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## CORPORATE GOVERNANCE MECHANISMS AND EARNINGS MANAGEMENT: EVIDENCE OF FAMILY AND NON-FAMILY FIRMS IN JORDAN

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### Abstract

**Purpose:** The current work explores the availability of any variance in the relationship amongst the directors' board, the earnings management, and the effectiveness of the audit committee of the family and non-family-owned companies in Jordan.

**Design/methodology/approach:** A panel dataset consisting of numerous observations on the same economic units is used. Each element includes two subscripts, the group identifier, *i* (63 firms listed on ASE), and inside the group index represented by *t* that categorizes time from 2014 to 2020. Thanks to the Hausman and Breusch-Pagan (LM) tests' verification of the appropriateness of the random-effects model, it is used to construct the regression model in this research paper.

**Findings:** This study demonstrates that the relationship concerning the effectiveness of the directors' board and earnings management is significant and negative for the entire sample and non-family companies. This association yet is insignificant and weak for family companies. Furthermore, the current work demonstrates that the audit committee's effectiveness significantly affects the management of earnings as gleaned from the whole and family sample. However, it is found that it is insignificant for non-family companies.

**Originality/ Value:** The current research paper studies the Jordanian firms chiefly featured with

common family ownership control. As gleaned from a framework theorized based on the agency theory, the use of data from Jordan assists in comparing family and non-family firms concerning the effect of the directors' board and the characteristics of the audit committee as a compound measure. Their combined impact on earnings management is attained by this compound measure.

**Keywords:** *Earnings management, Jordan, family and non-family firms, the effectiveness of the board of directors and audit committee.*

## **Introduction**

Family firms are prominently featured as the best significant business method of organizational structure in technologically and commercially advanced and developing countries. The variance among these states in holding family companies is identified by numerous pieces of research papers. To illustrate, using a sample of 27 wealthy economies, La Porta et al. (1999) explores the large corporations' ownership structure. The results of the study show that families often control firms. Likewise, as shown by (Faccio and Lang, 2002), families control a large number of public firms in Western Europe. Similarly, the huge majority of public firms in East Asia are organized and managed by families (Claessens et al., 2002). More precisely, the founding families in the United States constitute thirty-three percent of the S&P five hundred companies and firms (Anderson and Reeb, 2003). Furthermore, Omran et al. (2008) show that two-thirds of the 304 companies are organized and managed by families in four Arab countries. In addition, these countries view family businesses as the first prevalent form of economic organization.

The organizational form's prevalence around the world has recently triggered rapid development in the theoretical and empirical literature. Also, the family participation in administration and ownership affecting the firms' performance with different theoretical frameworks has been examined by researchers. Furthermore, with the use of agency theory, the family firms' performance is analyzed (Villalonga and Amit, 2006). Also, due to the common owner-manager conflict, the impact of principal-principal conflict or the so-called Agency problem II is argued, investigating its effects on the firms' value. Given the firm's Resource-Based View and the agency theory, Gibb Dyer (2006) pinpoints the effect of the family on the firm's performance to create the required propositions. Using the principles of the stewardship and agency theories, Miller, and Le Breton-Miller (2007) provide suggestions related to the factors that make family firms big competitors in the global market. The growing amount of research work in firms managed by families shows that family involvement equally brings costs and benefits to the firms.

Even though family-owned corporations are tremendously rooted amongst publicly traded organizations, family-owned companies still differ from non-family companies. To illustrate, more efforts are made by family owners to control directors than other forms of the big shareholder as stated by agency theory (Hashim & Amrah, 2016). Additionally, Anderson et al. (2004) shows that the agency problem, i.e., Type I agency problem among director-owners is less widespread in family businesses thanks to the availability of less information asymmetry between manager-owners as opposed to non-family companies. Yet, the Type II agency problem is regarded as plainer in family firms since family owners are featured with incentives and the capability to attain special benefits without regard for the few stockholders (Cheung et al., 2006; Ali et al., 2007).

In the same vein, in family firms, separation no longer exists between control and ownership. To put it another way, in a family-controlled company, the controlling family's members largely and daily take part in managing the firm by hiring themselves as board directors and executives. On the opposite side, small shareholders in non-family firms equally share ownership and professional directors manage the monitoring role (Issaa, G., & Siam, 2020). Because of that, this variation has brought about several motivation levels, management styles, decision-making processes, and family values amongst the founders (Chua et al., 2003; Hashim & Amrah, 2016). Given the variances in control and ownership concerning non-family and family possessed businesses with agency problems of Type I and Type II, the effect of the effectiveness of the audit committee and directors; board on the management of earnings is projected to vary for family and non-family companies.

Several significant variables such as corporate governance are adopted to decide the ability of the system of the company to endure and continue in economic crashes and shocks. And so, companies characterized by good corporate governance practices own an improved corporate outlook in terms of investment opportunities and management efficiency. To illustrate, companies distinguished by good management and advantageous long-term shareholder interests are attractive targets for investors (Sarbah and Xiao, 2015). Consequently, diminishing emerging agency conflicts in firms necessitates the corporate governance mechanisms' involvement to provide optimal monitoring, leading to reducing the possibility of the management of earnings and protecting the entire interests of the stakeholders (Rachagan, 2010). Despite the possibility that management issues relating to family firms are previously examined, several areas still need to be investigated. Among the novel concerns that can be spoken of is the relationship concerning corporate governance systems and control of the family, along with the generation's effect on these governance mechanisms (Hashim & Amrah, 2016). Moreover, Cai et al. (2008) maintain that using mechanisms of corporate governance assists in safeguarding the shareholders' interests such as decreasing the practices of earnings management. Despite the mixed results, numerous studies relating to the management of earnings empirically associate the management of earnings with the corporate governance mechanisms' characteristics (Xie et al., 2003; Peasnell et al., 2005; Saleh et al., 2007; Baxter & Cotter, 2009; Habbash et al., 2013; Idris et al., 2018). The latest studies and literature about corporate governance critique this approach as they have not addressed the quality of the mechanisms of corporate governance yet (Fallatah and Dickins, 2012; Ramly, 2013). To protect the whole shareholders' interests and decrease agency costs, a composite measure is strongly preferred to measure the mechanisms of corporate governance. As said by (Ward et al., 2009), the inconsistent findings of previous related research papers are explained by the fact that these studies independently examine the individual governance's mechanism when solving agency problems. They disregard the notion that, as part of interdependency, the single mechanisms' effectiveness relies on the efficacy resulting from various instruments.

On top of that, the firm's, and states' institutional structure, i.e., ownership structure tremendously affects the corporate governance mechanisms' effectiveness (Young et al., 2008; Chobpichien et al., 2008). To give you an idea, even though the directors' board is effective at work, the practices of the management of earnings are not reduced in companies controlled or owned by large shareholders, as the members of the board are hired as a legal form (Jaggi et al., 2009; Kosnick, 1987). As put by

(Bennett et al., 2003), due to the ownership's various concentrations, ownership can protect the minority shareholders' interests and monitor the management team. As a result, various types of controlling shareholders hold a discrepancy in the incurred costs of monitoring and the inconsistent power of monitoring.

In the current work, however, the research area has been extended to tackle the Jordanian business environment as the capital market is still poorly advanced and the corporate control and regulations are up to now at the level of development (Shanikat & Abbadi, 2011; Idris, 2012). Also, the Jordanian companies are known for the further concentrated structure of the ownership as family control is more prevalent together with poor legal security relating to minority shareholders (Al-Wshah, 2009; Al-Najjar, 2010; Abdullatif et al., 2015). Thus, the role of composition, structure, audit committee, and directors board vary between non-family and family companies, functioning under this weak controlling framework. Thereby, the efficacy of the directors' board and audit committee on the management of earnings varies between non-family and family companies.

Notably, the current work contributes to prolonging the previous literature and studies' scope related to the management of the earnings by considering the impact of the features and traits of the audit committee and directors' board, i.e. size, independence, expertise, and meetings as a combined measure to attain the mutual effect of these traits on the management of earnings gleaned from a framework formulated on the agency theory. Additionally, taking into account the disparity between the two said firms with the agency problems of Type I and Type II, and the disparity in control and ownership, this current work adds to the previous research literature by identifying the effect of the effectiveness of the audit committee and directors' board on the management of the earnings that is predicted to differ for the two families possessing companies.

### **Directors Board, Family Ownership Control, & Earnings Management**

The directors' board is "A fundamental component of corporate governance as the authority is delegated from the shareholders to the board to control and manage decisions made by higher management" (Fama & Jensen, 1983, p. 1). In respect of observing financial discretion, a directors' board with a large amount of effectiveness is essential to monitor the accounting choices' validity and other financial implications resultant from the related decisions made by management (Davidson et al., 2005). In efforts to obtain the procedures to enhance the financial statements' quality, corporate governance codes all over the map have pinpointed the trust role played by the board to moderate management of the opportunistic earnings and verify that the figures of the earnings deliver true information about the operations and tasks achieved by the firm (Sarkar et al., 2008).

Additionally, as put by (Fama, 1980; Jensen, 1993), boards of directors deliver a significant monitoring function in addressing the firms' agency problems. Hermalin & Weisbach (2003) maintain that in ownership featured with a dispersed context, the monitoring function shall revolve around decreasing the agency problem between management and dispersed shareholders. However, in the course of businesses with a large amount of attention on ownership, the firm's agency conflict is between the few stockholders and controlling stockholders (Lefort & Urzua, 2008). Specifically, in family-controlled companies, several characteristic and specific agency issues, i.e. the owning family's efforts to gain its economic interests arise in expropriating the interests of the minority (Fan & Wong, 2002). To exemplify, Desender (2009) argues that BOD-based monitoring is more significant with dispersed

ownership in comparison to a company owned by major shareholders. This is attributed to the fact that once the ownership is diffused, the capability or enticement to directly monitor management no longer exists (Davies, 2002; Aguilera, 2005). Concerning the firms controlled or possessed by major shareholders, even with competent BODs, members of the BODs are simply hired as a legal obligation or a rubber stamp used by the controlling shareholder ((Kosnik, 1987; Young et al., 2008).

As yet, insufficient studies have shed light on family ownership's effect on the relationship between the management of the earnings and the directors' board. As maintained by (Anderson et al., 2004, p.2), "The outside shareholders' interests are chiefly protected when independent directors have higher powers compared with family block-holders, showing that board independence significantly helps in decreasing the possible damaging effects of expropriation and family entrenchment". Using 309 firms relating to the period of 1998-2000 in Hong Kong, Jaggi et al. (2009) examines if the effective monitoring of the management of the earnings can be provided by the independent boards in companies working in the environment of family ownership. They demonstrate that effective monitoring of the management of the earnings is provided by independent boards. Likewise, the study shows that in non-family-regulated firms, corporate boards with a large level of independence are of high assistance to control the management of the earnings than in family-regulated companies. In consequence, increasing the independent directors' percentage to reinforce board monitoring may not be effective in family-controlled firms.

In this give-and-take discussion, Hashim (2011) argues whether family ownership affects the association concerning the management of earnings and the board's independence in Malaysian firms. Using 462 2-year observations of Malaysian companies, the study's findings show that the association between the management of earnings and the independence of the board is not stronger in family-regulated companies than in non-family-regulated businesses. As highlighted in another research paper using Turkish data covering the period from 2006 to 2010, Adiguzel (2013) indicates that the independent boards of directors are of a low level of effectiveness to monitor earnings management in family-possessioned companies in contrast to non-family-possessioned companies. Subsequently, Adiguzel (2013, p.2) adds " Even though board members are formally independent in family-possessioned companies, they are unlikely to be independent in a substance due to the ambiguous ties to the controlling family".

Largely, the mainstream of family-owned firms leans toward creating boards to avoid reducing their discretion over decision-making (Chen & Jaggi, 2000; Anderson et al., 2004). This may decrease the boards' ability to limit the managers' activities that are generally family members or are closely related to the owning family, attempting to achieve earnings toward the controlling family's goals at the price of minority shareholders. As put by (Ali, 1990), in Arab countries, for example, managers possess deep-seated traditional norms and values, namely: preference for certain individuals from tribes and personal relations, affecting their behaviors and intentions.

### **Management of the Earnings, Audit Committee, & Family Ownership Control**

The efficacy of the audit committee boosts the credibility of annual audited financial statements, along with their quality, and supports the work of the directors' board liable for protecting and developing the shareholders' interests (Fama & Jensen, 1983; Alchian & Demsetz, 1972). The concentration of the effectiveness of the said committee rests with the shareholders' wealth optimization to hinder the

top management's efforts to maximize personal interests (Wathne & Heide, 2000). This, in sequence, can restrain the management's earnings management behaviors. Results gleaned from various research work and studies show that audit committees directly control the scope of earnings management (Peasnell et al., 2005; DeFond & Jiambalvo, 1994; Burghleher & Al-Okdeh, 2020; He et al., 2007; Baxter & Cotter, 2009; Buraik, & Idris, 2020). Thus, the aforesaid committee characteristics necessary to improve the audit committee's effectiveness to perform its oversight operations have been articulated by the BRC in the late nineties. To illustrate, these characteristics consist of the audit committee's size, independence, meetings, along expertise.

In family-controlled firms, as formerly argued, the agency conflicts taking place between minority and majority shareholders are more predominant than the traditional agency problems between shareholders and managers (Setia-Atmaja et al., 2009). Therefore, families are featured with powerful incentives to have riches expropriated by pursuing special benefits without regard for minority investors (Schleifer & Vishny, 1997; Porta et al., 1999). Above all, past literature shows that the emerging economies have ineffective audit committees thanks to the central part played by the focused owners who are mostly families (Jaggi & Leung 2007; Abdullatif et al., 2015). It can be said that the efficacy of the said committee on earnings management in these companies is reduced by family ownership.

In this context, very few studies are conducted to examine family ownership's effect on the correlation regarding the audit committee and the management of earnings. Among the related studies is Jaggi & Leung (2007) conducted to maintain that the audit committees have an effective presence in the Chinese firms controlled by the families to restrain the managerial behaviors of the earnings management when the corporate board has no family members. As such, the family ownership control affects the audit committee's efficacy, and therefore decreasing earnings management becomes ineffective for the audit committee.

At the Jordanian level, a study whose study instrument is a view-based questionnaire of experienced external auditors required to audit the public listed firms in Jordan has been recently done. To show you what I mean, Abdullatif et al. (2015) discuss that the audit committees of an effective level are in low demand because of the problems of agency in these firms. The aforesaid study confirms that the audit committee's duty performance is of a narrow degree. This work concludes that these outcomes are appropriate to the prevailing family firm model in several Jordanian firms. The conclusions of the aforesaid studies are in harmony with the core of agency theory signifying that an audit committee with an effective level is not in high demand by the family firms as controlling families intend to exploit minority shareholders.

Notably, prior studies linking family ownership, the efficacy of the audit committee, and intellectual capital disclosure are raised in the current study. At the expense of intellectual capital disclosure and debt studies, family ownership is found to have a moderating effect on the association concerning intellectual capital disclosure and the effectiveness of the audit committee. To explain, Al-Ebel (2013) studies whether the positive correlation concerning intellectual capital disclosure and the audit committee's effectiveness is influenced by the so-called family ownership. The study shows that the positive correlation regarding the efficacy of the audit committee effectiveness and intellectual capital disclosure is reduced by family ownership. Concerning the concept of debt cost, using a study sample

of firms listed on the Muscat Securities Market from 2005 to 2011, Aomrah (2015) examines whether the association regarding the cost of debt and the effectiveness of the audit committee is weakened by family ownership. This piece of research shows that the efficacy of the audit committee is weakened by the family ownership in observing the accounting operations to furnish credible and relevant data and figures to the company's shareholders.

## **Methods**

### **Study Sample Selection Criteria & Data Sources**

The data set adopted in the current study embodies the industrial firms at the Amman Stock Exchange for 5-year reporting periods from 2014 to 2020. The industrial sector is selected to conduct this study for these reasons. First, the industrial companies' managements can select among several alternatives such as measurement options to handle the same accounting transaction through the elasticity provided by the IFRS (Idris, 2012).

Second, identifying the role of corporate governance in restraining the practices of managing the earnings is chiefly significant in the industrial sector to enhance the reported earnings' reliability and transparency and improve the investors' ability in the decision-making process. Therefore, focusing on a single sector enables the analysis of this study to control differential effects of regulation and evaluates more directly the influence of the monitoring mechanisms on the management of the earnings in industrial listed firms as better control of the sector context is generated by the homogeneous nature within the same sector (Pollalis, 2003; Idris, 2012).

The study population adopted is illustrated in Table (1). The industrial listed firm's total number is 76 firms in 2020. Because of the unavailable annual reports and inadequate financial data, seven firms are omitted from the analytical process. Industries known for adequate firm observations have been included in this study to ensure unbiased estimation. Consequently, following prior studies (Subramanyam, 1996; Habbash, 2010), less than 6-observation industry groups are removed from the study sample as well.

Table (1)

*Study Population*

<b>Description</b>	<b>No of Firms</b>
The industrial firms' total number listen on ASE in 2020	76
Less:	
Firms with incomplete online annual reports from 2014 to 2020	(4)
Firms with insufficient financial data from 2014 to 2020	(3)
Industries smaller than 6 firms	(6)
<b>Final Population</b>	<b>63</b>

**Total firm-year observations from 2016 to 2020**

**441**

Having removed three companies due to insufficient financial data, four companies with incomplete online annual reports, and six companies with industries smaller than six companies, the final sample adopted for a particular year is sixty-three companies. In detail, a balanced panel dataset comprising numerous observations of similar commercial units is used. With that being said, "Each component consists of two subscripts, the group identifier,  $i$ , in this case, is 63 firms, and within the group, index denoted by  $t$ , which classifies time (in this case 2014-2020)". Due to the balanced panel dataset approach, each year from 2014 to 2020 has a 63-firm sample size. The observations' total number for the entire period is 441, i.e., 63 firms for 7 years.

### **Empirical Model**

A balanced panel dataset comprising numerous observations of similar commercial units is used. "Each component consists of two subscripts, the group identifier,  $i$  (in this case 63 firms) and within the group, index denoted by  $t$ , which pinpoints time (in this case 2014-2020)". Given the aforesaid sample, this piece of research paper begins to report the descriptive statistics for the entire 441-firm sample, the 183-firm non-family sample, and the 258-firm family sample. The analysis attained from the descriptive studies furnishes many descriptive data, assisting appropriately to interpret and understand the data. "The means gleaned from randomly selected samples help to use the independent two-sample t-test to test whether the population means have a significant variance between the two types of the selected companies". As well, the following regression for earnings management is used in the current study.

$$EM_{it} = a0 + \beta_1 BoDE_{it} + \beta_2 ACE_{it} + \beta_3 SIZ_{it} + \beta_4 LE_{it} + \beta_5 FG_{it} + \beta_6 BIG4_{it} + \varepsilon_{it}$$

Where:  $i$  signifies the company,  $t$  period, EM is earnings management, BoDE is the board of directors' effectiveness, ACE is audit committee effectiveness, SIZ is firm size, LE is leverage, FG is firm growth, BIG4 is audit firm size, and  $\varepsilon$  is the error term.

### **Panel Data Estimation**

The ordinary least squares are first used to evaluate the earnings management model in the previous equation, dealing with the entire observations for the entire time as a particular sample. "The panel nature of data is disregarded by the OLS model, supposing that there is no serial correlation  $\varepsilon_{it}$ . Yet, panel data includes group effects, time effects, or both as the said effects are either fixed or random". Differences in intercepts across times or groups are assumed by the fixed effects model, while the differences in error variances are explored by the random-effects model. For a specified observation, an intercept differs across the findings of the units in the structure:

$$EM_{it} = a0 + \beta_1 BoDE_{it} + \beta_2 ACE_{it} + \beta_3 SIZ_{it} + \beta_4 LE_{it} + \beta_5 FG_{it} + \beta_6 BIG4_{it} + (u_i + \varepsilon_{it})$$

"Where  $u_i$  is the individual-level effect and  $\varepsilon_{it}$  is the term of disturbance. The  $u_i$  is either uncorrelated or correlated with predictor variables". The  $u_i$  is constantly supposed to get uncorrelated with  $\varepsilon_{it}$ . "If the  $u_i$  is uncorrelated with the predictor variables, it is known as the random-effects model "(Breusch and Pagan, 1980, p.2). "However, if the  $u_i$  is correlated with the predictor variables, it is termed as the



fixed-effects model. Differentiating between the fixed-effects model and the random-effects model necessitates using the Hausman test". "The difference of the two estimated covariance matrices unguaranteed to be positive definite is used by the test to evaluate the difference of both the random-effects model and the slope coefficients' fixed effects-model vectors". "On the contrary, the test of Breusch-Pagan (LM) uses the model of the OLS as the null hypothesis, and the random-effects model as the alternative" (Breusch and Pagan, 1980, p.2).

### **Operational Definitions and Measurements of the Variables**

The aforementioned literature review enables the adoption of discretionary accruals to proxy the management of the earnings operating as the dependent variable in the current piece of research. To illustrate, the estimation of the discretionary accruals model requires the adoption of the model of Kothari et al. (2005). The said model is extensively adopted since it fine-tunes the adapted Jones model by the addition of the return on assets as the indicator of the firm's performance. The aforesaid model is articulated like this:

$$TAC_{it}/TA_{it} = \alpha (1/TA_{it-1}) + \beta_1((\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}) + \beta_2 (PPE_{it}/TA_{it-1}) + \beta_3 ROA_{it-1} + \varepsilon_{it}$$

"Where:  $TAC_{it}$  is total accruals;  $TA_{it-1}$  is lagged total assets;  $\Delta REV_{it}$  is the change in revenues;  $\Delta REC_{it}$  is the change in receivables;  $PPE_{it}$  is net property, plant, and equipment;  $ROA_{it-1}$  is the lagged rate of return on assets;  $\varepsilon_{it}$  is the residual".

Researchers and scholars have not arranged and agreement on one mutual definition related to family business yet. For instance, as put by (Anderson and Reeb, 2003), a family company is a group or individuals of founders or any close family association amongst the block holders, managers, or owners. Instead, as described by (Maury, 2006), family ownership is the level of family existence and representation on the directors' board, along with applying family power dimensions. Moreover, as put by (Astrachan et al., 2002), a family company is a 3-dimension paradigm consisting of experience, power, and the family's culture. However, as stated by (Adams et al., 2009), family-owned firms as a concept are elucidated based on voting rights and family control. "As gleaned from the previous definitions, family companies in Oman are defined as special organizations holding the name of individuals and a family sharing the name of the same family or any close family association among the owners". Thus, "family ownership in the current work is calculated as a shares proportion possessed by family stakeholders owning 5%1 or more of a company concerning the issued shares' total number" (Al-Musalli and Ismail, 2012, p.2; Chahine, 2007). More importantly, they add "Separating family firms from non-family firms requires using a dummy variable by giving family companies a value of one (1) if the main family stakeholders possess a 5%-stake or more of company shares, and zero (0) is given otherwise for non-family companies".

Besides, four characteristics associated with the board are adopted to evaluate the audit committee's effectiveness and the directors' board as a composite measure. Firstly, board independence is the percentage of independent directors on the directors' board. Consistent with the agency theory, the board independence's higher level can observe the management company to protect the shareholder's interests and involve in earnings management (Osma, 2008; Metawee, 2013; Idris et al., 2018). Secondly, the board's size is the members' overall values on the firms' board (Anderson et al., 2004). As put by the resource dependence theory, the large board can attain more knowledge, experience, and opinions from various sources, and as a result reinforce its monitoring role (Dalton et al., 1999; Soliman & Ragab, 2013). Thirdly, the meeting of the board is calculated based on the total annually conducted meetings as the level of board activities and interaction affects the management of earnings (Habbash, 2011). Lipton & Lorsch (1992) maintain that boards regularly meeting can effectively solve the firms' various problems. Corresponding to (Conger et al., 1998; Vafeas, 1999), as the frequency of meetings increases, as a proxy by the board meetings' number, the board's monitoring function can be more effective. Fourthly, board financial expertise can be measured as the members' ratio having accounting or financial expertise to the board members' total number (Saleh et al., 2007). To illustrate, the directors shall attain accounting knowledge so that the information is made more transparent and the financial reporting process is properly monitored. On the other hand, as put by (Xie et al., 2003), the management of the earnings is less on the verge of taking place in firms managed by a directors' board possessing a financial and corporate background. For every characteristic, "A value of one (1) is given if the scale is equivalent to or above the sample median, and zero (0) is given otherwise". They add "Then, the said values are totaled to attain a compound score fluctuating between "0 and 4", with a higher score signifying the higher effectiveness of the board" (Ishak and Al-Ebel, 2013; Hoitash et al., 2009; Hashim & Amrah, 2016, p. 3).

What is more, these four measures are used to determine the audit committees' effectiveness. Firstly, various independent directors distributed by the committee members' total number are used to calculate the audit committees' independence (Mohamad et al., 2012). In detail, independent audit committees are less close to being related to financial statement fraud, as financial statement fraud can strongly take place in companies with less-audit committee independence (Garcia-Meca & Sanchez-Ballesta, 2009). Secondly, the audit committee members' total number presented in the last part of the fiscal year is used to measure the audit committee size (Al-Rassas & Kamardin, 2015). To illustrate, due to the availability of sufficient resources to assume a significant monitoring role, a big audit committee easily recognizes and handles the possible difficulties in the process of financial reporting (Siti Rochmah & Ghazali, 2012). Thirdly, the annually completed meetings number is employed to measure the audit committee meeting (Li et al., 2012). To explain, Xie et al. (2003) indicate that the audit committees' frequent meetings can limit the abnormal accruals levels. Fourthly, "The ratio of numbers of the audit committee having accounting expertise to a committee members' total number is adopted to computerize the financial expertise of the audit committee" (Zaman et al., 2011, p.2). Precisely, Abbott et al. (2004) maintain "The financial expertise of the audit committee is associated with the higher quality of the financial reporting". Four audit committee characteristics are incorporated to assess the audit committee's overall effectiveness. They add "These features are audit committee financial expertise, audit committee independence, audit committee size, and audit

committee frequency meeting". The four individual traits' scores of the audit committee are totaled to produce a total composite measure for the efficacy of the audit committee. A compound measure for the effectiveness of the audit committee fluctuating from 0 to 4 (which takes a score bounded by 0-1) is created by (DeZoort et al., 2002; Idris et al., 2018).

Additionally, four control variables are employed by the current work, namely: firm leverage (Lev), firm size (Size), audit firm size (Big4), and firm growth (Growth) (Pincus & Rajgopal, 2002; Ashbaugh et al., 2006; Huang et al. 2008; Chen et al., 2008). Concerning the firm size, it is incorporated into this study as among the key control variables calculated by the total assets' natural logarithm at year-end (Ismail et al., 2009). Largely, bigger firms and businesses are more various and developed than smaller firms, assuming the financial reporting system's sophistication is on the verge of varying in line with the firm size. Measuring firm leverage necessitates considering the total liabilities scaled by total assets (Cohen & Zarowin, 2010). To illustrate, as explained by (DeFond & Park 1997, p.1), "The Company in financial difficulty or near debt covenant violation is further motivated to involve in the practices of the earnings management". "Also, the modification in total assets measured by lagged total assets is used to measure the firm growth" (Daradkah, 2013, p.2). With, Inaam & Khmoussi (2012, p.3) maintain "Using a dummy variable corresponding to one (1) is used to measure the size of the audit firm if the firm is audited by a Big 4 and zero (0) otherwise". The variables' operational measurement is displayed in Table (2).

Table (2)

*Variables' Operational Measurements*

Variables	Symbol	Measurement
Earnings management	EM	The model of Kothari et al. (2005) is used to estimate the discretionary.
Effectiveness of board of directors	BoDE	Scores' sum of the four individual features of the directors' board (meetings, board size, independence, financial expertise, and meetings) is used to create an overall score. Four (4) means all four characteristics are above the sample median, while zero (0) means all four characteristics are equal or lower than the sample median.
Audit Committee Effectiveness	ACE	Sum of the four individual audit committee characteristics (board size, meetings, independence, and financial expertise). Four (4) means all four characteristics are above

		the sample median, while zero (0) means all four characteristics are equivalent to or lower than the sample median.
Family Control	FC	Value of one (1) if the main family shareholders possesses a stake of 5% or above of firm shares and zero (0) otherwise.
Audit Firm Size	BIG4	Equals "1" if the firm is audited by a Big 4 and "0" otherwise.
Firm size	SIZE	Total assets of the natural logarithm.
Firm Leverage	LEV	Total liabilities measured by total assets.
Firm Growth	GROW	The change in total assets measured by lagged total assets.

## Results & Discussion (Descriptive Statistics)

Table (3): *Full Sample, Family Firms, & Non-Family Firms Descriptive Statistics*

Variables	Full Sample (Firms=63) (N=441)				Family (Firms=37) (N=259)	Non-Family (Firms=26) (N=182)	t-statistics of Mean Difference
	Mean	Std D	Min	Max	Mean	Mean	
EM	0.068	0.077	0.008	0.532	0.066	0.062	2.079*
BoDE	1.393	0.735	0.000	4.000	1.434	1.757	2.856*
ACE	1.287	0.816	0.000	4.000	1.387	1.425	0.726*
SIZ	7.096	0.631	5.842	8.372	6.952	7.119	-5.132*
LE	0.492	0.263	0.031	1.425	0.382	0.405	1.618*
GR	0.023	0.281	- 0.608	3.498	0.015	0.009	0.632*
BIG4	0.578	0.506	0.000	1.000	0.469	0.513	-2.745*

"EM (Earnings Management) = The discretionary accruals estimated by Kothari *et al.* (2005) model.

BoDE (Board of Directors' Effectiveness) = Score ranging between "0-4", with a higher score indicating higher effectiveness of the board, and zero (0) otherwise.

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**ACE** (Audit committee effectiveness) = Score ranging between “0-4”, with a higher score signifying the board’s higher effectiveness, and zero (0) otherwise.

**SIZ** (Firm Size) = Total assets’ natural logarithm.

**LE** (Firm Leverage) = Total liabilities measured by total assets.

**GR** (Firm Growth) = The change in total assets measured by lagged total assets.

**BIG4** (Audit Firm Size) = Equals "1" if the firm is audited by a Big 4, and "0" otherwise".

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The separate and full sample’s descriptive statistics related to the family and non-family companies in the Industrial Jordanian companies listed on Amman Stock Exchange are shown in Table (3). It details the means and the t-statistics’ values testing the differences concerning the variables’ means for both types of firms. As gleaned from the descriptive statistics, the earnings management’s mean value for the full sample is 0.068 with a minimum of 0.008 and a maximum of 0.532. However, the mean values of the earnings management for the two firms are 0.066 and 0.062 in a row. The findings demonstrate that there is a statistically significant difference in the earnings management between the two said firms. With that being said, it is confirmed that the family firms’ earnings management is higher in comparison with non-family firms.

In the same context, the descriptive statistics indicate that the effectiveness of the directors’ board’s average value for the full sample is 1.393 with a minimum of 0.000 and a maximum of 4.000. However, the board of directors’ effectiveness means value for family companies is 1.434 and 1.757 for non-family companies. Moreover, the mean differences in T-statistics between the surveyed firms are significant as well. In light of the previous findings, it is shown that the family firms’ board of directors is not as effective as non-family firms. Conversely, the audit committee effectiveness’s mean value for the full sample is 1.287 with a 0.000 minimum score and a 4.000 maximum score. Conversely, the aforesaid two firms’ mean values are 1.387 and 1.425, correspondingly. Additionally, the findings attained from this sample demonstrate that the effectiveness of the audit committee between the two types of ownership has no significant statistical difference.

Furthermore, the firm size’s mean value for the full sample is 7.096 with a 5.842 minimum score and 8.372 maximum score. Conversely, both firms’ mean values are 6.952 and 7.119, proportionately. It can be gleaned from the previous values that the firm size in non-family firms is bigger than in family firms. Likewise, the leverage’s average value for the full sample is 0.492 with a 0.031 minimum score and a 1.425 maximum score, whereas the percentages of the leverage for both firms are 0.382 and 0.405, in turn. However, the firm growth’s descriptive statistics for the full sample are 0.023 with a -0.608 minimum score and a 3.498 maximum score, although both firms’ sample’s mean values are 0.015 and 0.009, correspondingly. Concerning the mean values relating to the auditor type (Big4), family firms have a 0.469 score and non-family firms have a 0.513 score. As opposed to non-family firms, it is shown that family firms are known for lower demand for high-quality audit services.

### **Regression Results**

Table (4): *Full Sample, Family Firms, & Non-Family Firms Random Effects Model*

Variables	Full sample (Firms=63)				Family (Firms=37)		Non-family (Firms=26)	
	Coeff.	t-Stat.	Coeff.	t-Stat.	Coeff.	t-Stat.	Coeff.	t-Stat.
BoDE	-0.652	-2.85***	-0.712	-4.63***	-0.351	-0.72	-0.462	-3.08***
ACE	-0.483	-2.36***	-0.352	-	-0.392	-2.09***	-0.416	-0.94
				0.012***				
SIZ	-0.051	-0.49	-0.025	-0.25	0.025	0.38	-0.041	-0.87
LE	-0.386	-1.23	-0.305	-0.82	-0.365	-0.92	-0.275	-1.05
GR	-0.364	2.45***	-0.315	1.32**	-0.452	1.56*	0.105	1.02
BIG4	-0.254	-1.12	-0.203	-0.93	-0.163	-0.81	0.097	
FC*BoDE			2.351	3.158***				
FC*ACE			-1.089	-2.25***				
Constant	0.312	1.68***	0.285	2.15***				
Hausman test		12.38						
Breusch-Pagan (LM) test		231.52***						
R <sup>2</sup>		0.285			0.321		0.386	
N		441			259		182	

\*\*\*, \*\* and \* indicate significant at 1%, 5% and 10%, correspondingly. Refer to Table (2) for a detailed description except **FC** is (Family control) = Dummy variable assigning the value of one (1) for the firm if major family shareholders own most of the cumulative ownership of large shareholders, and zero (0) otherwise.

**FC\*BoDEF** = interaction term between family control and board of directors' effectiveness.

**FC\*ACEF** = interaction between family control and audit committee effectiveness".

Table (4) shows that the Hausman test's result is  $> 0.05$  (i.e., not significant). As for the Breusch-Pagan (LM) test, it is  $< 0.05$  (i.e., significant). These two tests show that it is preferred to use the random-effects model. As gleaned from the random-effects model, the findings show that the board of directors' effectiveness for the full sample is significant (at  $p\text{-value} < 0.01$ ) in the expected negative direction, as presented by the estimated coefficient. This shows that the earnings management and directors' board's effectiveness have a strong relationship. The board of directors is regarded as a key internal control instrument formatted to monitor the management's actions. Accordingly, the board of directors' quality significantly controls the financial reporting validity, playing a basic part in improving the quality of the financial reporting (Beasley, 1996; Cohen et al., 2002). This finding is along the lines of points of view, suggesting that firms with effective directors' boards reduce agency conflicts by strengthening the monitoring's effectiveness and furnishing trustworthy financial reports. With that being said, the earnings management practices are properly mitigated (e.g., Anderson & Reeb, 2004; Al-Momani & Obeidat, 2013).

Concerning the interaction between the effectiveness of the board of directors and family ownership control, Table (4) demonstrates that the beta coefficient for the relationship between the directors'

board's effectiveness and family ownership control is positively significant (at  $p\text{-value} < 0.01$ ). This shows that the association between the earnings management and the board of directors' effectiveness is weak when the controlling family ownership exists in the firm. The previous result demonstrates that high family ownership control is related to the higher practices of earnings management. To put it another way, the board of directors' effectiveness's role in restraining earnings management is lower when family members control companies. A convincing and credible clarification for this finding is that the increase in family ownership enables the family members to regulate the firm by hiring their relatives on the board of directors so that the management can be properly monitored and the can be accurately followed law, administering the firm to hire independent directors on their board or employ managers supporting their various decisions (Yeh & Woidtke, 2005; Hashim & Amrah, 2016). Additionally, the current study's results are consistent with the view that agency problems are decreased between the shareholders and managers by family ownership control. However, the conflict between the minority shareholders and the controlling family is created, especially in countries characterized by weak safeguarding of the minority shareholders (Claessens & Fan, 2002; Maury, 2006; Abdullatif et al., 2015).

For supporting the full sample regression results in the current study, especially the family control's interaction with the effectiveness of the directors' board, the full sample is divided into two collections of non-family and family to explore the availability of a particular variance in the directors' board's effectiveness's effect on the earnings management among the two adopted firms in Jordan. This finding shows that the directors' boards' effectiveness and the management of the earnings for the family firms have no significant relationship. Regarding non-family firms, however, the board of directors' effectiveness and the earnings management have a consistently negative and significant relationship. This result is at one with previous research points of view that a board of directors is created by family businesses to abide by legal requirements. Conversely, a board of directors is created by non-family firms to deliver the main tool so that agency cost is controlled, and the earnings management practices are properly reduced (Idris, 2012). Besides, the current study is in agreement with the argument of (Jaggi et al., 2009; Idris et al., 2018) contending that the decisions made by the directors' board to appoint family firms aim to attain advice and expertise relating to the firm's direction of strategies instead of controlling and monitoring administrative and supervisory activities. It is also credible and acceptable that the roles of the family and the board have a substitution impact on the earnings management, guaranteeing additional investigation and analysis.

In the same vein, in the current study, the audit committee is regarded as among the key variables used to elucidate the concept of earnings management. As illustrated in Table (4), the effectiveness of the audit committee and the management of earnings management have a negative and significant relationship, being ( $p < 0.01$ ). The study's result is along the lines of agency theory, assuming that an audit committee with an effective performance accelerates the process of enhancing the financial reporting's quality. The said result shows that the audit committee's effectiveness principally improves the corporate financial reporting process and reduces agency problems by decreasing information asymmetry between directors and management, thus accelerating the decrease of the earnings

management level (Jenkins & Krawczyk, 2002; Chen & Zhou, 2007; Habbash, 2010; Abu Haija, 2012). It is noteworthy that corporate governance with poor standards such as ineffective audit committees enable misuses and abuses, i.e., fraudulent financial reporting (Chambers, 2005). Additionally, this result is consistent with the subject matter raised by Habbash (2010) arguing that the audit committees' quality guarantees the quality and soundness of control practices and internal accounting and observes the independence of the external auditor from high-ranking management, creating trust between investors and the provided financial data. Therefore, the effectiveness of the audit committee has a significant degree and part in moderating the management of the earnings.

Conversely, based on the interaction between family control and the audit committee with an effective performance in the full sample regression, the findings indicate that the term of the interaction (audit committee's effectiveness and family control) and the earnings management have no significant relationship. Furthermore, with the separation of the sample into two parts; non-family and family, the findings demonstrate that there is a negative and significant effect of the effectiveness of the audit committee on the management of earnings amongst the family firms, being (at  $p\text{-value} < 0.05$ ). However, this association is statistically insignificant for non-family firms. A conceivable clarification for this finding is that membership is usually pointed out by the family firms in the management team of the firm because of their family name irrespective of expertise. Consequently, audit quality is centered on family firms to boost their family management to improve internal control by perfecting the control process and profit planning (Carey, Simnett, & Tanewski, 2000). As stated by (Chen & Nowland, 2010, family firms are less liable to preserve the audit committees, chiefly when this family's control process is deep-rooted. Jaggi and Leung (2007) conclude that audit committees vitally reduce the earnings management level when these committees are uncontrolled and managed by the family members. Consequently, their findings demonstrate that the effectiveness of the audit committee's monitoring process is strongly decreased by family-controlled firms.

In short, the findings show that the directors' board's effectiveness significantly lessens the practices of the earnings management in non-family-owned companies more than in family companies. This finding is because the Jordanian family firms view that the purpose behind hiring a directors' board is to attain the required assistance and expertise relating to the firm's strategic direction rather than to observe and regulate the various administrative activities. On contrary, as confirmed by Al-khabash & Al-Thuneibat (2009), the audit committee's effectiveness includes a significant role in decreasing the practices of earnings management in family firms more than in non-family-owned firms as the Jordanian family firms mainly pay attention to audit quality as a tool to enhance the internal control process by supplementing the control process and profit planning.

## **Conclusion**

In a nutshell, the purpose of the current work is to study the availability of any different association between the audit committee's effectiveness, directors' board, and earnings management between the Jordanian family and non-family-owned companies. This research paper extends the previous studies' scope regarding earnings management by taking into consideration the business situation and



environment in Jordan. The Jordanian business context is selected as it featured a lack of a well-built bond market, where the financial markets, corporate control, and procedures are still less developed and weak. Additionally, the Jordanian companies are well-known for a more concentrated ownership structure, along with more family ownership control. Besides, this study extends the related research work and studies by furnishing a contrast between non-family and family firms about the board of directors' effect and the characteristics of the audit committee (independence, meetings, size, and expertise) as a compound measure so that the mutual impact of these traits on the earnings management's tendency is attained using a framework theorized consistent with agency theory.

Also, in light of the firms' panel data at the Amman Stock Exchange from 2014 to 2020, the empirical results attained in this study show that the directors' board's effectiveness's effect on earnings management is significant and negative for the full and non-family sample. However, this association is insignificant and weak for family firms. As well, the current study shows that the management of the earnings and the effectiveness of the audit committee share a significant and negative association based on the samples of the full and family firms, but this correlation is insignificant among non-family-owned firms.

The current work's results are regarded as convenient to all stakeholders since they furnish them with a significant indicator relating to the nature and level of the directors' board and controlling shareholders protecting their interests. This work is also beneficial for the policymakers and regulators on the Amman Stock Exchange of Jordan for the current research raises several issues, assisting them to analyze the effect of various methods of corporate governance such as an audit committee and directors' board on this relationship in the Jordanian business context. More precisely, policymakers and regulators may use the findings on the subject of the management of the earnings in association with governance practice to be familiar with the significant roles of the effectiveness of the directors' board as among the key instruments of the Jordanian corporate governance system.

Despite everything, a few limitations are included in this study. First, the sample data's quality is used to evaluate the results. Second, the current study's sample only concentrates on industrial companies and businesses listed on the Amman Stock Exchange. Other financial firms and non-listed firms are disregarded. Consequently, the conclusions' validation is not held for financial firms and other firms away from the mentioned lists. As a final point, neither the traits of the audit committee nor the board nor the control variables in the model adopted in the current study are thorough as required. For that reason, the focus in this work is given to the characteristics of the audit committee and the board and their association with the earnings management when either operating as a complementary or a substitute measurement. Having highlighted the aforesaid limitations, future research work and studies can look at the subject matter of earnings management in various contexts such as different stock exchanges, different economic cycles, or different cultures. Especially, the model's validity can also be thoroughly studied in various countries' contexts in the Middle East, various periods, and novel sample sizes.

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