

The Effect of Corporate Governance on Audit Quality: Evidence from Jordanian Listed firms

Abstract

Aims: The current study's goal is to investigate how corporate governance impacts audit quality. Study design: utilizing 624 observations from a panel of 78 firms that were listed on the Amman Stock Exchange (ASE) over 8 years, from 2012 to 2019.

Methodology: Regression with panel-corrected standard error (PCSE) was used to analyze the data.

Results: According to the study, board independence and family ownership have a negative impact on audit quality whereas board size and concentration ownership have a good impact. On the other hand, the study demonstrates that managerial ownership and the number of women on the board have no impact on the quality of the audit.

Conclusion: This study is significant because it is up to date and provides policymakers with information about the connections between corporate governance structures and audit quality in emerging nations. The fact that it offers insights to managers, researchers, lawmakers, and professional accounting organizations makes it important as well. Few empirical studies have been conducted in the past on the impact of corporate governance on audit quality, and those that have been done mostly focus on developed countries. The current study is also one of the few that have looked into the connection between corporate governance and audit quality in the context of Jordan.

Keywords: Audit Quality, Corporate Governance, Jordanian listed firms, Agency theory.

1. Introduction

In recent times, major corporate financial scandals like Enron and World Com have occurred due to conflicts of interest, weak internal control systems, financial irrationality and greed, manipulation on the part of the current auditors, and various fraudulent activities (Boubakri et al., 2010). The collapse of firms around the world has highlighted a number of key issues regarding audit quality and corporate governance, where the function of external auditors in corporate governance is crucial (Qawqzeh et al., 2021) due to the fact that auditors fill the gap between owners and agents. They are also viewed as management monitoring tools because they enhance the caliber of financial reporting and defend investors' interests (Guizani & Abdalkrim, 2022). Institutional differences exist in capital markets that are developing, like Jordan. The contrasts have been previously studied, including a weak corporate control market and more concentrated stock ownership in public firms (Alhababsah, 2019). Because of insufficient protections for investors, users of financial statements have in fact paid special attention to the work of auditors to assure the truth and credibility of the accounting records (Alkhazaleh et al., 2022). In the Jordanian context, after starting the privatization program, the Jordanian government introduced essential regulations and laws to attract more investment and boost investors' confidence. Securities Law No. 23 of 1997 in Jordan states that the accounting records of the listed firms must be audited by independent auditors.

On another side, a corporate governance code has been issued in Jordan to protect investors, where corporate governance is concerned with fairness, transparency, and principles of accountability (Alhababsah, 2019). One of the greatest significant topics in accounting, management, and financial literature is agency conflicts. According to Fama and Jensen (1983), precise corporate governance mechanisms may be an efficient tool to mitigate asymmetric information and agency issues between management and owners. Likewise, Sadaa et al. (2020) indicated that corporate governance is a crucial tool for reducing managers' self-centered behaviors that harm shareholders. As well as, Alkhazaleh et al. (2022) found that corporate governance mechanisms enhance firm performance. Alzoubi (2014) pointed that corporate governance enhances quality of financial reporting. As well as, corporate governance mostly seeks to protect stockholders by creating some transparency and ensuring accountability (Nour et al., 2019).

Corporate governance consists of several forms. The first form is board composition, this form serves as an observing umbrella to ensure properly serve all shareholders (Nour et al., 2019). Furthermore, managing and supervising details in the annual reports of the firm is one of the responsibilities of the directors' board (Jordan Securities Commission, 2017). Another essential form is the ownership structure. Due to its influence on managers' actions that are related to business performance, this form is crucial to firm growth strategies (Salehi et al., 2017). Previous literature has demonstrated the association between audit quality and corporate governance. However, less has been

researched about the association between audit quality and corporate governance in developing nations. Thereby, it might be an interesting chance to present critical kinds of corporate governance that may enhance audit quality.

Several reasons were a motivation to conduct the current study. There is a plethora of literature on corporate governance and audit quality in developed nations. However, the Middle Eastern nations, notably the Arab nations, have received little attention. Further research in Arab nations such as Jordan may be fascinating due to institutional variances that exist between Jordan and developed economies, including stricter rules auditor liability laws, and fewer transparency requirements. Second, despite the fact that corporate governance is seen as an effective observing tool, little research has looked into how they affect audit quality in the Jordanian context. Thereby, the present research closes the gap by investigating the influence of corporate governance on the audit quality in Jordanian firms.

The research's remaining portions are included below. The literature of the research hypotheses is provided in Section 2. In Section 3, the approach is presented. Section 4 presents the findings and the discussions that follow.

2. Literature Review

2.1 Theoretical Framework

The present study highlights agency theory which explains how corporate governance and audit quality are used to control this relationship and how corporate governance could be utilized to support audit quality as a way to address agency conflicts and abnormal information (Alawaqleh et al., 2021). As a result, agency theory was applied since corporate governance includes accounting components that increase control, prevent management fraud, and advance stakeholders' interests (Knechel, 2016). One of the main causes for external audit is the agency issues that occurs between managers and owners as a result of their information asymmetry. According to Zhang and Yu (2016), an external auditor has responsibilities to minimize agent-principal issues and alleviate asymmetric information between managers and owners since agents prefer increasing their own gains at the expense of principals. As a result, it is anticipated that auditors will exert more effort to produce improved audit quality in the situation of a major agency problem (Alhababsah, 2019). According to agency theory, companies with effective corporate governance systems will request more audit work and audits of higher quality than what auditors typically offer (Zhang & Yu, 2016), where primarily observing strategies, like corporate governance is introduced to balance the interest of principals and agents and to alleviate information asymmetry between managers and stakeholders (Al-Haddad & Whittington, 2019). Moreover, Watts and Zimmerman (1986) claim that the need for quality audits raises where agency costs increase. Additionally, corporate

governance promotes information balance and consistency, which helps to reduce conflicts between directors and shareholders.

2.2 Hypothesis development

2.2.1 Board size and Audit quality

The board of directors' primary duties are advising and management observing (Nguyen et al., 2016). Larger boards are seen as better able to keep an eye on management's behavior since it is harder for CEOs to control bigger boards (Nas & Kalaycioglu, 2016). Furthermore, companies with larger boards benefit from more skill and experience, Jensen (1986) argues that bigger boards are linked to the board observing capability. In line with these considerations, it has been a presumption that the size of the board ensures the board's high quality and that like a board may necessitate an audit of the highest caliber. Soliman (2021) used 103 Egyptian non-financial firms to demonstrate the direct influence of board size on audit quality and documented that board size affects positively audit quality. Likewise, Tanzina et al. (2019) utilized a sample of Bangladesh firms and reported that larger boards enhance audit quality. In the same way, Beisland et al. (2015) used 1,616 observations and pointed out that firms with larger boards require high audit quality. By analyzing 565 observations Nehme and Jizi (2018) found that larger board spend higher audit expenses to improve the observing capabilities and safeguard the shareholders. Puwanenthiren and Sivarajah (2022) indicated that boards with large size produce an efficient control environment that is frequently used to improve audit quality. On another hand, Komalasari and Suryanto (2018) and Suryanto et al. (2017) documented that firms with larger boards spend fewer expenses for auditing. In contrary, Kurniasih and Kiswanto (2019) and Sarhan et al. (2019) found no relationship between board size and audit quality. Thereby, the following hypothesis is:

H1: There is a positive relationship between board size and audit quality.

2.2.2 Board independence and Audit quality

Supporters of stewardship hypothesis Boyd (1995) contend that employing independent directors increases the likelihood of conflict within the board and reduces the efficiency of the decision-making process makes, where independent directors are less informed on the difficulties and capabilities of the firm to advise the company's strategic directions. Jiraporn et al. (2018) argued that it does not require to appoint of a professional external auditor whereas an independent board typically provides better supervision. To the extent that companies with an independent board confront fewer agency difficulties, the appointment of a Big 4 auditor may not be as necessary and could result in unwise expenditures on rising audit fees, ultimately decreasing shareholder wealth. Similarly, this theory substitutes board independence for high-quality external auditing. Guizani and Abdalkrim (2021) used 162 firms listed on GCC from 2009 to 2016 and found that board

independent affects negatively audit quality. Bakare (2019) also documented that firms with independent board spend low audit fees since they are less likely to require substantial audit services. However, Zhang and Yu (2016) indicated that board independent affects positively audit quality. In contrary, Mustapha et al. (2019) found that board independent has no effect on audit quality. Thereby, the following hypothesis is:

H2: There is a positive relationship between board independent and audit quality.

2.2.3 Board gender and Audit quality

The theory of resource dependence claims that the existence of female board members provides helpful advances for the firms (Hillman et al., 2009). Female directors have particular psychological characteristics that may make them more receptive to particular stakeholder arguments (Saidat et al., 2019). As well as, they are essential in improving a company's ethical legitimacy (Zhang et al, 2013). On another side, agency theory suggests that having women on board makes monitoring management more efficient, where diversity boosts boards' independence. In the same vein, female directors tend to reinforce internal control systems. Thus, financial reporting quality (Ibrahim & Hanefah, 2016). Previous studies indicated that the presence of female board members leads to a demand for high-quality auditing. Akpotor (2019) showed that the of presence women on board positively affects audit quality. Also, a study performed in US by Karen et al (2019) showed a positive association between the presence of women on board and audit quality. Likewise, Otuedon et al (2019) used 50 Nigerian firms and documented that female in board affects positively audit quality. Another research from the developing market, Alkebeese et al. (2021) found female in board positively affects audit quality. In contrary, Eseoghene et al (2019) documented female in board negatively affects audit quality. However, other trend of studies found that female in board has no effect on audit quality (Montenegro & Bras, 2015). Thereby, the following hypothesis is:

H3: There is a positive relationship between board gender diversity and audit quality.

2.2.4 Managerial Ownership and Audit Quality

The theory of agency indicates contradicted viewpoints of managerial ownership. The first is the alignment between management and shareholder interests. Thus, reducing information asymmetry between them (Fama & Jensen, 1983). According to the converging interest hypothesis, firms with managerial ownership prefer a better audit quality to present more trustworthy financial information to stakeholders (Park, 2019). Shan et al. (2019) indicated that when managerial ownership is centered in the zones of converging benefits, managers are more unlikely to try to participate in pragmatic behaviors. Also, Mitra et al. (2017) suggested that companies with managerial ownership are inclined to require better audit quality to obtain more assurance about the accuracy

and dependability of financial reports and to provide a positive impression of their financial information to the investment community. Guizani and Abdalkrim (2022) used 207 firms listed in GCC from 2009 to 2016 and demonstrated that managerial ownership is positively affects high audit quality. Another viewpoint is the managerial entrenchment argument, which claims that providing managers more discretion and significant ownership encourages them to consider their benefits over the benefits of shareholders (Jensen & Meckling, 1976). AlQadasi and Abidin (2018) used 544 Malaysian firms from 2009-2012 and documented a negative relationship. Another trend of studies found that managerial ownership does not audit quality (Qawqzeh et al., 2021). Thus, the next hypothesis is:

H4: There is a positive relationship between managerial ownership and audit quality.

2.2.5 Concentration Ownership and Audit Quality

Agency problems may be increased or decreased in concentrated ownership firms. When a firm's ownership is highly concentrated, agency issues between management and owners may be reduced (Alawaqleh et al., 2021). As well as, shareholders have authority to observe managers (Rehan & Javaid, 2019). Eventually, enhance firm performance (Alkhazaleh et al., 2022). As such, by using 300 Indonesian firms Darmadi (2014) showed that firms with concentrated ownership have high audit quality. As well as, Husnin et al. (2016) used 300 Malaysian firms and indicated that ownership concentration affects positively audit quality. In the Arab environment, Al-Matari et al. (2017) analyze data of Omani companies and indicated that ownership concentration affects positively audit quality. However, by using 107 firms from Finland Rönkkö et al. (2018) documented that Finnish firms with lower ownership concentration are inclined to require high quality audits. Likewise, Zhang and Cang (2021) pointed out that concentrated ownership firms are less demanding of audit quality in Uruguay and Peru. Zureigat (2011) analyzed data of Jordanian non-financial companies and reported that ownership concentration affects negatively audit quality. However, Alzeaideen and Al-Rawash (2018) and Hartanto (2021) indicated that ownership concentration does not affect audit quality. Thereby, the next hypothesis is:

H5: There is a positive relationship between concentration ownership and audit quality.

2.2.6 Family Ownership and Audit Quality

Prior studies documented mixed findings concerning the role of family ownership. This is a finding of disagreements over the significance of family ownership. On the one hand, family ownership as a tool for reducing agency issues that result from asymmetric information, thus leading to interest alignment (Ahmed et al., 2020). As well as, family reputation is a crucial aspect to take into account, because families frequently consider their companies as a part of the family, thus, they are worried about their reputation in its

society (Dyer & Whetten, 2006). This may be especially important for Jordan, where a company's name is frequently connected to its family name. As such, (Alhababsah, 2019) contend that family-firms in Jordan are concerned with their reputation. Thus, family members are implicitly obligated to uphold the family name, and this obligation enhances their motivation to spend more on monitoring and auditing expenses in order to avoid negative outcomes. Gaaya et al. (2017) used 55 Tunisian firms and found that family firms have a high audit quality. Likewise, Husnin et al. (2016) reported that family ownership influences positively audit quality. The second school argues that family-owned firms provide less protection for the rights of minority shareholders. These settings may provide chances for a family member to expropriate minority shareholders, excessive advantages enjoyed by family members, poor management in employing family members, and nepotism. Accordingly, Guizani and Abdalkrim (2021) showed that family-owned companies spend low audit fees since they are less likely to require substantial audit services. As well as, Odudu et al. (2019) pointed that family ownership influences negatively and audit quality. While Qawqzeh et al. (2021) demonstrated that family ownership does not affect audit quality. Thereby, the next hypothesis is:

H6: There is a positive relationship between family ownership and audit quality.

3. Research methodology

3.1 Sample

For the period from 2012 to 2019, the current study collected data through the annual reports of 78 non-financial companies listed on the Amman Stock Exchange. The non-financial companies were picked because of what they provide to the Jordanian market.

3.2 Definition and measurement of variables

3.2.1 Measuring Audit Quality

There is no agreement concerning the measure of audit quality. Many researchers utilized audit firm size as a measurement for audit quality (Alawaqleh et al., 2021). This measurement is based on a number of factors, like audit firm size. In other research, the reputation of the auditors was utilized to measure audit quality (Makni et al., 2012; Badiei et al., 2019). As well as, Kurniasih and Kiswanto (2019) investigated audit quality using the specialization of the auditor. Furthermore, previous studies employed a variety of methods, like the estimated discretionary accruals, to quantify audit quality. In accordance with the explanation above, the current study evaluated audit quality using a dummy variable to determine whether the firms in Jordan used a Big 4 audit firm or a Non-Big 4 company to examine its financial statements.

3.2.2 Corporate Governance Measurements

board independence, board gender, family ownership, managerial ownership, board size, and concentration ownership are the corporate governance dimensions utilized. The average of directors' independence is utilized to define board independence. The number of board members is utilized to mark the size of the board. The number of females on the board is utilized to calculate the gender of the board. The number of shares held by the directors as a percentage is used to calculate managerial ownership. By calculating the percentage of shares held by families, family ownership is calculated. The ratio of the top shareholder controlling greater than 5% of the total stock is how concentration ownership is calculated.

3.2.3 Control Variables Measurements. The present study's control variables were firm age and firm leverage. Firm age is the length of time a company has been in existence. Total debt to total assets is the ratio used to calculate firm leverage.

3.3 Research model

Before running the model, some diagnostic tests were performed. The Wooldridge test was carried out to see if there was any autocorrelation in the models, and the results indicated that there was. Heteroscedasticity was discovered utilizing the Breusch-Pagan/Cook-Weisberg test, which revealed its presence. Results from running the model without resolving these problems are biased. Due to its suitability as an estimator that corrects both heteroscedasticity and autocorrelation, panel corrected standard errors (PCSE) was utilized in the present investigation to address these econometric issues (Singla, 2020; Mnif & Imen, 2020). As mentioned, the panel corrected standard errors are utilized to estimate the following model (PCSE).

$$AQ_{it} = \alpha_{it} + \alpha_1 BS_{it} + \alpha_2 BI_{it} + \alpha_3 GEN_{it} + \alpha_4 MO_{it} + \alpha_5 CO_{it} + \alpha_6 FO_{it} + \alpha_7 FA_{it} + \alpha_8 LEV + \varepsilon_{it}$$

3.4 Research Findings

The aim of the current research is to discover the influence of corporate governance on audit quality. Descriptive statistics, diagnostic tests, and regression analysis findings are presented and analysed in this section.

3.4.1 Descriptive statistics

Table 1 displays summary data for the test variables utilized for this regression, including the median, mean value, standard error, minimum value, and maximum value. The descriptive analysis is shown in Table 1. Table 1 indicated that the ratio of companies

that are audited by Big 4 is 41 percent. This outcome is in the line with the previous study (Alawaqleh et al., 2021) which discovered that the ratio of Jordanian companies that are audited by Big 4 is 44 percent. While this result are not in the line with the prior study (Alzoubi, 2016) which refers that the ratio of Jordanian companies that are audited by Big 4 is 58 percent.

Table 1. Descriptive Statistics of variables.

Variables	Observations	Mean	Standard deviation	Minimum	Maximum
AQ	624	0.41	0.49	0	1
BS	624	8.12	2.46	5	13
BI	624	0.36	0.21	0	0.77
GEN	624	0.26	0.65	0	4
MO	624	0.03	0.07	0	0.28
FO	624	0.23	0.26	0	0.80
CO	624	0.62	0.22	.167	0.93
AGE	624	25.42	16.78	2	81
LEV	624	0.32	0.20	.056	0.79

Table 1 additionally shows that the sample's mean management ownership is 0.03 and has a 0.07 standard deviation. The minimum value is 0, and the greatest value is 0.28. Table 1 showed that the mean concentration ownership value is 0.62 and that the highest concentration ownership value is 0.93. Table 1 indicated that 0.23 of Jordanian listed firms in industrial and service sectors are family owned. Concerning board size, the greatest value of board member is 13, whereas the lowest value is 5. The mean value of board independence is 0.36, whereas the greatest value is 0.77. Moreover, Table 1 showed that the mean value of women in board is 0.26, demonstrating that the presence female in board is not large in Jordanian firms consistently with related literature. Regarding control variables, the average value of firm age is 25.42, whereas the average value of firm leverage is 0.32.

3.4.2 Pre-tests for regression

Any shared coefficients between the independent variables are plainly visible in the correlation matrices, as illustrated in Table 2. The strongest correlation, 0.36 between management ownership and family ownership, demonstrates that there is no problem with multicollinearity between the independent variables utilized in the current research model (Hair et al., 2020). Table 2 presents that the variance inflation factors that apply to the entire set of independent variables are well below the threshold value of 10 (Greene, 2002). The findings show that 1.37 is the greatest VIF value. Multicollinearity is not expected to pose challenges for analysis.

Table 2. Correlation Matrix among variables.

Variables	AQ	BS	BI	GEN	MO	FO	CO	AGE	LEV	VIF
AQ	1									
BS	0.278	1								1.105
BI	-0.301	-0.052	1							1.248
GEN	0.024	0.15	-0.089	1						1.074
MO	-0.182	-0.052	0.004	0.075	1					1.221
FO	-0.304	-0.179	0.059	0.036	0.361	1				1.305
CO	0.23	-0.204	-0.371	-0.062	0.008	0.257	1			1.371
AGE	0.063	0.014	0.025	0.055	0.008	0.017	0.014	1		1.009
LEV	0.077	-0.064	-0.045	-0.153	-0.213	-0.067	-0.042	0.047	1	1.092

To confirm that the residuals have a distribution that was normal, a normality test was applied. The Skewness and Kurtosis statistics, with corresponding values of 0.22 and 2.30, corroborate this level of normality in light of Table 3. Hair et al. (2020) demonstrated that the normality issue arises when the Skewness and Kurtosis values are outside of the acceptable ranges of 1.96 and 3.00, respectively. The Skewness and Kurtosis test for normalcy indicates that the residuals are normally distributed.

Table 3. Descriptive statistics of Residuals.

Descriptive Statistics									
Variable	Observations	Mean	Standard deviation	Minimum	Maximum	p1	p99	Skewness	Kurtosis
Residuals	624	0	0.41	-0.995	0.977	-0.774	0.883	0.226	2.305

Because consistent covariance, variance, and mean requirements need to be achieved to validate the suggested values and models, data stationarity is essential for panel data analysis. Thus, before measuring the influence of corporate governance structures on audit quality, it is crucial to take into account if the data are stationary or not. For stationarity testing, utilise the Levin-Lin-Chu test. Table 4 shows that every variable employed in the models was discovered to be stationary at each of its levels.

Table 4. Unit root test of the variables.

Variables	Statistics	p-value
MO	-2500	0.00
FO	-110	0.00
CO	-52.08	0.00
BS	-13.7	0.00
BI	-4.1	0.00
GEN	-4.65	0.00
AGE	-29.02	0.00
LEVE	-11.57	0.00

3.4.3 The result of regression

The current study required conducting a few significant checks, including residual normality, heteroscedasticity, and autocorrelation, before doing the panel data regression. The outcomes showed that heteroscedasticity and autocorrelation are prevalent. Panel corrected standard errors (PCSE), an adequate estimate that corrects for heteroscedasticity, and autocorrelation was utilised in the current study to address these econometric issues (Singla, 2020; Mnif & Imen, 2020).

Table 5. Prais-Winsten regression among all independent variables and dependent variables.

Dependent variables	Independent Variables	Coef.	St.Err.	p-value	Sig
AQ	BS	0.029	0.01	0.005	***
	BI	-0.167	0.069	0.015	**
	GEN	-0.017	0.04	0.671	
	MO	-0.359	0.254	0.157	
	FO	-0.478	0.109	0.00	***
	CO	0.441	0.106	0.00	***
	AGE	0.001	0.001	0.134	
	LEV	0.127	0.096	0.185	
	Constant	0.023	0.119	0.848	
Chi-square			41.42 (0.00)		

R-squared	16.40%
Heteroscedasticity	15.95 (0.00)
Autocorrelation	4.76 (0.00)
N	624

*** $p < .01$, ** $p < .05$, * $p < .1$

The findings of the study on the influence of corporate governance on audit quality are presented in Table 5. The outcomes of the prais-winsten regression are presented in Table 5. The Wald chi2 with p_value 0.000 confirms the acceptability of the statistical model, as seen in Table 5.

Table 5 presented that board size affects significantly and positively audit quality where (St. Err. = 0.01, Sig = 0.00) at the 1% level. Accordingly, H1 is supported. These findings are consistent with prior research that argued larger boards require high audits to improve the ability to monitor and safeguard a larger range of stakeholders (Tanzina et al., 2019; Nehme and Jizi, 2018). Also, Table 5 also indicated that board independence affects significantly but negatively audit quality where (St. Err. = 0.069, Sig = 0.01). Thereby, H2 is not supported. These findings are consistent with prior research (Guizani & Abdalkrim 2021; Bakare, 2019), the nomination of independent directors in emerging nations like Jordan may rely on connections with individuals rather than expertise or qualifications, which is in conflict with the agency theory argument (Alsartawi, 2019).

Concerning the existence female in board, the finding indicated that the existence of women on board does not influence audit quality. Thus, H3 is rejected. The result is contradicted with prior literature (Alkebesee et al., 2021), while consistent with prior study (Montenegro & Bras, 2015). The current study argues the case that a board director's experience is more important than their gender. Additionally, Table VI demonstrated that managerial ownership had no bearing on audit quality. Accordingly, H4 is not supported. This finding is not in the line with the convergence of interest hypothesis which argues that management with more managerial ownership would prefer high audit quality in order to provide trustworthy financial information to stakeholders (Park, 2019). Regarding concentration ownership, the result showed that concentration ownership affects significantly and positively audit quality where (St. Err. = 0.106, Sig = 0.01). Thus, H5 is accepted. This finding are consistent with the agency argument, when a firm's ownership is highly concentrated, agency issues between shareholders and management may be reduced (Jensen & Meckling, 1976). As well as, shareholders have authority to observe management (Rehan & Javaid, 2019). While these findings are not consistent with prior literature (Zhang and Cang, 2021; Zureigat, 2011).

Table 5 indicates that family ownership affect significantly but negatively audit quality where (St. Err. = 0.109, Sig = 0.00) at the 1% level. Therefore, H6 is rejected. These findings indicate that when family ownership raises, audit quality will be lowered. This finding is in the line with the prior study (Guizani & Abdalkrim, 2022) which showed

that family-owned firms spend low audit fees since they are less likely to require substantial audit services, but it is contradicted with prior literature (Ahmed et al., 2020; Alhababsah, 2019). Concerning control variables, Table 5 presented that firm age does not affect audit quality. As well as, Table 5 showed firm leverage does not affect audit quality.

4. Conclusion, implications, recommendations, and future research

This study examines how corporate governance affect audit quality in Jordanian firms. The external auditor is viewed as a management control tool since they enhance the financial reporting quality and represent the interest of shareholders (Guizani & Abdalkrim, 2022). Some of the prior studies contend that the agency theory illustrates the effect of corporate governance on audit quality. Thus, this study is important for regulators to recognize how corporate governance influence audit quality, and to establish a conceptual framework to illustrates the influence of corporate governance on audit quality to determine which mechanisms are truly crucial for audit quality.

The study is quantitative by design and is based on 624 observations made over the course of 8 years, from 2012 to 2019, for 78 companies listed in ASE. The current study showed that the rate of firms whose reports are audited by Big 4 is moderate about 41 percent. The present research's second goal is to determine whether corporate governance has an impact on audit quality in Jordanian companies. The results indicate that some corporate governance mechanisms affect audit quality such as board size and concentration ownership. Larger boards are considered to be better able to keep an eye on the management behavior since it is more challenging for CEOs to control larger boards (Nas & Kalaycioglu, 2016). Regarding concentration ownership, when a firm's ownership is highly concentrated, agency issues between managers and shareholders may be reduced (Jensen & Meckling, 1976).

These results should be taken seriously by policymakers and authorities to raise the audit quality and the financial reporting quality. The current study suggests that the board of directors must be raised to increase the efficiency of the board to select higher audit quality. The study results indicated that ownership concentration performs an efficient role in the audit process. As well as, shareholders have authority to observe management, thus they play a vital role in observing and selecting the external auditor and ensuring the independence of the external auditor. While board independence and family ownership affect negatively audit quality. Regarding board independence, this outcome may be explained by the notion that the nomination of independent directors in emerging nations like Jordan may rely on connections with individuals rather than expertise or qualifications, which is in conflict with the agency theory argument (Alsartawi, 2019). As well as, family-owned firms although families frequently consider their firms as a part of the family, therefore, they are worried about their financial reputation in its society, rather than the quality of their financial reporting. On another side, board gender and

managerial ownership do not affect audit quality. This result may be attributed to the existence of women in Jordanian firms is limited. Also, the percentage of managerial ownership in Jordanian firms is low. As in any other study, there are a number of limitations to the present research that must be taken into account. First, one measure for audit quality was employed. Therefore, future studies may use multiple measures. Second, the sample of the current study was restricted to industrial and service sectors. Thus, future studies may use financial sector.

References

- Ahmed, S., Syed, & Arshad. (2020). Corporate Governance, Ownership Structure and Dividend Smoothing: The Mediating Role of Family Ownership and Board Diversity in Emerging Markets. *European Research Studies Journal*, 23(3), 199–216.
- Al-Haddad, L., & Whittington, M. (2019). The impact of corporate governance mechanisms on real and accrual earnings management practices: evidence from Jordan. *Corporate Governance (Bingley)*, 19(6), 1167–1186.
- Alkhazaleh, Qutaiba & Ghazali, Aziatul & Shahbudin, Amirual. The Relationship between Corporate Governance Mechanisms and Firm Performance: Evidence from Jordanian 's Listed Firms. *International Journal of Academic Research in Business and Social Sciences*. 12(12), 1882-1904.
- Al-Matari, E. M., Al-Matari, Y. A., & Mohammed, S. A. S. (2017). Ownership structure, audit quality and firm performance moderating and direct-effect models: An empirical study. *Corporate Board Role Duties and Composition*, 13(1), 28–35.
- Alawaqleh, Q. A., Almasria, N. A., & Alsawalhah, J. M. (2021). The Effect of Board of Directors and CEO on Audit Quality : Evidence from Listed Manufacturing Firms in Jordan. *Journal of Asian Finance, Economics and Business*, 8(2), 243–253.
- Alhababsah, S. (2019). Ownership structure and audit quality: An empirical analysis considering ownership types in Jordan. *Journal of International Accounting, Auditing and Taxation*, 35, 71–84.
- Alkebsee, R. H., Tian, G., Usman, M., & Alhebry, A. A. (2021). Gender diversity in audit committees and audit fees : evidence from China. *Managerial Auditing Journal*. 36(1), 72–104.
- Alkhazaleh, Q., Ghazali, A., & Shah, A. (2022). The Relationship between Corporate Governance Mechanisms and Firm Performance : Evidence from Jordanian's Listed Firms. *International Journal of Academic Research in Business and Social Sciences*, 12(12), 1882–1904.
- AlQadasi, A., & Abidin, S. (2018). The effectiveness of internal corporate governance

and audit quality: the role of ownership concentration – Malaysian evidence. *Corporate Governance (Bingley)*, 18(2), 233–253.

Alsartawi, M. A. (2019). Board independence, frequency of meetings and performance. *Journal of Islamic Marketing*, 10(1), 290–303.

Alzeaideen, K., & Al-Rawash, S. Z. (2018). International Journal of Economics and Financial Issues The Effect of Ownership Structure and Corporate Debt on Audit Quality: Evidence from Jordan. *International Journal of Economics and Financial Issues*, 8(3), 51–58.

Alzoubi, E. S. S. (2016). Audit quality and earnings management: Evidence from Jordan. *Journal of Applied Accounting Research*, 17(2), 170–189.

Akpotor, V. A., Osemwengie, O. E., & Imuentinyan, E. C. (2019). Corporate board diversity and audit quality. *Journal of Accounting, Business and Social Sciences*, 1(2), 83-100.

Badie, H., Yeganeh, Y. H., Saghafi, A., & Babajani, J. (2019). The Effect of Corporate Governance Mechanisms on Audit Quality by Explaining the Intermediary Function of Auditor ' s Behavioral Components. *International Journal of Finance and Managerial Accounting*, 4(15), 73–82.

Bakare. (2019). Board independence and audit quality in Nigeria. *Accounting and Taxation Review*, 3(1), 1–11.

Beisland, L. A., Mersland, R., & Strøm, R. Ø. (2015). Audit Quality and Corporate Governance: Evidence from the Microfinance Industry. *International Journal of Auditing*, 237, 218–237.

Boubakri, N., Guedhami, O., & Mishra, D. (2010). Family control and the implied cost of equity : Evidence before and after the Asian financial crisis. *Journal of International Business Studies*, 41(3), 451–474.

Boyd, B. K. (1995). CEO Duality and firm performance: CONTINGENCY MODEL. *Strategic Management Journal*, 16, 301–312.

Carl, K., Duho, T., Onumah, J. M., Owodo, R. A., Asare, E. T., & Onumah, R. M. (2020). Bank risk , profit efficiency and profitability in a frontier market profitability. *Journal of Economic and Administrative Sciences*, 36(4), 381–402.

Darmadi, S. (2014). Ownership concentration, family control, and auditor choice: Evidence from an emerging market. *Asian Review of Accounting*, 24(1), 19–42.

Dyer, W. G., & Whetten, D. a. (2006). Family Firms and Social Responsibility: Preliminary Evidence from the S&P 500. *Entrepreneurship: Theory and Practice*, 801, 785–803.

Fama, E. F., & Jensen, M. C. (1983). Agency Problems and Residual Claims. *The Journal of Law and Economics*, 26(2), 327–349.

- Gaaya, S., Lakhal, N., & Faten, L. (2017). Does family ownership reduce corporate tax avoidance? The moderating effect of audit quality avoidance. *Managerial Auditing Journal*, 32(7), 731–744.
- Greene, W. H. (2002). *ECONOMETRIC ANALYSIS Senior Media Project Manager: Victoria Anderson Production Editor: Michael Reynolds* (Fifth). Prentice Hall.
- Guizani, M., & Abdalkrim, G. (2021). Ownership structure and audit quality: the mediating effect of board independence. *Corporate Governance: An International Review*, 21(5), 754–774.
- Guizani, M., & Abdalkrim, G. (2022). Ownership structure, board independence and auditor choice: evidence from GCC countries. *Journal of Accounting in Emerging Economies*, 12(1), 127–149.
- Hair, J. F., Page, M., & Brunsveld, N. (2020). *Essentials of Business Research Methods* (Fourth). Routledge.
- Hartanto, R. (2021). Ownership Structure and Auditor Choice: Evidence in State-Owned Enterprises in Indonesia. *Budapest International Research and Critics Institute Journal*, 5(3), 25054–25064.
- Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of Management*, 35(6), 1404–1427.
- Husnin, A. . I., Nawawi, A., & Salin, A. S. A. . (2016). Corporate Governance and Auditor Quality – Malaysian Evidence. *Asian Review of Accounting*, 24(2), 1321–7348.
- Ibrahim, A. H., & Hanefah, M. M. (2016). Board diversity and corporate social responsibility in Jordan. *Journal of Financial Reporting and Accounting*, 14(2), 279–298.
- Jensen, M. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *American Economic Review*, 76(2), 323–329.
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial Behavior, Agency Costs, and Ownership Structure. *Journal of Financial Economics*, 3(4), 305–360.
- Jiraporn, P., Chintrakarn, P., Tong, S., & Treepongkaruna, S. (2018). Does board independence substitute for external audit quality? Evidence from an exogenous regulatory shock. *Australian Journal of Management*, 43(1), 27–41.
- Knechel, W. R. (2016). Audit Quality and Regulation. *International Journal of Auditing*, 20(3), 215–223.
- Komalasari, A., & Suryanto, T. (2018). Corporate Governance and Audit Quality: A Comparison of ASEAN Countries. *Journal of Applied Economic Science*, 13(3), 693–700.

- Kouaib, A., & Jarboui, A. (2016). Real earnings management in innovative firms: Does CEO profile make a difference?. *12*, 40-54. *Journal of Behavioral and Experimental Finance*.
- Kurniasih, I., & Kiswanto. (2019). The Effect of Industrial Specialization Auditors and Audit Committee Expertise on Audit Quality. *Accounting Analysis Journal*, *8*(2), 118–126.
- Makni, I., Kolsi, M., & Affes, H. (2012). The Impact of Corporate Governance Mechanisms on Audit Quality: Evidence from Tunisia. *Journal of Corporate Governance*, *11*(3), 48–70.
- Mayur, M., & Saravanan, P. (2017). Performance implications of board size , composition and activity: empirical evidence from the Indian banking sector. *Corporate Governance: The international journal of business in society*.*17*(3), 466–489.
- Mitra, S., Jaggi, B., & Al-Hayale, T. (2017). The effect of managerial stock ownership on the relationship between material internal control weaknesses and audit fees. *Review of Accounting and Finance*, *16*(2), 239–259.
- Mnif, Y., & Imen, C. (2020). Female board directorship and earnings management. *Pacific Accounting Review*. *33*(1).114-141.
- Montenegro, T. M., & Bras, F. A. (2015). Spanish Journal of Finance and Accounting / Revista Audit quality: does gender composition of audit firms matter? *Spanish Journal of Finance and Accounting*, *44*(3), 264–297.
- Mustapha, U. A., Nik, N., Rashid, M., Lateef, S. A., & Bala, A. (2019). The Effect of Corporate Governance Attributes On Audit Quality in Nigeria. *International Journal of Recent Technology and Engineering*, *8*(4).
- Nas, I. T., & Kalaycioglu, O. (2016). The effects of the board composition, board size and CEO duality on export performance: Evidence from Turkey. *Management Research Review*, *39*(11), 1374–1409.
- Nehme, R., & Jizi, M. (2018). The efficiency of corporate boards and firms' audit fees: the case of the FTSE financial institutions. *Pacific Accounting Review*, *30*(3), 297–317.
- Nelson, S. P., & Mohamed-Rusdi, N. F. (2015). Ownership structures influence on audit fee. *Journal of Accounting in Emerging Economies*, *5*(4), 457–478.
- Nguyen, P., Rahman, N., Tong, A., & Zhao, R. (2016). Board size and firm value: evidence from Australia. *Journal of Management and Governance*, *20*(4), 851–873.
- Nour, A. I., Sharabati, A.-A. A., & Hammad, K. M. (2019). Corporate Governance and Corporate Social Responsibility Disclosure. *International Journal of Sustainable Entrepreneurship and Corporate Social Responsibility*, *5*(1), 20–41.

- Odudu, A. S., Okpanachi, J., & Yahaya, A. O. (2019). Family and Foreign Ownership and Audit Quality of Listed Manufacturing Firms in Nigeria. *Global Journal of Management And Business Research*, 19(1), 68–79.
- Park, B. J. (2019). Audit Committees and Managerial Influence on Audit Quality: ‘Voluntary’ versus ‘Mandatory’ Approach to Corporate Governance. *Australian Accounting Review*, 29(1), 266–280.
- Puwanenthiren, P., & Sivarajah, R. (2022). Does Corporate Governance Matter for Audit Quality? Evidence from Sri Lanka. *MANAGEMENT AND ACCOUNTING REVIEW*, 21(2).
- Qawqzeh, H. K., Bshayreh, M. M., & Alharbi, A. W. (2021). Does ownership structure affect audit quality in countries characterized by a weak legal protection of the shareholders? *Journal of Financial Reporting and Accounting*, 19(5), 707–724.
- Rehan, A., & Javaid, A. (2019). How Concentrated Ownership Affects the Growth of Firms in Pakistan? *Journal of Business and Economics*, 11(2), 125–142.
- Rönkkö, J., Paananen, M., & Vakkuri, J. (2018). Exploring the determinants of internal audit: Evidence from ownership structure. *International Journal of Auditing*, 22(1), 25–39.
- Sadaa, A. M., Ganesan, Y., & Ghanim, M. (2020). The effect of earnings quality and bank continuity: the moderating role of ownership structure and CSR. *Journal of Sustainable Finance & Investment*, 1–21.
- Saidat, Z., Silva, M., & Seaman, C. (2019). The relationship between corporate governance and financial performance: Evidence from Jordanian family and nonfamily firms. *Journal of Family Business Management*, 9(1), 54–78.
- Saidu, M., & Aifuwa, H. (2020). *Board Characteristics and Audit Quality: The Moderating Role of Gender Diversity*. *International Journal of Business & Law Research*. 8(1), 144-155.
- Salehi, M., Tarighi, H., & Rezanezhad, M. (2017). The relationship between board of directors’ structure and company ownership with corporate social responsibility disclosure: Iranian angle. *Humanomics*, 33(4).
- Salem Alzoubi, E. S. (2014). Board Characteristics and Financial Reporting Quality: Evidence From Jordan. *Corporate Ownership and Control*, 11(3), 8–29.
- Sarhan, A. A., Ntim, C. G., & Al-Najjar, B. (2019). Board diversity, corporate governance, corporate performance, and executive pay. *International Journal of Finance and Economics*, 24(2), 761–786.
- Shan, Y. G., Troshani, I., & Tarca, A. (2019). Managerial ownership, audit firm size, and audit fees: Australian evidence. *Journal of International Accounting, Auditing and Taxation*, 35, 18–36.

- Singla, H. K. (2020). Does family ownership affect the profitability of construction and real estate firms? Evidence from India. *Journal of Financial Management of Property and Construction*, 25(1), 107–124.
- Soliman, K. W. (2021). Investigating the effect of corporate governance on audit quality and its impact on investment efficiency. *Investment Management and Financial Innovations*, 17(3), 175–188.
- Suryanto, T., Thalassinou, J. E., & Thalassinou, E. I. (2017). Board Characteristics, Audit Committee and Audit Quality: The Case of Indonesia. *International Journal of Economics and Business Administration*, 5(3), 44–57.
- Tabachnick, B. G., & Fidell, L. S. (2019). *Using Multivariate Statistics* (Seventh). Boston, MA: Pearson.
- Tanzina, H., Afroze, S., & Fatema-Tuz-Zohra. (2019). *Impact of Corporate Governance on Audit Fees and Audit Quality: A Study in the Insurance Industry of Bangladesh*. 2, 4–11.
- Watts, R. L., & Zimmerman, J. L. (1986). *Positive accounting theory*. Prentice-Hall Inc.
- Zhang, D., & Cang, Y. (2021). Ownership concentration, foreign ownership and auditing: evidence from SMEs in Latin America. *Pacific Accounting Review*, 33(3), 301–321.
- Zhang, J. Z., & Yu, Y. (2016). Does Board Independence Affect Audit Fees? Evidence from Recent Regulatory Reforms. *European Accounting Review*. 25(4). 793-814.
- Zureigat, Q. (2011). The Effect of Ownership Structure on Audit Quality: Evidence from Jordan. *International Journal of Business and Social Science*, 2(10), 38–46.