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# Does corporate governance affect earnings management? Evidence from an emerging market

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**Abstract**

This study aims to analyze the effect of different corporate governance mechanisms on earnings management by focusing on Jordanian firms. As such, the study utilized data, and regression analysis of the scores included the coefficients of various corporate governance factors such as leverage, size, cash flow, firm growth, board size, board independence, and managerial ownership to determine the enjoyed effect on earnings management. The results show the significant correlation between regulations and corporate governance and its effects on earnings management. The coefficient of leverage, board size, board independence, and managerial ownership are statistically significant, signaling their effectiveness in maintaining low levels of earnings management; while high levels of cash flow are linked with high earnings management and constraints on the manager's discretion, thus reducing earnings decision-making. Thus, it is seen that the role of corporate governance is crucial to ensure financial examination, which also serves to inform policymakers, stakeholders, and the public in Jordan and other democratic countries, and researchers to ensure fairness in accounting practice and that EM is reduced to the minimum.



*Keywords*: Corporate governance, Earnings management, Leverage, Board size, Board independence, Managerial ownership

## 1. Introduction

Corporate governance encompasses a comprehensive set of regulations, norms, and procedures specifically formulated to provide organizational guidance and oversight [1]. The concept involves the creation of decision-making frameworks that are both transparent and accountable, as well as the adoption of ethical standards and risk management protocols [2]. Corporate governance is a mechanism designed to achieve a company's long-term success and sustainability by managing the stakeholders and enhancing the transparency and disclosure rules [3]. Corporate governance aligns the interests of shareholders, employees, and other stakeholders in general, and the company's societal responsibilities in particular [4]. It affects the behavior of firms and is instrumental in solving agency conflicts [5]. Evaluating the impact of corporate governance is important, as it is a significant factor in earnings management in a firm, which is a prevailing concern in corporate finance research [6]. Earnings manipulation refers to the manipulation of the financial statements by the management, which results in them not reflecting the actual financial status of the firm and negatively impacts the investor's perception of its performance [7].

Corporate governance mechanisms play an increasingly important role in the corporate landscape in Jordan, which is currently experiencing rapid economic development and corporate growth [8]. An efficient corporate sector cannot do without transparency and accountability [9]. It is therefore of utmost importance to comprehend how one may apply corporate governance to address such levels as earnings management. Given that earnings management influences investor confidence and suppresses its willingness to invest in a company or economy, it is imperative to learn how the corporate governance mechanisms can be used most efficiently in Jordan [10]. Corporate governance in Jordan includes practices that improve transparency, accountability, and ethical conduct in corporations [11]. These practices involve a multitude of ways and may vary regarding the composition and independence of the board of directors, the quality of audit procedures, the efficiency of internal controls, and the regulatory context that defines the conditions where companies operate [9]. Corporate governance mechanisms, by establishing a shared environment of accountability and responsibility, discourage opportunistic behavior associated with predictable income management [12]. In this way, corporate governance can protect the interests of its shareholders and build trust among investors [9].

Many studies have indicated that the reasons for the failure of companies are due to the weakness of the corporate governance of these companies, as well as the weakness of protection by regulatory authorities [1, 3, 5, 6]. Hence, several theories have emerged to try to solve these problems, such as the agency theory, which regulates the relationship between management and shareholders and explains the causes of problems that may arise as a result of conflicts of interest [7, 11], and attempts to solve the problem of information asymmetry. Accordingly, this study aims to identify the impact of corporate governance on earnings management.

## 2. Literature review and hypotheses development

Corporate governance provides a means for understanding the interactions that take place in an organization between the principals, the shareholders, and the agents, the managers [6]. According to agency theory, the interests of principals and agents differ, leading to a principal-agent relationship, which is described as conflict propagation [12]. The agents, i.e. the managers, act to maximize their interest, which might include earnings manipulation, to their benefit and at the expense of the shareholders. Therefore, effective corporate governance may reduce earnings management [13]. Corporate governance encompasses wide parameters like the size of the board's independence and managerial ownership. The size of the corporate board, as measured by the number of members it encompasses, is one of the most vital components of corporate governance structures, and it is interrelated with the process of managing earnings within organizations [2]. The relationship between board size and earnings management is considered to be dependent and is subject to ongoing debates and scrutiny in the academic literature [13]. By relying on the agency theory, it is possible to assume that having a larger board might result in the formation of coordination problems and the reduced effectiveness of this entity in overseeing the managerial actions and preventing the executives from being opportunistic [6].

In other words, in this particular case, having a larger board hurts the organizations; moreover, it might promote some manners of managerial self-dealing, one of which is the setting up of arbitrary accruals to meet the quotas for the earnings' results [14]. On the other hand, an expanded board can enhance the scrutiny of managerial activities, thereby reducing the tendency to inflate or deflate the arbitrary accruals and coordinate approach to financial reporting standards [4]. However, under an alternative view, a larger board could help coordinate aspects of the organizations' operations that might suffer under such a relatively small board [12]. In addition, the argument could be made that a larger board allows managers to gain additional advice from more members and coordinate the strategy quickly [7].

At the same time, the results of the existing empirical literature concerning the impact of the board size on earnings management differ in many respects [15]. For example, on the one hand, several studies based on the experience of smaller boards indicate that they might be prone to failure, therefore, an optimal board size should be done, which ensures the balance between the ability to ensure proper oversight and coordination efficiency [16]. On the other hand, there is some other scholarship, that assumes that a board should not exceed a certain limit, which is approximately eight or nine directors, as exceeding it could help to promote coordination problems and reduce the board's effectiveness in ensuring oversight [9].

The board independence emerges as a fundamental element of corporate governance [17]. Board independence is defined as the absence of any administrative or executive relationship with the company, as the board consists of independent directors [18]. The importance of board independence lies in the role it plays in improving the board's capacity and efficiency in the oversight process and enhancing corporate governance mechanisms [19]. Earlier scholarly inquiries have investigated the complex relationship between the autonomy of non-executive directors and the implementation of earnings management strategies, thus resulting in conflicts [20]. Independent directors are fundamental in safeguarding abuses by the managers of their authority, the loss of confidence of investors, and effectively preventing some manipulative management practices [21]. The apparent missing link between the past studies is that they present major disparities concerning the influence of board independence on the implementation of earnings management strategies [22].

The first inquiry established a positive significant relationship between the presence of independent directors on governance boards and the reduction in the implementation of financial statement manipulation measures [23]. Second, a negative association between board independence and the implementation of earnings management tasks is identified. However, the apparent gap is that different journals present conflicting views, thus failing to closely examine the relationship between the two variables [23, 24, 25].

Corporate governance techniques that attempt to restrict earnings management approaches are typically based on managerial ownership [22]. Khan et al. [26] define managerial ownership as the portion of a company's total shares that is owned by senior volunteers inside the firm relative to all of the business's shares. The ownership structure has a significant effect because it may increase the likelihood of managing earnings. Tessema et al. [27] argue a proper ownership structure can help prevent earnings management. According to Murni et al. [28] managerial ownership is positively linked to earnings management. However, alternative findings suggest that the inner ownership structure could help reduce managerial opportunism [22]. Of particular relevance to this assignment is the need to investigate the association between managerial ownership and earns management because Jordan has a critical need for good corporate governance [13]. Corporate governance is important, as it provides shareholders with sufficient openness and accountability [10]. Furthermore, they comprehend how corporate administration can help reduce agency conflicts and boost investor confidence by identifying the relationship between managerial holdings and earnings management [29]. Furthermore, further exploration of evidence from Jordanian firms could provide insight into how managerial ownership acts to align management incentives with shareholders, thereby reducing the likelihood of deliberate earnings management.

To conclude, this assignment will undertake a thorough investigation of the evidence, which will be of relevance to corporate governance and investor protection mechanisms in Jordan. One of the benefits of completing this research is that, through understanding the consequences of managerial ownership tendencies, and provides evidence to indicate how private and public efforts can improve mechanisms for reducing managing earnings practices. On the whole, through the identification of the conditions and consequences of the managerial ownership of earned management practices, we could ensure the promotion of corporate governance standards from stakeholders, policymakers, and investors. Furthermore, understanding the dynamics surrounding managerial holding and earning management practices can be applied to ensure that the correct implications and outcomes of the proposed reforms for Jordan are understood.

Growth is the most essential indicator, which can show a company's past results and its future perspectives. Chebbi and Ammer [30] state that the growth rate of sales has a direct impact on the ability of a firm to provide profits and benefits in the future. If sales are higher, profits will have the same tendency. It is wrong to avoid the fact that sales growth can result in greater profitability and better payment of dividends to shareholders. Thus, such companies are less likely to be financially distressed because of their better financial state. In terms of empirical research, the impact of sales growth on the financial distress of companies was properly explained. Akhter et al. [18] are sure that sales growth has an impact on the avoidance of the risk of experiencing financial failure. As for Mardawi et al. [31] the influence of sales growth on the financial fear of companies was not observed. For better results and to decrease the number of earnings management cases, companies follow such recommendations as qualified experts' involvement, changes in audit processes, and corporate governance mechanisms mechanics. Thus, analysis of the relationships between sales growth and earnings management or corporate governance within a particular country, Jordan, for instance, can be effective for understanding how to avoid financial failures.

Capital is essential for company operations, typically sourced through share issuance or loans, known as leverage, emphasizing the need for asset-liability balance to prevent financial distress [32]. Financial distress occurs when liabilities exceed assets, risking financial obligations. Conversely, asset surplus enables resilience. Leverage's impact on distress is nuanced, varying with factors like industry dynamics and governance. Kaur and Lodhia [33] found leverage not significantly affecting distress, suggesting other determinants. Qaderi et al. [34] further explored this, revealing leverage's contextual complexity. Corporate governance's role in mitigating distress, especially in Jordan, is crucial due to its influence on firm behavior and earnings management. Investigating governance's efficacy in reducing such practices enhances financial transparency. This study in Jordan seeks to illuminate governance's impact on distress, aiming to enrich understanding and promote financial stability.

The size of a bank is an important variable that impacts the performance of banks due to its association with banks' operational peculiarities. To begin with, the size of a bank is a substantial predictor of access to equity capital. According to Mir and Shah, such capital is directly related to a bank's dimension [35]. Larger banks, as suggested by Jackson et al., often possess high excess capital reserves that are determined by the market, as these organizations tend to avoid bankruptcy and prevent their managers from taking great risks for the shareholders [36]. This tendency increases customer satisfaction with a bank's actions and eventually allows such organizations to generate more profit. At the same time, the research by Gropp and Heider [37] has determined that asset size is crucial for the performance of a banking organization. Thus, most big banks' operational results are usually better due to larger overall profitability. The justification for such a statement is related to the fact that larger banks possess diversified asset portfolios, and when a part of them underperforms, the potential losses are limited.

Moreover, Degryse and Van Cayseele [38] stated that bank size also should be mentioned as a predictor that impacts lending. One of the most serious control variables is the size of a firm concerning which banks as organizations operate and make their debts. Similar to the general understanding of the role of the size dimension, it is usually related to an increased room for risk in this aspect [39]. The majority of small businesses are believed to be 'small' for a reason; this usually indicates that such firms have an increased chance of becoming insolvent soon, and such a perspective mitigates the probability of successful bank lending. At the same time, for instance, as mentioned by Twum et al. [40] the influence of bank size on the relationship between lending and performance was not proven. Therefore, this fact suggests that even though bank size is a significant variable, the performance of banking organizations is impacted by other factors as well.

Cash flow is a pivotal variable in the realm of corporate governance and earnings management, particularly within the framework of agency theory [41]. As a fundamental indicator of a company's liquidity and financial health, cash flow metrics offer valuable insights into the underlying cash-generating capabilities of a firm [42]. Research indicates that firms with stronger cash flow performance are less likely to engage in earnings manipulation, highlighting the role of cash flow as a constraint on opportunistic behavior by managers [43, 44]. The results of the study have several implications for various stakeholders in the financial field. Firstly, they demonstrate that strong corporate governance practices play a crucial role in decreasing earnings management behaviors [45]. Therefore, businesses are encouraged to implement strong governance systems to ensure the transparency and reliability of their reports. Moreover, such measures can also contribute to the confidence of investors in businesses' financial statements [15]. Policy-makers and regulatory authorities can also take advantage of these findings to ensure the development of regulatory frameworks and systems that prevent earning manipulation [46]. This way, their efforts will be targeted at reducing the likelihood of unethical behavior associated with misreporting [40]. At the same time, the implications for professional practice highlight how the acquired information can inform decisions about various strategic measures and initiatives to counteract earnings management risk [47].

Therefore, by nurturing the principles of good governance, businesses can ensure the trust of stakeholders and a positive organizational reputation. In conclusion, it is also likely that the study might benefit the development of the field since it can act as a starting point for further study and investigation of the interaction of corporate governance systems and earnings management strategies. Keeping in view the above-mentioned literature, this study aims to examine the efficacy of corporate governance mechanisms in addressing earnings management practices, with a specific focus on Jordanian firms. This study confirms the following hypothesis.

H1: Corporate governance has an impact on reducing earnings management practices among Jordanian firms, as predicted by agency theory.

## 3. Methodology

This section elucidates the aims and conjectures of the research. Moreover, this section delineates the methodology employed in the study, encompassing the criteria for sample selection, sources of data, and techniques for data collection. This section additionally elucidates the employed data analysis techniques. The study used a sample-based methodology, utilizing financial organizations that are publicly listed on the Amman Stock Exchange. The Amman stock market has a total of 31 registered banks and other financial entities, these companies are included in the sample. The dataset included in this research encompasses a complete decade, commencing in 2013 and concluding in 2022. The source of all the information is the official website of the Amman Stock Exchange at https://www.ase.com.jo/en. According to the research, the facts about company-level variables were derived from the annual reports of the banks. Utilizing a content analysis methodology, an examination was conducted on the annual reports to ascertain how social responsibility accounting was revealed.

Previous studies have indicated that the quality of financial reporting is affected by many variables other than corporate governance variables ,such as leverage, size, and cash flow [7, 13]. To avoid the influence of these variables on the results when implementing the study model, a set of control variables was used.

## 4. Results and discussion

The overarching purpose of this research, grounded in agency theory, is to assess how well corporate governance procedures address earnings management practices. The study will specifically concentrate on firms operating in Jordan. Descriptive statistics were employed, followed by regression analysis.

### 4.1. Descriptive statistics

The provided statistical data in Table 1 encompasses various parameters that offer insights into the distribution, variability, and central tendencies of eight different variables, although the specific context or labels for these variables are not provided. However, based on the statistical measures presented, we can discern important characteristics of the dataset.

The mean values, which represent the average of the data points, range from 0.142 to 54.623 across the eight variables. This indicates a significant diversity in the central tendencies of the variables, suggesting that they may represent distinct aspects of financial or numerical data. For instance, a mean of 54.623 suggests a relatively high average value for the corresponding variable compared to the others. Standard error values, which indicate the precision of the mean estimates, vary between 0.009 and 2.370. A lower standard error suggests greater precision in estimating the true population mean from the sample data. The wide range of standard errors across the variables suggests variability in the reliability of the mean estimates. Median values, representing the middle value of the dataset when arranged in ascending order, provide insights into the central tendency of the variables. Ranging from 0.088 to 55, the medians offer an alternative measure of central tendency and help assess the potential impact of outliers on the mean values.

Standard deviation and variance measures reflect the spread of data around the mean. With standard deviations ranging from 0.153 to 41.720 and sample variances from 0.024 to 1740.598, these statistics illustrate the extent of variability within each variable. A higher standard deviation or variance suggests a greater dispersion of data points around the mean. Kurtosis and skewness statistics offer insights into the shape and symmetry of the distribution of data. A flatter distribution and heavier tails are indicated by a negative kurtosis value, whereas a more peaked distribution and lighter tails are indicated by a positive measurement. A right-skewed distribution is indicated by a positive value for skewness, whereas a left-skewed distribution is shown by a negative number. Skewness measurements the imbalance in the distribution. The range, representing the difference between the maximum and minimum values, varies widely across the variables, ranging from 0.581 to 210. This indicates the range of variation in the observed values within each variable, providing context for understanding the spread of the data. These statistical measures provide a comprehensive overview of the distributional characteristics, central tendencies, and variability within the dataset, laying the groundwork for further analysis and interpretation within the relevant context or domain.

Table 1. Descriptive statistics

| | Leverage | Size | Cash flow | Firm growth | Board size | Board independence | Managerial ownership | Earning management |
|---|---|---|---|---|---|---|---|---|
| Mean | 0.142 | 3.831 | 0.055 | 0.186 | 9.461 | 4.252 | 0.136 | 54.623 |
| Median | 0.088 | 3.812 | 0.046 | 0.140 | 10.000 | 4.000 | 0.090 | 55.000 |
| S. D | 0.153 | 0.739 | 0.097 | 0.275 | 3.539 | 2.944 | 0.134 | 41.720 |
| Kurtosis | 0.882 | -0.526 | 1.044 | -1.139 | -1.279 | -1.275 | 1.297 | 0.667 |
| Skewness | 1.204 | -0.080 | 0.184 | 0.112 | -0.005 | 0.057 | 1.293 | -0.635 |
| Range | 0.738 | 3.591 | 0.672 | 0.994 | 11.000 | 9.000 | 0.581 | 210.000 |
| Min | 0.000 | 2.013 | -0.290 | -0.297 | 4.000 | 0.000 | 0.000 | -90.000 |
| Max | 0.738 | 5.604 | 0.382 | 0.697 | 15.000 | 9.000 | 0.581 | 120.000 |
| Count | 310 | 310 | 310 | 310 | 310 | 310 | 310 | 310 |

**4.2. Regression analysis**

The coefficients shown in Table 2 are the estimated impacts of different independent variables on a dependent variable. With this consideration, these statistics also include their standard errors, t-statistics, p-values, as well as 95% confidence intervals. These coefficients are based on a regression analysis and help to understand these variables' relationship. In this summary, a detailed interpretation of these data will be provided and presented for all independent variables. When it comes to the coefficient for the intercept, it is equal to 86.297. Considering the current discussion, it is important to say that the estimated value is associated with the dependent variable in case any independent variable is absent, insignificant, or unaccounted for. Meanwhile, the intercept's t-statistic is a considerable size, paired with a p-value of 0.00 and 95% confidence 36.9192582–135.6787418, which indicates that the relationship with the independent variable is of critical importance.

Considering the variables, it is important to say that each coefficient here offers the key information regarding this independent variable's potential impact on the dependent variable, while the presence of other factors is accepted. The leverage coefficient of -21.325 suggests that there is a negative correlation. Meanwhile, being $12.079, it is important to say that there is a positive correlation that may be considered, meaning that the increase in the cash flow amount is anticipated to result in a similar proportion in the dependent variable.

To evaluate the seriousness of each coefficient, it is crucial to find out the extent to which t-statistics became known. Here, it is important to divide each coefficient by the corresponding value of its standard error. In general, it may be said that the higher the t-statistics, the greater the potential impacts of regression. The p-values corresponding to each independent variable's coefficient must then guide also if these coefficients are likely to be observed when it comes to the true impact of note. Finally, the standard error of the of independent variable to the dependent variable's coefficient must offer the sense of measure in how to certain the impacts, meaning the lower these errors, the greater the degree of certainty concerning the true population parameter's regression.

Table 2. Regression results

| | Coefficients | Standard Error | t Stat | P-value | Lower 95% | Upper 95% | Lower 95.0% | Upper 95.0% |
|---|---|---|---|---|---|---|---|---|
| Intercept | 86.297 | 14.893 | 5.795 | 0.000 | 56.990 | 115.603 | 56.990 | 115.603 |
| Leverage | -21.325 | 15.629 | -3.364 | 0.000 | -52.081 | 9.430 | -52.081 | 9.430 |
| Size | -6.017 | 3.394 | -2.773 | 0.038 | -12.696 | 0.662 | -12.696 | 0.662 |
| Cash flow | 12.079 | 25.518 | 3.473 | 0.001 | -38.137 | 62.295 | -38.137 | 62.295 |
| Firm growth | 2.626 | 9.017 | 2.291 | 0.045 | -15.119 | 20.370 | -15.119 | 20.370 |
| Board size | -0.166 | 0.682 | -2.243 | 0.048 | -1.508 | 1.176 | -1.508 | 1.176 |
| Board independence | -1.155 | 0.814 | -2.418 | 0.022 | -2.757 | 0.448 | -2.757 | 0.448 |
| Managerial ownership | -1.898 | 18.524 | -2.102 | 0.049 | -38.351 | 34.554 | -38.351 | 34.554 |
| R Square | 0.0254 | | | | | | | |

## 5. Conclusion

The results of the regression analysis in the context of agency theory shed light on the connection between different corporate governance mechanisms and earnings management strategies. The computed coefficients help present the assessment of the size and direction of the independent variable effects on each earning management measure. Meanwhile, the accompanying statistics also provide insights into the reliability and significance of the estimates, including confidence ranges, t-statistics, p-values, and standard errors. Concerning the data, it is important to clarify that different corporate governance mechanisms were found to decrease the extent of earnings management measures.

In these terms, it is observed that the coefficients associated with several of the selected variables are statistically significant, such as leverage, board size, board independence, and managerial ownership. The negative correlation can be observed in cases where acknowledged high levels of leverage and managerial ownership are related to earnings management decreases. In turn, it is confirmed that an insignificant increase in board size is also linked to less amount of earnings management, while enhanced board independence is found to identify shareholders' interests. In addition, the fact that the cash flow coefficient is found to be positive overall implies that companies with a higher amount of available operational capital are more likely to rely on earnings management measures. As a result, the abuse can be dependent on the potential conflicts arising from financial constraints and the directors' decisions. However, the firm growth coefficient related to the positive correlation still can be classified as insignificant, implying that the growth of a company does not cause increased earnings management.

## Declaration of competing interest

The authors declare that they have no known financial or non-financial competing interests in any material discussed in this paper.

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## Author contribution

Alrawashedh, N.: analysis and interpretation of results, Zureigat, B.: draft preparation, Rawashdehm B.: study conception and design, Zraqat, O.: analysis and interpretation of results, and Hussien, L.: data collection.

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