 1: calculation the total accruals:

TAC_{it} = ER-CFO

Where:

TAC: Total Accruals

ER: Earnings

CFO: Cash Flow from Operations

Step 2: determining non-discretionary accruals by estimating the model's parameters using the regression equation below for each sample company and each year separately:

$$TAC_{it}/AS_{it-1} = \beta 1\ (1/AS_{it-1}) + \beta 2\ (\Delta REV_{it} - \Delta REC_{it})/\ AS_{it-1} + \beta 3\ (PPE_{it}\ /AS_{it-1}) + \varepsilon_{it}$$

Where:

TAC: Total Accruals.

AS: Total assets at the end of the previous year.
ΔREV: Change in Revenue.
ΔREC: Change in Receivables.
FA: Property, Plant, and Equipment
Step 3: Using the model parameters determined from the preceding equation to calculate non-discretionary accruals for each of the sample companies:

$$NDA = \beta 1\ (1/AS_{it}) + \beta 2\ (\Delta REV_{it} - \Delta REC_{it})/\ AS_{it} + \beta 3\ (FA_{it}\ /\ AS_{it}) + \varepsilon_{it}$$

Where:
NDA: Non-discretionary accruals
Step 4: Discretionary accruals used as a proxy to measure the level of earnings management. Discretionary accruals are calculated by subtracting non-discretionary accruals from total accruals:

$$DA_{it} = TAC_{it} - NDA_{it}$$

Where:
DA: Discretionary Accruals

Audit Quality

In this study audit quality is measured using three proxies; audit firm size, non-audit fees, and audit fees. Consistent with literature, audit firm size is a dummy variable equal of 1 if the firm is audited by a Big Four auditor and 0 otherwise (Almarayeh et al. 2020). On the other hand, audit fees is a natural logarithm of audit fees. Non-audit fees is a dummy variable equal 1 if the audit firm provides non audit services for client and 0 otherwise.
The following Table presents the selected research variables, with details of their measurements:

Table 1: Descriptions of study variables

Variable	Variable Measurement
Independent Variables	
Audit Quality	
Audit Firm Size	A dummy variable equal 1 if a Big Four auditor audits the firm otherwise zero
Audit Fees	A natural logarithm of audit fees

Non- Audit Fees	A dummy variable equal 1 if the audit firm provides non audit services for client and 0 otherwise.
Dependent Variable	
Earnings Management	This variable will be measured by using standard prediction errors from the modified Jones Model.
Control Variables	
Age	Time length of firm establishment
Size	Log of firm' total assets
Leverage	Total debt divided by total assets

4.3 Study Model

The following multiple regression model will be estimated to test the study's hypotheses:

$EM_{it} = \beta_0 + \beta_1 AFS_{it} + \beta_2 AF_{it} + \beta_3 NAF_{it} + \beta_4 LEV_{it} + \beta_5 AGE_{it} + \beta_6 SIZE_{it} + \varepsilon_{it}$

Where:

EM: Earnings Management

AFS: Audit Firm Size

AF: Audit Fees

NAF: Non-Audit Fees

LEV: Leverage

Age: Firm Age

Size: Firm Size

β_0= Intercept, measures the expected value of the risk-free rate if the regression equals to zero

β_1= the coefficient of the independent variable

u = the error term

5. Results

5.1 Descriptive Statistics

The descriptive statistics for the study variables are shown in Table 2. As indicated in table 2, the average of EM is positive, indicating that industrial enterprises in Jordan use earnings management tactics on a regular basis. Earnings management, on the other hand, varies widely across organizations, as indicated by the lowest and highest EM numbers. As shown in table 2, the mean Audit Firm Size (AFS) is 0.34 which means that most Jordanian industrial companies are audited by non-big audit firms. Regarding to Audit Fees (AF), the minimum value is 4500 compared with the max value is 6896500 which indicate the wide variance of audit fees among Jordanian industrial companies listed on Amman Stock Exchange. On the other hand, the mean of Non-Audit Fees is 0.45 which indicate that audit firms provide services other than auditing services to their clients at an average rate.

Table 2: Descriptive Statistics of Study Variables

Variable	Mean	SD	Min	Max
EM	0.23	0.11	0.00	0.66
AFS	0.34	0.47	0.00	1.00
AF	66415.80	554893.50	4500	6896500
NAF	0.27	0.45	0.00	1.00
AGE	33.09	15.20	8.00	70.00
LEV	32.19	18.60	3.20	76.79
SIZE	7.48	0.54	6.56	9.07

5.2 Multicollinearity

Multicollinearity is defined as the existence of a linear relationship between the independent variables. The presence of multicollinearity among the independent variables contradicts one of the assumptions on which the multiple regression model is based. According to Anderson et al. (1993), a high overall correlation coefficient as one that exceeds 70% between any two independent variables. The matrix of multicollinearity test is detailed in the table 3.

As shown in Table 3, the correlation between all the independent variables was less than 70%, which means that the regression model is free from the problem of multicollinearity.

Table 3: Multicollinearity Test

	AF	AFS	NAF	AGE	LEV	SIZE
AF	1					
AFS	-0.0298	1				
NAF	-0.0406	-0.2523	1			
AGE	-0.0374	0.4475	-0.0325	1		
LEV	-0.0806	0.0232	-0.0824	-0.1587	1	
SIZE	0.035	0.3032	0.002	0.2196	0.0906	1

5.3 Hausman Test

To test the hypotheses of the study, fixed effect model or random effect model must choose. The Hausman test must be performed in order to choose one of these models. Two assumptions are established to do this. First, the null hypothesis: "H0: random effect model is appropriate for panel data" followed by alternative hypothesis "Ha: fixed effect model is appropriate for panel data." Table 4 shows the results of hausman test. Table 3 shows the results of the Hausman test. As shown in the table 4 Prob>chi2 is less than 0.05. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. As a result, the fixed effect model used to assess the study's hypotheses.

Table 4: Hausman Test

	chi2	Prob>chi2
Test Summary	11.16	0.0483

5.4 Regression Results

Table 5 shows the results of regression results using fixed effect model. Regarding to audit quality measured by audit firm size,

the regression found that it is significantly positively related with earnings management (t = 1.92, P>t = 0.06). This result is inconsistent with the general viewpoint that the Big Four companies provide higher quality auditing compared to the rest of the audit firms. As shown in the table 5, the audit fees significantly negatively related with earnings management (t=-2.98, P>t = 0.00). This result leads to the conclusion that audit firms who charge a lower fee for their services are more flexible about their client companies' earnings management. In other words, the potential of asserting that more aggressive earnings management happens primarily among organizations that spend less than intended for audit services (Martinez & Moraes, 2017). On the other hand, this result is consistent with Mustapha et al. (2019), Sitanggang et al. (2019) and Gandía & Huguet (2021). Therefore, H3 is accepted. Regarding to non-audit fees, the regression found that non-audit fees have a positive impact on earnings management which indicate that providing services other than auditing may lead to impair audit independence. However, it is statistically insignificant. Regarding to control variables, the regression found that leverage and size have insignificant related with earnings management. On the other hand, age has a significant negative related with earnings management.

Table 5: Regression Results

	Coef.	Std. Err.	t	P>t
Audit Firm Size	0.09	0.04	1.92	0.06
Non-Audit Fees	0.03	0.08	0.36	0.72
Audit Fees	0.00	0.00	-2.98	0.00
Leverage	0.00	0.00	-0.21	0.84
Age	-0.02	0.01	-3.34	0.00
Size	-0.14	0.21	-0.68	0.50
_cons	1.56	1.61	0.97	0.34

Dependent Variable: Earnings Management

6. Conclusion

Major research over the last ten years have tended to indicate a positive relationship between audit quality and earnings management techniques in the context of many financial crises that have thrown light on the credibility of the audit function. This study aims to verify the quality of the audit represented by the size of the auditing company, non-audit services, audit fees and their relationship to earnings management in industrial companies listed on the Amman Stock Exchange (ASE). The results of the study showed a positive relationship between the size of the audit firm and earnings management. The results of the analysis also showed a negative relationship between fees for non-audit services and earnings management. Based on the results of the study, it is important to work on educating users of financial reports about the effects and repercussions of earnings management practices on their decisions.

7. Bibliography List:

Abid, A., Shaique, M., & Anwar ul Haq, M. (2018). Do big four auditors always provide higher audit quality? Evidence from Pakistan. *International Journal of Financial Studies*, *6*(2), 58.

Almarayeh, T. S., Aibar-Guzmán, B., & Abdullatif, M. (2020). Does audit quality influence earnings management in emerging markets? Evidence from Jordan:¿ Influye la calidad de la auditoría en la gestión de resultados en los mercados emergentes? Evidencia de Jordania. *Revista de Contabilidad-Spanish Accounting Review*, *23*(1), 64-74.

Debnath, P. (2017). Assaying the impact of firm's growth and performance on earnings management: An empirical observation of Indian economy. *International Journal of Research in Business Studies and Management*, 4(2), 30-40.

Fields, T. D., Lys, T. Z., & Vincent, L. (2001). Empirical research on accounting choice. *Journal of accounting and economics*, *31*(1-3), 255-307.

Gandía, J. L., & Huguet, D. (2021). Audit fees and earnings management: differences based on the type of audit. Economic *Research-Ekonomska Istraživanja*, 34(1), 2628-2650.

Gandía, J. L., & Huguet, D. (2021). Audit fees and earnings management: Differences based on the type of audit. *Economic Research-Ekonomska Istraživanja*, *34*(1), 2628-2650.

Kang, S. M., Hwang, I. T., & Hur, K. S. (2019). Non-audit services and auditor independence depending on client performance. *Australian Accounting Review*, *29*(3), 485-501.

Martinez, A. L., & Moraes, A. D. J. (2017). Relationship between Auditors 'fees And Earnings Management. *Revista de Administração de Empresas*, 57, 148-157.

Mustapha, A. M., Rashid, N., Ado, A. B., & Ademola, L. S. (2019). the effect of audit quality on Accruals Earnings Management in Nigeria Listed Firms. *International Journal of Recent Technology and Engineering*, *8*(4), 4894-4992.

Rahman, R. A., Omar, N. H., Osman, A. H., & Zakaria, M. (2020). Do Big Four Auditors Limit Real Earnings Management?. *Test Engineering and Management*. 9750 - 9757.

Sharf, N. Abu-Nassar, M. (2021). The Effect of Audit Quality and Auditor's Opinion on Earnings Management: Evidence from Jordan. *Jordan Journal of Business Administration*, 17 (2), 236- 253.

Sitanggang, R. P., Karbhari, Y., Matemilola, B. T., & Ariff, M. (2019). Audit quality and real earnings management: evidence from the UK manufacturing sector. *International Journal of Managerial Finance*.