

Corporate Governance Mechanisms and Audit Feature: Evidence from an Emerging Stock Market

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Abstract: - This study investigates whether audit fees are impacted by board diversity and ownership structure. Specifically, the purpose of this study is to investigate the correlation between board diversity (through the board of directors' composition which includes the size of the board, the composition of independent members, multiple directorships of the board, board gender diversity, and CEO tenure) —as well as ownership construction which includes Ownership concentration, foreign concentration, and intuitional concentration) and audit features namely, audit fees. Secondary data, which is intended to be gathered from the annual reports of Jordanian enterprises as financial and auditing data, has been used to address this. The control variables are client size, leverage, business complexity, sales internationally, and asset return. The study relationships are tested by using OLS regression. This study also seeks to inspect whether gender diversity on the board influences audit fees. The findings illustrate that some aspects of governance mechanisms influence audit fees. This research implies that there is a strong positive correlation between audit fees and ownership concentration, which further supports the notion that financial reporting is reliable. The results indicated a depressing relationship between independent directors' audit fees and the duration of CEOs. Additionally, the findings demonstrated that board size hurt audit fees. The board of directors (many directorships) had a statistically significant impact on the audit fees, according to the results. The results of this study suggest that a key factor in determining audit fees and audit quality is board diversity and ownership structure.

Key-Words: - Governance Mechanisms, Audit Feature, audit fees, Jordanian enterprises, Board diversity, Ownership structure.

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1 Introduction

Research in audit-related corporate governance has investigated some factors influencing audit fees, [1], [2], [3], [4], [5]. Different models of audit

fees illustrate the impact of various risk types on audit pricing, [6], [7] [8], [9]. The last decades have witnessed a crucial and urgent need in the world economy for improving audit quality and

corporate governance mechanisms, [10], [11], [12]. The evident weaknesses relating to internal governance systems, in addition to audit failures, signify that it is essential that governance mechanisms and the quality of audits are improved, [13]. It should be mentioned that calls for superior quality of audit were primarily stressed due to the failure of audit services to expose and deal with corporate scandals, [14]. This was acknowledged in research completed by [15], who emphasized that audit in recent years regarding the quality of audits. Likewise, the failures associated with corporate governance have resulted in audits being conducted correctly and effectively, [16], considering that recent investigations involving corporate and audit failures have stated that governance mechanisms (e.g., board of directors) have a vital part to play, [17]. Additionally, these high-profile corporate scandals suggest that boards of directors have received searching questions regarding their responsibilities and roles in the monitoring process to ensure that these scandals do not occur again or are less frequent, [18]. The recent decades have witnessed a crucial and urgent need in the world economy for audit fees and corporate governance mechanisms, [10], [11]. There are two key aspects to the theoretical portion of the audit fees literature: the demand and supply standpoint. The viewpoint of audit fees focuses on a positive connection between corporate governance and auditing charges. However, the supply-side view maintains a negative relationship between audit fees and corporate governance characteristics, [19], [20], [21], for instance, found in numerous studies that the demand side supported the value of board features for audit fees. The evolving dynamics of global financial markets have heightened the significance of effective corporate governance in ensuring the integrity, transparency, and sustainable growth of corporations. In the context of emerging stock markets, where economic landscapes are dynamic and regulatory frameworks are continually evolving, understanding the intricate relationships among corporate governance, ownership structure, board diversity, and audit fees becomes imperative. Considering this perspective, a proficient board should enhance the financial reporting process, consequently diminishing the necessity for external auditing.

A large shareholder active in operations and decision-making may be so influential on operations and internal control that external audits are minimized, [22]. Different kinds of major shareholders may also have different consequences, as the effects of multinational companies with

headquarters in another country may differ from those involved in the same country investors, [13]. Higher demand for external auditing services would be correlated with the presence of major shareholders. Empirical proof of audit consistency can be seen as auditors being prepared to report any misunderstandings identified during the audit process, [23]. Payment of high costs for audit could represent the efforts and efficiency of the auditor, [24]. Indeed, major companies audited (Big 4 or similar) are aiming to preserve their credibility and have better training programs and thus plan to report on the correct audit (high quality), [25]. Thus, large audit firms can be used as an aggressive inspection mechanism for firms' financial statements compared to their small counterparties, [26], [27].

The literature surrounding corporate governance has witnessed substantial growth and diversification, reflecting the evolving nature of business environments worldwide, [28]. Scholars have delved into the complexities of ownership structures, examining how various ownership patterns influence governance practices. Additionally, Board diversity has emerged as a pivotal factor in shaping corporate decision-making processes and, consequently, the overall performance of organizations. Complementing these discussions, the examination of audit fees provides insight into the financial oversight and assurance mechanisms adopted by corporations, [7].

The corporate governance code is developed to foster the economy and ensure stakeholders' interests (JCGC, 2012). This study develops the literature on audit quality and may well demonstrate how audit quality is affected by governance mechanisms, specifically after the introduction of the JCGC, [29]. These fields have recently become the main issue for academics and practice. This is because governance mechanisms and audit fees are the main mechanisms companies have used to avoid scandals and protect shareholders. Recent scams and corruption in big companies such as Enron and Pramalat and a chain of audit failures, for example, Arthur Andersen, lead to an impairment of investors' trust in the auditor report and governance mechanisms; this could significantly weaken the capital market because investors are the primary source for raising funds, [30]. The high audit fees and reliability of governance mechanisms are essential to protecting investors and restoring the investors' confidence. They may determine the survival and success of companies. More specifically, concerns about

external auditors and audit fees are expected to be crucial issues that play a vital role in promoting assurance, reliability, and enhancing trust in the financial statement as well as retrieving investors' confidence, [10], [31]. Thus, most companies use some techniques to increase stakeholders' confidence in the capital market, such as independent auditors and suitable governance mechanisms, [32].

Therefore, the study objectives and questions are motivated by several rational reasons and relevant gaps that led to this study. In addition to that, this research is important in numerous ways. Since this study answers the research questions, it will offer recommendations to the leading financial agencies, such as the Jordan Securities Commission (JSC), and companies, [33]. In addition, this is significant not just for Jordanian regulators and academics but also on a global level; they will be used as a good source to help improve corporate governance and apply this research to other contexts. It also explores the gaps and inconsistencies in the current body of knowledge, paving the way for the formulation of hypotheses that will guide our empirical investigation in the context of an emerging stock market. Studies have also shown that there is some connection between the interference of corporate governance on auditor remuneration in the form of audit fees. Agency theory predicts that in the absence of solid regulations and an efficient marketplace, managers in a highly concentrated ownership situation will have sufficient incentives to have more rigorous audits performed, which will lead to higher audit fees. From the point of view of agency theory, external auditors are one of the most important techniques of corporate governance because they observe and check the quality of the financial reporting system and report any material misstatement, [34]. Additionally, there are two different sides, including demand-side and supply-side studies utilized in the literature on audit fees, [35], the demand-side perspective is more suitable for our research due to the responsibilities assigned to governance mechanisms under the Jordanian governance code. The agency theory suggests various corporate governance techniques intended to reduce agency costs. The most vital external mechanism is an external audit, ensuring the financial reports represent an accurate and fair view and evaluating the control system is effective. Therefore, all these rational reasons and justifications lead to undertaking this study. This research endeavors to contribute to the existing body of knowledge by shedding light on the

nuanced dynamics between CGM and audit fees within the context of an emerging stock market. By delving into this intersection, we aim to uncover insights that can inform regulatory policies, guide corporate practices, and enrich the understanding of stakeholders involved in these dynamic financial ecosystems. Through empirical evidence drawn from the specific nuances of an emerging stock market, this paper seeks to deepen our comprehension of the multifaceted relationship between CGM and audit fees, ultimately advancing the discourse on corporate accountability and financial stewardship in the global financial landscape. This research seeks to explore and contribute to the discourse on these critical facets within the specific context of an emerging stock market.

2 Literature Review and Theoretical Framework

2.1 Board Diversity

2.1.1 Multiple Directorships, Board Independence, Board Size, CEO Tenure and Audit Quality

Diversity on boards can be seen as one of the instruments of corporate governance. This tool contributes to increasing business management efficiency. It also strives for effective corporate management oversight. Thus, diversity on the board must be accomplished when choosing board members, [36]. Directors' boards shall have access to optimally functioning reliable information. There is continuous debate in the literature, [37], about what kind of managers or executives' composition is the best in this context – either external managers with better market experience and access to information from other businesses (competent business partners) or internal managers with superior knowledge of the sector. In other words, it is a compromise between the increasing efficiency of knowledge in the heterogeneous board and the homogeneous decision-making boards. Heterogeneous boards tend to be well-informed of external concerns to challenge and discuss strategic organizational decisions, while uniform boards focus mainly on confidence, collaboration, and mutual understanding and values, [38].

To acquire expertise, the Board of Directors is a significant strategic resource in the world's leading businesses, foreign capital sources, emerging geological and industrial markets, and

competitors. Therefore, the company's increased divergence and financial performance among the board members is exemplary. Increased knowledge and access to external information are intended to provide a diversified board with a broader range of management advice compared to a more homogeneous board, [39]. The resource viewpoint focuses on the benefits of board diversity regarding access to the wider knowledge network, not on the costs of decreasing productivity in decision-making. Other important factors that quantify heterogeneity are age and sex diversity among board members.

Recent studies claim that CEO tenure increases company-specific knowledge and familiarity with the financial reporting process, improving financial reporting quality, [40], [41]. Furthermore, it is expected that CEO tenure has a crucial impact on the quality of CEO negotiation and the quality of decisions taken by top management. Since the CEO is also responsible for monitoring management decisions, some previous studies recommend that long-term CEO tenure leads to entrenchment and a decline in shareholder wealth, [42], [43]. From another angle, [44], suggests a negative relationship exists between the CEO's tenure and earning management, as the longer the CEO's tenure, the performance and strategy of the company are further shaped by the CEO's skills, knowledge, and previous practice. Hence, the 64 CEOs will be aware of their actions to avoid fraud or misstatement, as the CEO's reputation relates to that company.

In addition, tenure improves the CEO's firm knowledge, skills, and practical experience in the company's financial operations and accounting systems. It thus improves the CEO's competency to discover misreported information and prevent irregular actions. Despite all arguments, no direct research examines the relationship between CEOs and audit fees.

Since the board's performance depends on the role of the top positions (i.e., chairman), [45], there should be a separation between the chairperson, who presides over the board's meetings, and the chief executive officer (CEO), who is responsible for leading the daily activities of the company, because in some companies one person holds the dual position of chairperson and CEO at the same time. Similarly, the JCGC recommended separating the functions of the CEO and chairman, ensuring that each individual has their tasks and responsibilities, and each person should hold separate positions. Individual managers aid effective management and decision-making in

monitoring businesses to maximize market profit. Independent board directors need further external audit quality work to render satisfactory financial statements. [46], argue that more independent board members need strict oversight of financial statements, and, in turn, external auditors require more audit services, thus enhancing audit charges. The relationship between independent directors and audit fees is discussed by [47], but no substantial relationship is identified. However, in other studies, for example, there is a positive and important correlation between independent directors and audit fees, [48].

Audit risk is demonstrated by leverage and asset liquidity; a significant determinant of audit costs is found to be audit risk, [49]. A UK sample of industrial companies is examined by studies such as [50]. Leverage is calculated as an asset-split long-term debt ratio that is similar to previous studies, including, [51], and liquidity is assessed as current assets. The higher the probability of audits and thus the higher the auditing charges, the greater the amount of liquid debt and assets. The leverage (asset liquidity) and audit fees require a positive relationship.

[21], propose that the risk to external auditors for organizations, such as those with wider and more expert boards and a better control environment, is smaller than that, which can lead to decreased audit costs of external audit procedures, [52]. On the other hand, indicates a positive connection between the size of the board and the valuation of the business. This makes it more possible for the broad committee to have better discussion and monitoring, thereby improving audit services and audit charges in turn. Companies with broad boards will rely more on sound audit reporting and need more external auditors to provide assurance, resulting in heavy audit fees. The board size is also clearly associated with audit fees, as noted by [53]. Additionally, similar to [54], the key governance method includes board meetings in listed SMEs, as this accessibility of human capital provides the board with different perceptions, ideas, and skills, which may lead to generating critical discussions and enhancing the quality of decisions, [55]. This is consistent with [56] who argue that a positive association exists between the size of the board and audit fees. Further support for this argument is the claim that large board sizes can engage more in controlling, monitoring, and overseeing the financial reporting system, [55]. This allows for the establishment of good committees by boards, such as audit and remuneration committees. Audit quality literature

claims that companies with smaller board sizes lead to improving the quality of decision-making and monitoring of financial reporting, [57], [58]. This study proposes that the size of boards is connected with diversity and different perspectives, which will help improve the quality of the monitoring process in the company. Therefore, the previous corporate literature proposes that a large board size is connected with diversity and different perspectives, which improves social capital in meeting, [55]. However, [59], claims that the ideal number of board members should be no more than eight.

H1: A correlation exists between the CEO tenure and audit fees in Jordanian manufacturing public companies.

H2: A correlation exists between the multiple directorships of the board and audit fees in Jordanian manufacturing public companies.

H3: A correlation exists between board independence and audit fees in Jordanian manufacturing public companies.

H4: A correlation exists between board size and audit fees in Jordanian manufacturing public companies.

H5: A correlation exists between board gender diversity and audit fees in Jordanian manufacturing public companies.

2.2 Ownership Structure

2.2.1 Ownership Concentration, Institutional Concentration, Foreign Ownership and Audit Quality

One of the most intensely debated issues is ownership concentration, and the quality of audit service in the corporate governance literature is whether it affects companies' decisions, [60], [61], [62]. An essential governance tool is ownership structure, especially when there is a weak legal framework. Similar to numerous emerging markets, Jordan's legislative framework provides insufficient safeguards for investors, hence making it customary for corporations to be dominated by influential shareholders. Similarly, the various categories of controlling shareholders possess distinct investment strategies and incentives, which subsequently influence their management of the investee companies. [63], pointed out that concentrating only on ownership concentration without taking into account the various kinds of owners independently could result in inaccurate conclusions about the respective roles that each type of owner plays. Institutional investors are affected by a company's monitoring mechanism,

including income management activities. [64], found that institutional ownership was strongly connected as a proxy for audit quality with audit fees. [65], said institutional ownership could be a significant factor in helping companies conduct their business effectively. He found that companies tend to audit the Big 4 if institutional ownership increases. [66], concluded that increased institutional shares resulted in a general demand for better-quality audits in China.

[67], demonstrate a significant impact of ownership concentration on contemporary and subsequent company success. [68], pointed out to companies with regulated shareholders that standards of audit services may differ from those of those companies that do not control shareholders; they found that if an auditor faced a family-owned business of customers, the audit quality was compromised. The [69], survey showed that external auditors' qualifications for listed companies in China were lower at a lower proportion of government equity or a higher stock concentration at a marginally significant level. The assumption that unlisted Russian companies belonging to foreign investors reported better quality earnings than those belonging exclusively to unlisted Russo enterprises (2008) could not be supported by [70], but found that unlisted Russian enterprises with foreign ownership reported earning earnings faster.

[71], points out that the arrangement of ownership impacts reported earnings. However, the impact on managers' ability to manage income remains controversial for insiders, institutional investors, and block holders. We examine if each of the ownership structure categories (insiders, external block holders, and institutional investors) is expected to lead to greater transparency, reliability, and the auditor's risk of delivering an improper audit opinion by effective boards and committees.

High-concentration companies are more likely than companies with low concentration to meet their obligations and track external audit processes more efficiently due to possible liability threats and reputational impairment. As a result, owner concentrations will likely increase due to the need for a broader audit scope to ensure audit consistency. Relatedly, posits that ownership concentration affects audit services and auditor choices. Firms with high ownership concentration are more motivated to actively control managerial actions as their equity holding allows them to monitor managerial actions, which may affect the high audit fees. Moreover, block shareholders are

the main mechanisms to control and monitor management actions, [72]. Hence, block shareholders require high audit fees to improve control and protect their investments from mismanagement. This supports claims by [73] that firms with block shareholders may provide relevant and timely financial information. This is supported by [68], who found the concentrated ownership effect on the level of audit fees since the audit service in companies with concentrated ownership is different from companies without concentrated ownership; this is because the majority shareholders can affect the decision of auditor selection in the annual general meeting. Existing agency theory proposes that a company's ownership composition influences the level of external auditing quality, [74]. Ownership concentration is considered a key form of monitoring and governance mechanisms. Thus, the concentration of ownership actively engaged in decision-making and daily practice has a wider span of control, [75], [76]. In publicly listed companies, shareholders are the company's owners and have numerous and diverse rights and duties, [77], [78]. However, shareholders are not allowed to manage their companies directly, given that this duty is assigned to general managers and governing bodies accountable to shareholders. Additionally, shareholders cannot obtain information concerning certain data and transactions.

Furthermore, ownership concentration gives rise to a new agency paradigm known as the principal-principal model, in which the majority (controlling) and minority shareholders are the main parties involved in conflict, [79]. [80], found an important positive association between audit independence and competence and audit fee charges with more recent data from the United States, but no meaningful link between meeting frequency and audit fees. Despite these contradictory results, we assess the link between higher-quality auditing fees and a more independent and knowledgeable auditing committee. In this context, we assess the relationship.

Initially, it is tempting to substitute the view that more of one control source contributes that there is a negative relationship between regulation or governance and external audit to less than another. However, this relationship is not commonly seen in previous studies, and it is more common to see positive relationships. It does not consider, as discussed above, the view of substitution suggests that there would be a negative interaction with external auditing for alternate

control sources. Implicitly, this point of view is based on a scenario consisting of a single decision-maker reducing the risk to the whole system and having the capacity to control all applicable decisions. In that case, the portfolio of control mechanisms can indeed be modified by the sole decision-maker, and if one becomes more robust, another can decrease power. These directors are also interested in safeguarding their reputations and call for better external audits. However, they would help the interests of all parties involved. Moreover, it seems irrational that a business with greater control is more likely to invest in a set of control systems using only one aspect of control. These points show that checks can complement and not necessarily replace one another.

The information and communication component of the internal control framework is responsible for ensuring that data is located in the business. This includes information on organizational management reaching employees, but also information on employees to manage. Hypothesis five to be empirically tested is as follows:

H6: A relationship exists between ownership concentration and audit fees in Jordanian manufacturing public companies.

H7: A correlation exists between foreign ownership and audit fees in Jordanian manufacturing public companies.

One of the primary reasons for external auditing is the agency problem that emerges from data deviation between the principal and the management. [81], contended that external auditors must lessen the information asymmetry and principal-agent conflict between them since agents act to maximize their interests even at the expense of principals. They argue that external auditors reduce conflicts between principals and agents, as agents seek to maximize their utility even at the expense of the principal, making information between the principal and the agent important.

As a result, it is anticipated that auditors will put in more work during auditing operations in the event of a big agency problem (delivering greater audit quality). Furthermore, ownership concentration gives rise to a new agency paradigm known as the principal-agent model, in which the majority (controlling) and minority shareholders are the main parties involved in conflict, [79], [82].

Furthermore, the concentration of ownership generates an agency perspective: the principal-principal model. In this model, conflicts mainly

take place between two groups of principals: majority (controlling) shareholders and minority shareholders, [79].

Against this backdrop, our research aims to conduct a comprehensive literature review that synthesizes existing knowledge on Corporate Governance Mechanisms, Ownership Structure, Board Diversity, and Audit Fees. By drawing on a diverse array of academic perspectives, theoretical frameworks, and empirical studies, this literature review sets the stage for hypothesis development and [83].

Due to mixed results, the literature has two separate viewpoints or views on corporate governance's impact on audit charges, i.e., demand-driven and risk-based. The demand-based view indicates that good governance agents expect high-quality audits to ensure the authenticity and validity of the accounts. It would thus lead to an increase in the cost of external auditors' fees. On the other side, those who speak from a risk-based point of view claim that organizations with good governance policies minimize the external auditor's risk and shorten the audit duration by the external auditor, decreasing the cost of audit fees. This section contains an extensive analysis of the study's literature and hypotheses. Previous audit determinants research highlighted corporate management and financial considerations as drivers of audit charges. Adequate processes in internal management increase financial transparency and assist auditors in their monitoring function to provide auditors with a more reliable assessment. Scientists submitted that internal corporate management processes, such as the presence of an audit committee, influence the amount of external audit fees, [84], [85].

3 Research Methodology and Data

3.1 Secondary Data and Model Specifications (Preliminary Empirical Results)

To investigate the relationship between the board of directors' characteristics (board independence, board size, financial literacy, multiple directorships, CEO duality, CEO tenure, ownership concentration, and audit fees, document analysis was used as a method for collecting data about these variables. This research starts with targeting all companies listed in the ASE as the study population. The companies listed in the ASE comprise two main segments:

the financial sector (i.e., banks and insurance companies) and the non-financial sector (i.e., manufacturing and services). However, for this study, the sample excludes companies working in the financial sector (i.e., insurance corporations and banks) and service companies because of the distinctions in the operational characteristics and different applicable administrative requirements. Hence, the sample of this study is the manufacturing of Jordanian companies listed in ASE. Since the listed companies within this sector are employed for this study with panel data, this sample makes this research doable and generalizable. Consistent with prior studies, this study used similar sampling selection criteria in previous literature, [86], [87], [88], [89]. This research focused on manufacturing companies due to homogeneity considerations, [90]. The incomplete data was eliminated. Hence, this decreases the number of observations. The financial reports are publicly available on the ASE database. The data about these variables were obtained from companies' annual reports and the ASE database. The manufacturing sector includes 14 different types of companies, such as Mining, Electrical Industries, and Chemical Industries. Our dependent variable is audit fees (LAF).

3.2 Research Model Specifications

For empirical analysis purposes, there are three main types of data: panel, cross-sectional, and time series data, [91]. A panel data set involves cross-sectional and time series data, [92]. A panel data set involves cross-sectional and time series data, [92]. The empirical analysis in this research is based on panel data for five years and for 76 manufacturing companies. Moreover, panel data involve less collinearity among the independent variables and include more observations, [93]. The period started from 2017 until the latest annual reports in 2021 while collecting data for this research, and during this period, study variables are available in the financial report. These variables were extracted from secondary sources, mainly from the disclosure of companies' financial reports; all these variables are mandatory to disclose in the financial report to the JSC. Regarding the empirical analysis, which investigates the relationship between the board of directors' composition, ownership concentration, and AQ proxies.

Table 1 (Appendix) illustrates the variables' measurement, definitions, and codes for dependent variables, independent variables, and control variables for this relationship. This research used some control variables consistent with prior

studies, as these variables are likely to impact findings and the relationship between CGM and AQ.

This study utilized Ordinary Least Squares (OLS) as the dependent variable measurement is a continuous variable such as audit fees. Previous studies have also employed ordinary least squares (OLS), [86], [108], [109], [110]. However, this study will examine a different set of independent variables. These models have been employed to present and examine empirical data regarding the relationship between CGM and AQ. The OLS regression model, is developed as follows: "Audit fees model."

$$AF = \alpha + \beta_1 BI_{i,t} + \beta_2 BS_{i,t} + \beta_4 MD_{i,t} + \beta_5 CET_{i,t} + \beta_6 BGD_{i,t} + \beta_7 IO_{i,t} + \beta_8 OC_{i,t} + \beta_3 FO_{i,t} + \beta_9 FL_{i,t} + \beta_{10} BC_{i,t} + \beta_{11} IS_{i,t} + \beta_{11} CS_{i,t} + \beta_{11} AR_{i,t} + \varepsilon_{i,t}$$

($AFE_{i,t}$) = "Natural Logarithm of Total Audit fees paid to the Audit firm".

$BI_{i,t}$ = "The percentage of non-executive directors on the in the board of directors".

$BS_{i,t}$ = "Total number of directors on the board".

$MD_{i,t}$ = "Number of director positions held by board members in other companies either as executive or non-executive directors".

$CEOT_{i,t}$ = "The number of years the current CEO holds this position"

$FO_{i,t}$ = "Percentage of foreign ownership in the firm"

$IO_{i,t}$ = "The Percentage of institution ownership in the firm".

$BGD_{i,t}$ The proportion of male directors on the board is expressed in percentages

$OC_{i,t}$ = "The percentage of shares owned by shareholders who own more than 5% of equity capital".

$SI_{i,t}$ = "It is measured as a ratio of international sales to total assets"

$FL_{i,t}$ = "Measured by using this equation (total debts divided by total assets)" (Control variable).

$CS_{i,t}$ = "Measured by the total assets owned by company" (Control variable).

$BC_{i,t}$ = "Sum of inventory and accounts receivable divided total asset" (Control variable).

$\varepsilon_{i,t}$ = error terms

Note:

This study employs certain control variables in line with previous research, as these variables are

expected to influence results and the association between CGM and AQ, given that some control variables influence AQ levels. [111], found that client size affected audit fees and efforts. The primary reason for including control variables is to mitigate biases in estimating AQ by controlling for any omitted variable biases. [112], argue that leverage influences external audit work. Therefore, selecting control variables aims to control for leverage, client size, and complexity, [113].

The auditing charges are determined by the Big 4 auditing companies. Previous studies examined the impact of large audit firms on auditing charges, [50], [51]. Big 4 is known to be a binary variable, with Big 4 meaning in the present paper. For companies audited by Big 4 accounting companies and JSBED otherwise. The Big 4 audit firms offer high-quality assurance services to minimize the possibility of financial misrepresentation and thereby increase the number of audit fees. A positive correlation between Big 4 and audit fees is therefore expected. Financial reporting standard (opinion): a favorable correlation is expected, with previous empirical evidence, between audit opinion and audit fees. This relationship is confirmed by [51]. The standard of financial reporting is known as audit opinion. Audit firms categorize the financial statements of corporations as unqualified and qualified (no misstatements) (where the audit evaluation is necessary because of financial mistakes). Audit risk can be seen as a major contributor to audit charges because more risk leads to higher audit charges. The connection between losses and audit charges is therefore projected to be favorable.

Sales Internationally: This corporate factor is found to positively correlate with the audit fees and serves as a stand-in for the complexity of the client. Higher audit fees will result from higher foreign sales levels (high customer complexity). Therefore, a favorable link between international sales and audit fees is essential. It is measured as a percentage of international sales to total assets, [114].

Size of Firm: Previous reports that corporate size is an important factor affecting audit fee amount. Large businesses are more likely to pursue more audit assurance to avoid any financial mistakes or fraud situations. find that the size of the company has a favorable audit ranking using a collection of Australian publicly-traded publicly traded firms. In this analysis, the size is measured as the standard customer size proxy logarithm, [115]. Scaling audit fees according to firm size is crucial to reduce spurious correlations caused by size and produce

better inferences, as company size significantly determines audit fees, [113] and has a significant influence over other firm characteristics.

Asset Return: indicates that audit fees and profitability are related. It was argued that there needs to be a negative correlation between the return of assets and audit costs.

4 Results Analysis and Discussion

4.1 (Data Analysis Techniques) Descriptive Analysis:

The companies listed in the ASE comprise two main segments: the financial sector (i.e., banks and insurance) and the non-financial sector (i.e., manufacturing and services). However, for this study, the sample excludes companies working in the financial sector (i.e., insurance corporations and banks) because of the distinctions in the relevant administrative prerequisites. The sample of this study is the manufacturing and service of Jordanian companies listed in ASE since the listed companies within these sectors are employed for this study with panel data. Hence, examining the effect of the composition of the board of directors on audit fees may contribute to promoting investors' confidence and enhancing transparency. The data will be collected manually from the firms' financial reports published on the ASE official's website.

Justification for Data Collection Methods: To collect data from Jordanian financial reports, this study will utilize document analysis to gather information about the compositions of boards of directors and audit fee indicators from companies' financial reports and the ASE website for the first empirical 49 parts. This data collection method offers several advantages.

This source of data gathering has several advantages. Firstly, the data source (financial reports) is the main and official source for various parties, such as the government, investors, and regulatory authorities. Thus, this source is more precise and truthful than other secondary data sources, [116]. Hence, this source has a high level of truthfulness and credibility. Jordanian code states that all listed companies should prepare their annual audited report following "accepted profession standards and international principles." The shareholders should also select an authorized independent auditor during the general assembly according to the suggestions from the board of directors.

After collecting data, statistical techniques were employed to test and analyze the data.

Descriptive statistics will be provided; descriptive analysis describes the variables' distribution and the responses' general pattern, using mean and standard deviation measures. In addition, correlation analysis will examine the relationship between corporate governance (including the board of directors and internal audit) and audit fees. This study also used multiple regression analysis; the main purpose of using regression analysis is to examine the effect of corporate governance (including the board of directors and internal audits) on audit fees and test the hypothesis. This study applied multiple binary logistic regression for some variables, such as audit firm size as a dependent variable, since a dichotomous dependent variable (Big 4 audit firm or non-Big Four) is binary as the proxy for audit fees. However, this study will apply ordinary least squares (OLS) if the dependent variable is continuous, such as audit fees. The previous studies have used ordinary least squares (OLS) and binary logistic regression models, [108], [109], [110], [117]. However, this study will look at a different independent variable set. Multiple regression analyses will be conducted to analyze the effect of internal audit on audit fees. Furthermore, various statistical techniques are employed to test and analyze the data after collecting it. Hence, descriptive statistics were provided; descriptive analyses describe the variables' distribution and the responses' general pattern numerically and graphically, [118], using mean and standard deviation measures. Table 2 (Appendix) provides descriptive statistics on the model variables for all firm-year observations. Furthermore, Table 2 (Appendix) illustrates the maximum, minimum, mean, and standard deviation of all variables in the study.

The variable value of the board member ranged between 0.00 and 5.00, with a mean of 3.00, indicating that, on average, companies in the sample have 8 members on the board of directors. Ownership concentration values ranged from 0.07 to 0.98, with a mean of 0.59. Ownership concentration is measured by the percentage of shares owned by shareholders holding more than 5% of equity capital. Table 2 (Appendix) shows that approximately 0.78% of the board members are non-executive. Additionally, the majority (70.8%) of the sampled firms do not have duality, indicating separate roles for the chairman and CEO. The average audit fee for the sample companies is 11.23214, with a relatively high standard deviation, reflecting variations in client sizes and the complexity of the companies in the sample.

Furthermore, the median and mean values for

industry specialization are 17.15% and 6.9%, respectively. Pearson's correlation coefficients provide a numerical description of the strength and direction of the linear relationship between pairs of variables. The purpose of multivariate regression analysis is to assess how the dependent variable is influenced by two or more independent variables, [119]. In this study, the primary aim of the regression analysis is to analyze the impact of independent variables on the dependent variable.

Multicollinearity is present when two or more predictor variables are highly correlated; this makes it problematic to identify the individual effect of each variable to the explanation of the dependent variable, [120]. According to the results, there is no high multicollinearity between the variables. The Variance Inflation Factors (VIFs) for the variables examined were below accepted thresholds, indicating that the independent variables are reasonably independent, and multicollinearity is not a significant issue, [121].

As indicated by the β coefficient, there is a significant positive relationship between ownership concentration and audit fees, which implies that companies with a high percentage of ownership concentration demand higher audit quality. The coefficient of determination of ownership concentration is 0.05, implying that as ownership concentration increases, audit fees increase by 5%. Moreover, as can be seen from Table 4 (Appendix), the independent director has a positive relationship with audit fees; the coefficient of determination of the audit committee is 12 % and significant at the 10% level. These findings are consistent with previous studies, [122], suggesting potential explanations such as stakeholder influence and long-term orientation. Additionally, the consistently positive and statistically significant coefficient for IOC (-0.103, $p < 0.01$) indicates that companies with high IOC typically incur higher audit fees.

The findings of the present study also indicate that gender diversity on a board has a substantial influence on the correlation between board individuality and economic performance. Based on the analysis of the research hypotheses, the findings presented in Table 4 (Appendix) demonstrate a statistically significant positive association between CEO tenure and audit fees, with a coefficient of 0.03 ($t = 1.8, p < 0.01$). This indicates that companies with CEO tenure typically led to higher audit fees,

The consistently positive and statistically significant coefficient for FOC (0.07, $p < 0.001$) indicates that companies with high FOC typically achieve higher audit fees. It also reveals that the

variable value of the board size was between 5 and 13, and the mean was 8, demonstrating that sample companies have, on average, 3 members on the audit committee. As indicated by the descriptive statistics, the value of ownership concentration ranged between 0.07 and 0.98, and the mean was 0.59. The controlling shareholders are measured by the percentage of shares owned by shareholders who own more than 5% of equity capital. Table 3 (Appendix) shows that almost 0.78% of the board members are non-executive. Our findings validate previous empirical evidence indicating that companies with diverse gender compositions tend to reap greater financial rewards when they exhibit high audit quality, [122]. This resonance with stakeholder expectations suggests a strategic alignment between gender diversity and audit quality. These findings align with prior empirical research. However, presents contrasting results, suggesting that gender diversity negatively affects audit. These results suggest that diverse boards may exhibit greater assurance in auditing, that positively impact audit fees. The findings regarding BGD indicate a positive correlation between BGD and audit fees. This also reinforces the idea that diversity in the boardroom is expected to leverage unique knowledge, varied evidence, and practices for the benefit of the company. The negative coefficient for Multiple Directorship (-0.025) in the models highlights its impact on audit fees. Board diversity and Audit fees. These findings align with past empirical research. Nonetheless, presents contrasting results, suggesting that gender diversity negatively affects financial performance.

Furthermore, the majority, 70.8% of the sampled firms do not have duality. As can be seen, the audit fee on average for the sample companies is 11.23214. It can be seen that there is a relatively high standard deviation for audit fees, which can be inferred from the different sizes of the clients and the complexity of the sample companies. According to the results, the VIFs for the variables investigated were below the accepted levels, so the general message from the VIF is that the independent variables are reasonably independent, and there is no high Multicollinearity. Therefore, VIF values as one of the regression results, as shown in Table 3 (Appendix), confirmed no high multicollinearity between the study's variables as they range between 1.1 and 2.1. Moreover, the high possibility of the F statistic 141.71 sig at .000 indicates that all independent variables are jointly significant in describing audit quality, and the model is proposed to be statistically valid. The overall model is significant, indicating to fit the 95

model to the data. However, not all independent variables have statistically significant coefficients. There is a positive significant relationship between ownership concentration and audit fees, which implies that companies with a high percentage of ownership concentration demand higher audit quality. The coefficient of determination of ownership concentration is 0.05, implying that as ownership concentration increases, audit fees increase by 5%. Moreover, as seen in Table 4 (Appendix), the FOC has a positive relationship with audit fees; the coefficient of determination of the audit committee is 7 % and significant at the 10% level. Additionally, our research indicates that the size of a company could diminish the beneficial effects of having a diverse board and ownership composition on its audit fees when it comes to firm performance. The empirical findings of this paper underscore that larger boards are linked to decreased audit fees, indicating that a diverse and larger board could potentially enhance a firm's financial monitoring process and lead to high audit fees. Likewise, the Percentage of outside directors consistently shows a positive and significant association with audit fees. This suggests that companies with a higher proportion of independent directors on their boards tend to achieve better monitoring processes and lead to high audit fees.

5 Conclusions

The results of this study have presented policymakers a range of recommendations. Explicitly, results stated that the Governance Code needed to be updated to reflect the most recent changes to auditing values and governance instructions after reviewing the existing regulations. This essential result from the fact that the JCGC's latest version was released in 2006, and advancements have occurred in governance guidelines and international values, mainly those related to non-audit services, the auditor's role in measuring internal controls, and the contribution valuable insights into shortages and flaws in control procedures.

Moreover, the auditor must consider the evidence and effectiveness of governance mechanisms when implementing their procedures and conducting audits. The Jordanian policymaker has established a governance code aligned with international professional standards to enhance audit quality and mitigate vulnerabilities in governance mechanisms. The goal of the Jordanian policymaker's creation of a governance code compliant with global professional standards is to

strengthen the quality of audits and solve governance mechanism flaws. Consequently, high audit quality serves as a preventive measure against audit failures, thereby reducing the likelihood of legal actions and playing a substantial role in safeguarding investors from fraud and scandals.

Furthermore, it is worth mentioning that [122] ascertained that independence, CEO duality, and the size of the board substantially influence the choice of an industry-specialized auditor. researched the correlation between governance mechanisms and auditor choice and gathered data from 162 listed companies (2005 to 2009). The study concluded that ownership concentration and board independence are significantly associated with the Big-4 audit companies' choices. They established a significant correlation concerning audit complexity and risk, client size, and auditor-related variables with audit fees. Further, their investigation noticed a negative relationship between the independence of audit committees and audit fees. This ensures that the presence of an audit committee helps to strengthen a financially stable firm's audit efficiency and financial reporting practices. Others believed that the audit features were not related to the audit fees.

In addition, these studies claim that an effective board tends to employ quality of audits so that management uses the resources appropriately and that the interests of the shareholders are considered. An effective board also ensures that good governance is at an organization's core and includes being accountable for enhancing levels of control and guaranteeing a high level of audit quality. Additionally, based on the Corporate Governance Code in Jordan (2006), the board of directors must establish a disclosure policy that guarantees high-reliability levels and act to ensure the policy complies with in support of this and assert that the monitoring role of the board is essential concerning improving the monitoring process and reliability of financial transactions. Hence, board members are responsible for dealing with the primary financial decisions concerning disclosure and avoiding any conflict of interest. Moreover, the Corporate Governance Code (2006) asserts that directors are responsible for examining key decisions and information about the firm's monitoring process and disclosure policy. Similarly, the directors are also responsible for ensuring that other monitoring mechanisms appropriately achieve their duties, protecting shareholders' interests. Moreover, substantial evidence indicates that a larger board size amplifies the positive influence of audit fees by offering a

diverse array of perspectives and skills. Based on these findings, we conclude that ownership concentration and board diversity align with the theoretical prediction of agency theory, which advocates for the idea that interaction and diversity enhance decision-making and innovation, contribute to a comprehensive environmental strategy, and improve resource allocation and expertise.

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Conflict of Interest

The authors have no conflicts of interest to declare.

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APPENDIX

Table 1. The Definition of Variables and Measurements

Study Variables	Code	Descriptions and measurements	Supported Literature
Dependent variables: Audit fees	AFE	“Natural Logarithm of Total Audit fees paid to the Audit firm”.	[32], [94]
Audit Quality			
Independent variables: Board independence	BOD	“The percentage of non-executive directors on the board of directors”.	[10], [21], [30], [32], [94], [95]
Board size	BOS	“Total number of directors on the board. An internal Governance indicator”.	[10], [11], [94]
Multiple Directorships	MD	“Number of director positions held by board members in other companies either as an executive or non-executive directors”.	[96], [97], [98]
Board gender diversity	BGD	The proportion of male directors on the board are expressed in percentages	[76], [99]
CEO tenure	CEOT	“The number of years the current CEO holds this position”	[100]
Ownership concentration	OC	The Percentage of shares owned by shareholders who own more than 5 % of Equity Capital	[101]
Institutional Ownership	IO	The Percentage of institution ownership in the firm	[102]
Foreign Ownership (FO)		The Percentage of foreign ownership in the firm	[103]
Control variable Client Size	FIS	“Measured by the total. assets owned by the company”	[30], [94], [102], [104]
Sales Internationally (SI)	SI	It is measured as a ratio of international sales to total assets	[105]
Financial Leverage	AQ	Measured by using this equation (total debts divided by total assets)”	[106]
Business Complexity	BCO	The sum of inventory and accounts receivable divided by total assets.	[30], [94], [107]
Return on Asset	ROA	dividing its net income by its total assets	

Table 2. Summary Descriptive Statistics on the model variables for all firm-year observations (the maximum, minimum, mean, and standard deviation of all variables in the study)

Descriptive Statistics	N	Range	Min	Max	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
					Statistic	Std. Error			Statistic	Std. Error	Statistic	Std. Error
MD	325	8	0	8	3.86	.087	1.563	2.443	.710	.135	.795	.270
BS	325	8	5	13	8.44	.122	2.201	4.846	.270	.135	-.981	.270
BI	325	.86	.14	1.00	.7805	.01095	.19735	.039	-1.122	.135	1.298	.270
CEOT	325	22	1	23	7.34	.288	5.183	26.867	1.091	.135	.420	.270
OC	325	.81	.07	.98	.5937	.01228	.22139	.049	-.377	.135	-.586	.270
AFE	325	8.2700	7.7679	14.9380	11.23214	.7950	.14345	38.083	3.937	.135	.15356	.270
BC	325	.94	.02	.96	.3573	.01034	.18648	.035	.614	.135	.544	.270
IO	325	.37	.07	.61	.2103	.0235	.15748	.027	.324	.0213	.457	.372
FO	325	.24	.04	.41	.145	.0453	.13301	.067	.532	.0761	.274	.432
SI	325											
BC	325	1394837	1192383	121146600	.236	.0251	183920755	.218	.732	.047	.380	.571
ROA	325	12102736 1	1192383	1211466000	64524269.8	10202087.93	183920755.889	3382698840	5.225	.135	26.739	.270
BGD	325	.7030	.124	.931	.6034	.02934	.18372	.040	-1.231	.146	1.138	.291
Valid N (listwise)	325											

Source: Field results

Table 3. Summary of the results of multicollinearity between the variables

Variable name	Pearson correlation coefficients	BS _{i,t}	BI _{i,t}	MD _{i,t}	CEOT _{i,t}	OC _{i,t}	IO _{i,t}	FO _{i,t}	BC _{i,t}	IS _{i,t}	CS _{i,t}	BC _{i,t}	FL _{i,t}	AR _{i,t}	BGD _{i,t}
BS _{i,t}	Pearson Correlation	0.59**	1.00												
BI _{i,t}	Pearson Correlation	-0.016	0.03	1.00											
	Sig.	0.77	0.54												
MD _{i,t}	Pearson Correlation	0.34**	0.45**	0.001	1.00										
	Sig.	0.00	0.00	0.94											
CEOT _{i,t}	Pearson Correlation	0.15**	0.07	0.17**	0.06	1.00									
	Sig.	0.01	0.20	0.00	0.33										
OC _{i,t}	Pearson Correlation	0.04-	0.01	0.07	0.08	0.03	1.00								
	Sig.	0.41	0.72	0.24	0.13	0.60									
IO _{i,t}	Pearson Correlation	0.32**	0.38**	0.11*	0.40**	0.25**	0.02	1.00							
	Sig.	0.00	0.00	0.04	0.00	0.00	0.75								
FO _{i,t}	Pearson Correlation	0.15**	0.28**	0.002-	-0.06	-0.07	0.01	0.04	1.00						
	Sig.	0.00	0.00	0.97	0.29	0.09	0.92	0.49							
	Sig.	0.53	0.64	0.54	0.00	0.04	0.78	0.00	0.00						
IS _{i,t}	Pearson Correlation	0.01-	0.18**	0.01	0.02	0.17**	0.09	0.28**	0.18**	0.40**	1.00				
	Sig.	0.89	0.00	0.83	0.74	0.00	0.11	0.00	0.00	0.00					
CS _{i,t}	Pearson Correlation	0.04	0.21**	0.01	0.12*	0.05	0.01	0.13*	0.12*	0.04	0.02	1.00			
	Sig.	0.54	0.00	0.76	0.02	0.43	0.93	0.02	0.04	0.44	0.79				
BC _{i,t}	Pearson Correlation	0.01	0.07	0.09	0.03	0.03	0.05	0.09	0.04	0.16**	0.11	-0.13	1.00		
	Sig.	0.92	0.17	0.11	0.63	0.59	0.40	0.13	0.39	0.00	0.05	0.01			
FL _{i,t}	Pearson Correlation	0.04	0.24**	0.15**	0.06	0.15**	0.13*	0.27**	0.16**	0.29**	0.90**	0.10-	0.12*	1.00	
	Sig.	0.43	0.00	0.01	0.27	0.01	0.02	0.00	0.00	0.00	0.00	0.07	0.03		
AR _{i,t}	Pearson Correlation	1	.585**	-.016	.338**	-.150**	0.046	.312**	-.159	.034	-.008	.035	-.005	.044	
	Sig.		.000	.774	.000	.007	.414	.000	.004	.528	.891	.535	.923	.427	
BGD	Pearson Correlation	0.03	0.29**	0.02	0.03	0.14**	0.08	0.19**	0.21**	0.39**	0.01-	0.01	0.13*	0.16**	1

Variable name	Pearson correlation coefficients	BS _{i,t}	BI _{i,t}	MD _{i,t}	CEOT _{i,t}	OC _{i,t}	IO _{i,t}	FO _{i,t}	BC _{i,t}	IS _{i,t}	CS _{i,t}	BC _{i,t}	FL _{i,t}	AR _{i,t}	BGD _{i,t}
Sig.		0.89	0.00	0.46	0.23	0.00	0.01	0.00	0.00	0.00	0.79	0.72	0.03	0.00	

Source: Field results

Table 4. Summary of the results of the multivariate regression of corporate governance mechanisms on audit quality proxy (audit fees)

Coefficients									
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.			
		B	Std. Error	β					
	(Constant)	0.03	0.19		0.15	0.63			
	Ownership concentration	.004	0.02	-.012-	-.183	0.86			
	Board size	.003	0.04	-.012-	-.168	0.00			
	Independent director	.126	0.13	-.052-	-.949	0.09			
	Foreign Ownership concentration	0.07	0.02	0.21	3.38	0.00			
	Institutional Ownership Concentration	-.103	0.06	-.097	-1.74	0.08			
	CEO tenure	-0.03	0.01	-.001-	.18	0.09			
	Multiple Directorship	-.025	0.02	-.113-	-1.548	0.12			
	BGD	.351	.23	0.17	1.211	.003			
	Sales Internationally	.001	0.01	-.013	-2.62	0.79			
	Client Size	0.27	0.09	0.16	3.02	0.00			
	Financial Leverage	-0.25	0.05	0.30	5.47	0.00			
	Business Complexity	0.03	0.19		0.15	0.88			
	Asset Return	-.004	0.02	-.012	-1.83	0.86			
Model Summary									
Model	R	R ²	Adjusted R-Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	Sig.F Change	F	Sig
1	0.45	0.65	0.56	0.44	0.11	14.22	0.00	7.75	0.00

Source: Field results. Note: * Significance at the 0.1 level. ** Significance at the .05 level. *** Significance at the .01 level.
*p<10%- **p<5%- ***p<1%