

Earnings Management and Corporate Governance Evidence from Jordanian Banks

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Abstract: *The board of directors typically selects and removes officers, initiates fundamental changes, determines capital structure, adds, amends, or repeals bylaws (such as mergers and divestitures), declares dividends and sets the compensation for officers and management.*

The segregation of duties involves assigning different employees to perform functions so that an employee acting alone is prevented from committing an error or concealing a fraud in the normal course of their duties. Four types of functional responsibilities should be segregated: the authority to execute transactions, the recording of transactions, custody of the assets affected by the transactions and periodic reconciliation of existing assets to recorded amounts.

There are several studies on the influence of corporate governance in developed markets relating to a variety of aspects. However, in the context of the Jordan market, such researches are rare. The paper analyses the governance practices of 13 Jordanian listed banks listed. The main findings of the study are that there is a positive relationship between board sizes and earnings management (EM) through discretionary accruals, that there is no relationship between independence and segregation of duties, and that EM through discretionary accruals and board size mediates the association between corporate governance structure and (EM) through discretionary accruals.

Keywords: Board Size, Corporate Governance, Earning Management, Jordanian Banks.

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I. INTRODUCTION

The main reason for the interest in earnings management lies in the fact that the net incomes recorded in books are used for many purposes, including asset valuation and executive remuneration.

Managers need to meet their possible needs and thus reporting better results through different content. Decisions based on operating activities impact firm cash flow. One method of managing earnings is by controlling accruals without cash-flow results, hereafter referred to as accrual manipulation.

Managers choose accounting practices that allow them to postpone profits in future periods to the current period by increasing the debt ratio. Moreover, in most heavily indebted companies, managers try to avoid violating debt lines by choosing accounting methods that increase current-year profits at the expense of future years in order to avoid additional costs (obligation to refund, renegotiation costs) [1]. There are several explanations for managing profits. This includes the remuneration plan as managers apply accounting policies that enable them to meet their interest by deferring the results of future periods to the current periods. The adoption of a performance-related compensation policy aims to encourage managers to make decisions that serve the interests of shareholders. However, many studies show that this policy does not allow the company to improve its performance. This is because of the opportunistic behaviour of managers to ensure common interests among the various stakeholders; the company can act on administrative ownership by adopting strategic compensation based on options and shares. [2] assert that when the number of shares held by the leader increases, it encourages action in the interests of shareholders. Managers deal with accounting and financial information when compensation is based on stock options. Managers also influence their compensation contracts to include more options.

The trust theory has a shared element of a degree of trust, which is transferred to a firm's managers from its shareholders. The trust bestowed upon the firm's managers by the shareholders is broken when the managers commit fraud. The trust theory argues that the pressure to ensure that a company remains highly profitable leads managers to search for opportunities to manipulate and rationalise the company's net earnings. The contributions of this study are, firstly, that it investigates the impact of various governance committees on EM through discretionary accruals. Secondly, it analyses the interrelationships between the independent variables. It deviates from earlier studies to provide evidence that understanding these interrelationships is important for strengthening the responsibilities of people in charge of governance. Finally, this study contributes to the furtherance of corporate governance practices in Jordan, as various aspects of corporate governance still need to be fully entrenched in companies, especially in the area of earnings management.

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II. LITERATURE REVIEW

[3] investigates on 2,098 Chinese's firms the influence of corporate governance on EM and companies' performance from 2008 to 2014, and finds that firms perform better when a board includes more independent directors and the firms with smaller boards have better earnings quality.

[4] studied the behaviour of earnings management (EM) of Pakistani firms for 15 years from 2003–2017 and found a positive association between firm value variables and accrual EM.

[5] found in Jordanian industrial companies that EM has a relationship with leverage ratio but is not affected by the Altman's Z-score. This research also found a relationship between returns on equity, earnings per share, and EM.

[6] revealed that a largely negative relationship between EM and corporate social responsibility is more overwhelming, which highlights the notion that companies with strong corporate social responsibility are less inclined to engage in earnings management practices. However, several researches found that corporate social responsibility is used by managers to mask their earnings management practice.

[7] found a positive relationship between profit management and profit maximisation when the reward is between the upper and lower limits. They also showed that revenue management is reduced when the realised revenue is below the upper limit. However, managers manage upward profits when they are below the minimum and choose to manage profits downward when profits exceed the upper limit.

[8] found that the size of a BOD tends to grow as firms diversify. However, the optimal size of a board can positively influence the board performance and act as a control mechanism [9]. Despite these studies, there are limited findings on whether board size can affect EM. [10] found that banking supervision payed little importance to the corporate governance characteristics of the banks institutions. The findings also emphasizes on the presence of a chief risk officer in the board of directors, on the ownership structure of the financial institutions and on board independence, when discussing bank performance.

The association between corporate governance structures and board size has been studied in different ways. [11] established that a bigger board size leads to lower independence, indicating the presence of earnings management in China. [12] found that, in India, while considering the appointment of independent directors in order to monitor performance and earnings management, cross-board phenomena must be considered. [13] stated that board size does not matter in determining firm performance, and it can be substituted by the experience and relevant qualifications of the board of directors in providing better controls to reduce earnings management. [14] found that board size moderates the effect of segregation of duties between the CEO and the chairman and firm performance. [15] stated that a cost–benefit issue arises when determining the quantity and quality of board members in ensuring strong structure. [16] results revealed that the non-executive directors on a remuneration committee will be of benefit if a larger board size is warranted.

[17] stated that there is an evidence that EM is moved from firm to firm through audit committee members. [18] used 13,065 observations of between 2003 and 2010 for American companies related to earnings management, interlocking between BOD and audit committees, and reached that centralities measured by board member interlocking are related to EM. [19] found that earnings management affected the return on assets for financial banks in Nigeria. [20] showed that institutional ownership and family reduce EM but that the influence is different depending on company size.

[21] investigated whether risk management-related corporate governance mechanisms are related to a better bank performance during the international financial crisis and found that the banks, in which the chief risk officer directly reports to the board of directors exhibit significantly higher return on equity and stock returns during the crisis.

In other hand, [22] found that shareholder-friendly corporate governance is related with higher systemic risk and stand-alone in the banking sector.

[23] found that the greater the degree of centrality, the greater the EM, and that variation in negative and positive accruals is influenced by board intermediation. The core objective of [24] was to examine whether the BOD and other key committees influence earnings management through discretionary accruals. This study found that collusion among a board of directors could be a motivation for such action and that nomination committees are able to influence remuneration committees directly and indirectly. [25] reached that the modified Jones model is effective in estimating the extent of EM practiced in the Saudi Stock Exchange in petrochemical industries.

III. RESEARCH METHOD

3.1 Study sample

The Jordanian bank sector shareholding companies whose share prices and other required data are available during the study period (2010–2016) will represent the study sample, (13) Banks are representing the study sample. The banks are Arab Bank, Jordan Ahli Bank, Cairo Amman Bank, Housing Bank, Jordan Kuwait Bank, Arab Jordan Investment Bank, Jordan Commercial Bank, Invest Bank, Arab Banking Corporation Bank, Bank Al Etihad, Societe General Bank Jordan, Capital Bank and Bank of Jordan.

IV. THEORETICAL FRAMEWORK AND STUDY HYPOTHESES DEVELOPMENT

The motivations and incentives for profit management are firstly opportunistic motivation in order to achieve self-management benefits; profit management has a material impact on the company's true position. After that, efficiency Motivation is the motivation is efficiency when influencing users financial statements and accounting information by showing the company to achieve a balance between return and risk, in order to ensure the survival of the company in the competitive market [26].

Then, contractual incentives for profit management are when the contract between the company and the other parties is based on accounting results; managers have an incentive to manage profits. Contract incentives are debt charters, maximisation of remuneration for management and job security.

Market incentives for profit management are linked to the stock market, especially the market prices of the company's shares on a specific date, as in the case of the selection of shares or to increase market prices in the case of initial offers of the stock [27].

4.1 Board Size and Earnings Management through Discretionary Accruals

A viable BOD is important for the fruitful operation of an organisation. A BOD is a group of individuals who are elected to represent the stakeholders in making decisions on major company issues.

A board of directors is a vital aspect of an organisation, as they influence the reliability of annual reports. [28] found that a larger board can make better choices. However, the optimal size of a board can positively influence the performance of the board and will act as a control mechanism [12]. So, the first hypothesis of this study is:

Hypothesis 1: There is a relationship between board size and earnings management (EM) through discretionary accruals.

4.2 Board Independence and Earnings Management through Discretionary Accruals

According to the broken trust theory (BT), the independence of a board of directors is important because a board with more independent directors is less likely to use creative accounting methods, thereby decreasing earnings management. Several studies have analysed whether the requirement for 33% of a board to be made up of independent directors has caused a decrease in earnings management – while some studies have discovered a negative relationship [29], others found that trying to have independent directors is a wasted exercise [12]. These discussions give rise to the second hypothesis:

Hypothesis 2: There is a relationship between board independence and EM through discretionary accruals.

4.3 Segregation of duties and earnings management through discretionary accruals

A segregation of duties between the chairman and CEO of an organisation is necessary. If they are unable to split responsibilities, it is likely to have the advantage of decentralisation, which leads to lower earnings management [15]. It can be argued that if the roles of CEO and chairman are not split, it becomes easy for the CEO/chairman to manipulate and adjust the earnings. This gives rise to the third hypothesis:

Hypothesis 3: There is a positive relationship between segregation of duties (CEODUAL) and EM through discretionary accruals.

4.4 Mediating the role of board size

The association between board size and corporate governance structures has been explored in several ways. [13] established that board size does not matter in

determining firm performance while it can be substituted by the related experience and qualifications of the board members in providing better controls to reduce earnings management. [11] found that a larger board size leads to lower independence, indicating the presence of earnings management in China. [14] found that board size moderates the effect between segregation of duties and earnings management. This leads to the hypothesis that:

Hypothesis 4: Board size mediates the relationship between EM and corporate governance structure through discretionary accruals.

V. VARIABLES AND METHODOLOGY

To explore the influence of corporate governance on EM in Jordan using Jordanian companies listed on the (ASE), the required data was collected for the period 2009–2016 from 13 banks, resulting in a total of 91 observations for analysis.

The study main model is:

$$EM_{it} = \beta_0 + \beta_1 BS_{it} + \beta_2 IND_{it} + \beta_3 CEODUAL_{it} + \epsilon_{it} \dots \dots \dots (1)$$

(EM) is measured by the discretionary accruals model, as will be illustrated later. Board size (BS) is defined as the total number of non-executive and executive board members. Independence (IND) is measured as a percentage of non-executive members from the total board of directors (BOD) members [30].

Segregation of duties (CEODUAL) is another explanatory variable for this study and is defined as the dummy variable (0, 1). If there is a separation between a chair position and CEO position, it takes 1; otherwise 0. This model can help in testing the first three hypotheses, while for the fourth the board size will be treated as a mediation variable.

EM can be achieved through several methods, including accruals and changes in capital structure decisions. This research uses total accruals, as this approach can be computed using Jordanian data and is used by several studies, such as [31]. Discretionary accruals then represent the proxy for earnings management [32].

$$TA = NI - OCF \dots \dots \dots (2)$$

$$TA_{it}/A_{it-1} = a_1 [1/A_{it-1}] + a_2 [PPE_{it}/A_{it-1}] + a_3 [\Delta REV_{it}/A_{it-1}] + \epsilon_{it} \dots \dots \dots (3)$$

Where:

- TA_{it} = total Accruals for firm i in year t;
- NI=Net Income;
- OCF= Operating Cash Flow;
- PPE_{it} = fixed assets;
- Δ REV_{it}= Change in revenues;
- A_{it-1}= total assets;



VI. DESCRIPTIVE ANALYSIS

Table (1): Descriptive Measures

Variable	Accruals	BS	IND	CEODUAL
No.	91	91	91	91
Mean	-43,770,770	11.09	0.720	0.91
SD	265,235,919	1.684	0.267	0.285
Skewness	2.861	-0.512	-0.612	-2.960
Kurtosis	23.434	0.452	-0.940	6.911
Minimum	-781,567,000	7	0	0
Maximum	1,742,511,000	15	1	1

The number of accruals is large, which indicates that Jordanian banks may use earnings management tools to manipulate earnings, and that the size of boards of directors range from 7 members to 15, with 11 approximately on average who fit with Jordanian rules and laws.

Out of 91 observations, 72% of the firms had independent directors on their board, implying strong compliance with corporate governance initiatives. Around 91% of the companies had CEO duality, revealing that most companies complied with the separation of responsibilities between the CEO and the chairman, although [24] found that the separation percentage is only 35%.

VII. BIVARIATE CORRELATION

Discretionary accruals (DISC) was placed table (2) instead of accruals (ACCR) because it is included in the study models. Board size is positively correlated with discretionary accruals committees but is negatively correlated with independence. This indicates that a lower board size could be one of the factors leading to increasing independence, which could pose a threat to earnings management through discretionary accruals. Segregation of duties between the chairman and CEO seems to have no correlation with earnings management through discretionary accruals.

Table (2): Correlation matrix

Variable	DISC	BS	IND	CEODUAL
DISC	1.000	0.258**	0.046	-0.145
BS		1.000	-0.171*	0.016
IND			1.000	0.046
CEODUAL				1.000

VIII. RESIDUAL DIAGNOSTICS

8.1 First: Histogram-Normality test

This test displays descriptive statistics and histogram of the residuals.

The null hypothesis: normal distribution.

The alternative: not normal.

the probability value is less than 5%, this means that the data is not normally distributed [33].

8.2 Second: cross-section dependence test

Several tests can be used to test the cross-section dependence in a series in a panel structured. If the probability value is less than 5%, we reject the null hypothesis.

Table (3): Residual Cross-Section Dependence Test

Test	Statistic	Degree of Freedom	Prob.
Breusch-Pagan LM	91.4069	78	0.142
Pesaran CD	4.08392		0
Pesaran scaled LM	0.03258		0.974

In regard to Breusch–Pagan LM and Pesaran-scaled LM test, the probability value is more than 5%. Which indicates that the null hypothesis can be rejected.

8.3 Panel Causality Test

The null hypothesis is that Granger-cause does not found in the first and second regression. If the probability value is less than 5%, we reject the null hypothesis [33]. According to the following outcomes, Earnings management does Granger Cause independence since the probability value is less than 5%. Therefore, we can reject the null.

Table (4): Pairwise Ganger Causality Tests

Null Hypothesis:	F-Statistic	Prob.
IND does not Cause EM	2.31313	0.1077
EM does not Cause IND	6.56317	0.0026
CEO does not Cause EM	0.12116	0.8861
EM does not Cause CEO	-10.3924	1
BS does not Cause EM	0.74056	0.4812
EM does not Cause BS	0.57478	0.5659
CEO does not Cause IND	0.65511	0.5231
IND does not Cause CEO	0.16946	0.8445
BS does not Cause IND	0.06589	0.9363
IND does not Cause BS	0.00033	0.9997
BS does not Cause CEO	-3.64556	1
CEO does not Cause BS	0.73754	0.4826

IX. RESULTS

Table 5 represents the first hypotheses coefficients. The board size coefficient was significant, so there is a positive relationship between EM and board size through discretionary accruals. This result means that board size helps in enhancing earnings management tools. Banks with larger boards can use more techniques to manipulate earnings than smaller boards.

The association between EM and board size is strongly supported by the results. It is asserted that in Jordan, a higher number of members on a bank’s board can increase possibilities of motivation and collusion for discretionary accruals, leading to earnings management. Currently, Jordanian banks have as many as 15 members on their boards. This results of this research acts as advice to these banks that they either restrict the number of directors on their boards to reduce earnings management or exercise more controls.

Table (5): Regression coefficients (first Hypothesis)

	Constant	BS _{it}	F-statistic	R ²
coefficients	-0.221	0.016	(6.366)**	0.067
t-values	-3.190***	(2.523)**		
p-value	0.002	0.013		

Tables 6 and 7 show the second and third hypotheses coefficients. Several studies have concluded that the presence of more independent directors on a board can negatively impact EM [34, 35]. The first result supports these findings by saying that when the number of board

members is high, strong controls can be implemented by having more independent directors instigating a split of responsibilities between the CEO and the chairman reducing the threat to EM through discretionary accruals. This result agrees with [11].



Similarly, a larger board size can be enhanced with more qualified members, such as financial and human resources experts.

Under the business, a director will not have personal liability for their conduct if they act in good faith. Or in other words, are not motivated by fraud, conflict of interest, illegality and are not guilty of gross negligence. Thus,

Table (6): Regression coefficients (Second Hypothesis)

	Constant	IND	F-statistic	R ²
coefficients	-0.061	0.018	0.19	0.002
t-values	(-1.969)**	0.436		
p-value	0.052	0.664		

Table (7): Regression coefficients (Third Hypothesis)

	Constant	CEODUAL	F-statistic	R ²
coefficients	-0.001	-0.052	1.900	0.021
t-values	-0.031	-1.378		
p-value	0.975	0.172		

Table (8): Regression coefficients (multivariate regression model)

	Constant	BS _{it}	IND	CEODUAL	F-statistic	R ²
coefficients	-0.210	0.017	-0.055	0.037	3.152	0.098
t-values	-(2.5)***	(2.7)***	(-1.506)	(0.939)		
p-value (F-Test)					0.029	

Finally, this study tested the mediation effect of board size between board independence and EM through discretionary accruals, and between segregation of duties and earnings management through discretionary accruals, using [36] method. Based on this test, it found that board size mediates the association between board independence and EM (Sobel’s test value = 4.634, p-value = 0.008), indicating that with a larger board it is possible to have more independent members, reducing the incentives of EM.

Board size mediates the relationship between segregation of duties and EM (Sobel’s test value = 2.814, p-value = 0.018), indicating that with a larger board it is possible for companies to clearly segregate the duties between the CEO and chairman, leading to more controls and fewer incentives for EM.

Board size mediates the segregation of duties and Earnings management relationship (Sobel’s test value = 2.814, p-value = 0.018) indicating that with bigger board size it will be possible for companies to evidently segregate the duties between the CEO and chairman leading to more controls and fewer incentives for earnings management.

X. CONCLUSION

The study main results are that there is a positive relationship between EM and board size, that there is no relationship between independence and segregation of duties, and that EM through discretionary accruals and

honest errors of judgment do not result in liability. Moreover, a director may rely on information provided by an officer or an expert if the reliance is reasonable.

Lastly, table (8) represents the multivariate model coefficients; we have three independent variables. No change in the main results compared with the simple regression models except for increasing in R² to about 10%.

board size mediates the relationship between corporate governance structure and EM.

These results indicate that the organisation's control environment encompasses the actions and attitudes of upper level management and the BOD and regarding the significance of control, which represents the ‘tone at the top’. The structure of an entity is determined by its size and mission. The entity must be structured to best achieve its objectives, but structure is also a function of size. A large entity normally requires more formal reporting lines than a small one does.

The policy implications of the findings means that Jordanian banks are required to have a BOD, consisting of both inside members (officers and employees) and outside members (nonemployees who hold company stock). This board is the governing authority of the corporation and is therefore responsible for establishing overall corporate policy. Day-to-day operations are delegated to management. The directors have a fiduciary duty to the organisation and its shareholders. They must exercise reasonable care in the performance of their duties, which entails being informed about and conservative with pertinent corporate information, attending meetings, analysing corporate financial statements, etc.



With regard to segregation of duties, this involves assigning different employees to perform functions so that an employee acting alone is prevented from committing an error or concealing fraud in the normal course of their duties.

This study has several recommendations for further researches, as several questions remain unanswered regarding the effects of earnings management mechanisms upon earnings management. It is recommended that the focus of regulatory proclamations be directed towards the rights of shareholders, thereby making it pertinent to have a strong corporate culture backed by straightforwardness of data.

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