

Corporate Governance, CEOs' Financial Incentives and Earnings Management? A Survey

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Abstract The study aims to review the impact of corporate governance and CEOs' financial incentives on earnings management. Some corporate departments resort to earnings management practices through measurement and accounting disclosure processes in a way that serves their interests, taking advantage of the flexibility in accounting standards to choose between alternative accounting methods and policies. An in-depth discussion of earning management measures was conducted and we concentrate on the Miller ratio, which focuses on working capital and operating cash flows. The study predicts a positive relationship between the board of directors' independence and earnings management and a positive relationship between leverage and earnings management.

Keywords: board of directors, financial incentives for executives, earnings management

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1. Introduction

Users of financial statements primarily rely on the financial data of an organization to assess the performance of that organization. Moreover, it is also the basis for management's accountability to shareholders about their ability to exploit the available resources. The importance of such financial data has increased a lot for trading shares of those companies in the financial markets, along with their influence on stock prices [1]. Accounting standards or financial reporting standards prepare these lists. These standards and principles have given a broad scope for choosing between alternatives to treat the same transaction or event [2]. Therefore, many higher authorities of the company, such as the CEO, board of directors, or even managers, are exploiting the management with their influence and power to manipulate financial statements to serve their objectives. Generally, this is referred to as earnings management [3].

Earnings management practices have led to many scandals and even the collapse of some of the world's largest companies. The most famous of which are Enron and WorldCom. There were many reasons behind the collapse of Enron and WorldCom, such as failure of the financing structure, inability to pay the cash flows for the due obligations, lack of proper control practices, and lack of interest in applying accounting standards related to disclosure and transparency. In addition, some major accounting and auditing companies, such as Arthur Anderson, colluded with them, which led to the collapse [4,5].

In the context of many financial crises and scandals that affected the credibility of published financial data and the

credibility of their collectors and auditors, votes rose to formulate objective rules through the Board of Directors to protect the interests of all parties. Also, according to agency theory, there was an emphasis on regulating the existing relationships between the executive management of institutions and their boards of directors, as well as between shareholders and stakeholders [6].

In light of the above discussion, it highlights the importance of applying corporate governance mechanisms to limit the practice of earning management. For example, the Alhaddad [7] study showed that the board of directors' characteristics limit the practice of earning management. Similarly, Aladi and Abdullah [8] found that applying internal and external governance mechanisms reduced the practice of earning management.

On the other hand, academics and professionals regard financial rewards and incentives for executives as the second most important driver of earnings management practice in Saudi Arabia [9]. Executive interest in managing profitability has grown as a result, particularly concerning harmful practices that negatively impact the company's value. Therefore, there is a growing need to disclose those practices and reduce the influence of executives on financial statements. Can be accomplished by public shareholding firms adopting and implementing corporate governance rules and guidelines [10].

2. Earning Management and Its Context

This aspect seeks to present earning management in terms of its concept, the motives that prompted the company to practice earning management, the

methods used in earning management, and methods for measuring it.

2.1. Concept of Earnings Management

Earnings management is one of the topics that did not exist previously. It appeared after the fall of large corporations such as ENRON and WorldCom. The reasons behind the fall were primarily financial and administrative corruption, poor management of these companies for correct practices, a weak interest in applying accounting standards, and a need to show correct information about their financial status [11].

Most accountants agree that the profit element is one of the most critical elements of financial statements, and investors rely on it to make investment decisions. In addition, it is an important indicator to determine the company's share price. The best economic measure is the measure of profit prepared based on accrual, as it reflects the efficiency of the administration in using available resources. However, the administration abuses the freedom granted to it in choosing accounting policies and tends to manipulate profits to show the results of economic units better than they are. The international accounting standards also allowed the freedom to choose between the accounting alternatives that followed, in addition to the freedom to disclose or not disclose the elements that affect profits [11,12,13,14].

Previous studies presented many concepts for earning management. One of the earliest studies that provided a comprehensive definition of earning management was by Healy and Wahlen [15]. It showed that earning management means that the administration uses its professional judgment in preparing financial reports as well as the structure of operations to change financial reports to mislead some stakeholders through the information contained in these reports about the economic performance of the company or to influence the contracts made by the company. According to Ibrahim [16], earning management is the deliberate manipulation of the management in the accrual accounts to achieve the maximum benefit to managers and the company's market value.

Aljabri [17] showed that "earning management" is a set of practices intended by management regarding profit measurement and reporting to influence the profit published in financial reports. One employs judgments and estimations while also taking advantage of accounting principles' and standards' flexibility. It may be contractual or to influence other parties. Abdelfattah [18] also came up with the same framework but in a more detailed manner. It clarified that earning management includes a group of different accounting practices, including those within the framework of generally accepted accounting principles. It represents standard or neutral accounting practices with conservative accounting practices, including what departs from this framework and reaches the point of abusive accounting practices. Abusive accounting practices are practiced to manipulate and prepare fraudulent financial reports to prevent showing the results of the actual economic performance of the facility. It is carried out following a set of managers' provisions,

through which the profit figure is affected or altered by certain accounting practices.

Kang & Kim [19], Uwuigbe et al. [20], and Uwuigbe et al. [3] studies have added an ethical dimension to their definition of earning management. They showed that earning management represents an unethical practice used by the company's management through accounting options or discretionary accrual decisions. It is based on the deliberate manipulation of securities to deceive investors about the company's economic situation or to obtain some contractual benefit that depends mainly on accounting numbers.

Given the above, most researchers attribute a negative reputation to earnings management. However, some researchers represent earning management positively. For example, McKee [21] took the opposite position when describing earning management as reasonable and legally acceptable measures if practiced within the income smoothing method to achieve the relative stability of profits that makes them predictable. Ronen and Yaaris [22] took a middle position, as the study indicated that the impact that arises from earnings management might be beneficial if it is viewed as providing owners and other stakeholders an indication of the company's performance in the long term, even if it conceals that performance from them in the short term.

We summarize from the above that earning management is a method of manipulation practiced by the administration by exploiting its influence and authority when preparing financial reports using the flexibility granted by accounting standards and principles. Overall, this results in the financial reality being beautified and shown without its actual reality to mislead current and prospective investors.

2.2. Motives for Practicing Earnings Management

Looking at previous studies related to the motives for practicing earning management, the researchers and those interested initially focused on the accounting choice in the seventies and early eighties of the last century. Moreover, the most important topic for researchers and analysts was the tendency of managers to engage in earnings management activities to achieve their own goals and benefits. Until the mid-1980s, the accrual basis remained the only factor for studying the administrative motives for practicing earnings management activities. At the beginning of the nineties, studies took new directions for the motives of earning management, such as those related to shares, contractual motives, and regulatory motives [8].

Albaroudi [23] referred to the administration's pursuit of preparing financial reports to achieve two main goals, namely, the survival of the economic unit and its continuity in the competitive market and achieving unique benefits for management, whether in the present or the future. Dye [24] explained that the information asymmetry between managers and stockholders is a primary motive for practicing earnings management.

Based on the preceding, previous studies identified a set of motives that motivate management to practice earning management, which can be summarized as follows:

2.2.1. Motives Related to the Stock Market

When shares are issued, management is motivated to use accounting procedures to increase profits to affect investors' expectations and their assessment of the enterprise. For example, a change in share prices for a certain period (a quarter or a year) and unexpected accounting profit for the period are meaningful because the accounting profit figures provide essential information for investors, and the facility's declaration includes appropriate information for evaluating the facility [25].

In addition to the preceding, the company's management may practice earnings management by determining part of its compensation based on stock prices on a specific date, as they benefit from the difference between stock market prices. Because of this, it drives management to influence the stock's value on the day of granting options for more significant compensation. In this way, the management of the enterprise exercises what is called earnings management. It can also influence the company's profits to conform to market analysts or their predictions, as analysts often rely on information provided by management about the entity's future performance. Therefore, these forecasts motivate management to report profits in line with the specified figures by analysts so that it seems that the administration is fulfilling its guarantees to achieve these profits [26].

2.2.2. Motives Related to Contractual Arrangements

The contractual motives for earning management include debt financing and reward contracts. The management can implement earnings management practices by choosing accounting adjustments to maximize compensation and rewards. The contractual relationship between management and owners may include incentives whereby those responsible for management are rewarded with net profit growth. There should be a minimum and maximum reward. According to this relationship, the management has the motive to increase the present value of its rewards by increasing the current profits at the expense of profits in the future period [8].

The management also engages in earning management activities to avoid violating the borrowing contracts. The main reason for this motive is that managers are encouraged to increase profits to reduce restrictions imposed in debt agreements or to avoid the costs of violating contracts. Consequently, the closer the establishments are to the indebtedness conditions based on accounting figures, the greater the tendency of the administration to use the accounting methods and procedures that lead to an increase in the profits that it reports [27].

2.2.3. Motives Related to Organizational Arrangements

The organizational motives for managing profits include several types, such as the size of the establishment, the organization at the industry level, specific tax laws for a particular economic sector, and some pressures to which some sectors of the economy are exposed. Earning management activities are practiced here because each of them is linked to the political burdens borne by the

establishment and the greater flexibility in the use of accounting changes, as well as the presence of a greater possibility of profit fluctuation from one year to another in large enterprises, unlike the case in small enterprises [28]. Furthermore, while all sectors are subject to some form of regulation, some of these sectors face regulatory oversight that is based on the use of accounting numbers, so these establishments have the incentive to select accounting methods that lead to the practice of earning management toward reduction [8].

2.3. Earnings Management Methods

Earnings management is based on multiple methods and mechanisms, the most important of which is when the administration tries to follow specific methods that lead to maintaining a stable pace of profits so that the enterprise can reach its target profits. Overall, this is called income smoothing. However, it is also possible that profits can be manipulated through bad faith, as described by creative accounting, or by absorbing most of the losses in the current year to improve profits in future periods, known as "rearranging the books." The following literature explains these methods in detail.

2.3.1. Income Smoothing

Income smoothing is one of the most critical and famous earnings management methods. The administration tries to maintain a stable stream of accounting profits that the firm decides on so that the target profits are reached by controlling the timing of actual operations or choosing accounting policies. For this, there are two different ways to achieve income homogeneity, as listed below [28]:

2.3.1.1. Real Income Smoothing

It is a phrase about economic smoothing that occurs when management takes the measures appropriate to structure the enterprise's economic activities. It affects the accounting profits, as the enterprise can smooth the income by postponing production and investment decisions until the end of the year, depending on the knowledge of the facility's performance at that time.

2.3.1.2. Artificial Income Smoothing or Accounting Smoothing

Artificial income smoothing is the intervention of the administration through the accounting selection to report on the accounting profits in line with its desire to smooth the income without a fundamental economic change in the facility's performance. When the administration manipulates the timing of the accounting entries, it constitutes one of the earnings management methods. [29] considered that the interest in business secrecy creates motives for smoothing income. Based on the current and future performance of the facility, reporting a few accounting profits increases the possibility of excluding management. Therefore, when profits are weak, the management of the enterprise has motives for choosing the accounting procedures that contribute to the transfer of future accounting profits to the current period to avoid the possibility of excluding them.

2.3.2. Creative Accounting

Many researchers and specialists tried to define the concept of creative accounting. Amat et al. [30] defined it as “a process through which accountants use their knowledge of accounting principles and rules to process the numbers recorded in the accounts of the enterprise.” Aladi and Abdullah [8] mentioned four different methods of creative accounting, as follows:

1. Accounting principles allow the management of the enterprise to choose between its various alternatives.
2. The existence of restrictions in the accounts, such as an unavoidable number of estimates, judgments, and predictions that the internal parties in the facility usually issue, provides an opportunity for creative accounting to deviate from the side of caution or take the side of optimism in making estimates.
3. The use of fictitious transactions either to manipulate budget balances or to move profit between accounting periods, which is what happens by entering between two or more transactions related to a third party (usually the bank).
4. Use the timing of actual operations to reflect the desired impression on the accounts.

2.3.3. Accounting Rearrange the Books

The accounting strategy of rearranging the books is based on influencing the income statement to make poor results look worse. Therefore, it usually depends on the period in which the company makes losses rather than profits and inflates the loss figures to improve profits in the next year. During reorganization and changes in the facility's executive management, the process of rearranging the books occurs so that the new executives can use the accounting rearrangement of the books and bear the facility's poor performance and negative consequences for the previous executives. Moreover, the process of liquidation or cleaning the accounts of the facility takes place in a way that can be used in the future to smooth profits, generate a steady flow of revenue, and take credit for improvements in the following year [8].

Healy [31] considered that the management of the enterprise might have the incentive to reduce profits during some periods. For example, suppose the profits realized are less than the target. In that case, the management will have an incentive to rearrange the books because it deliberately reduces profits or even realizes losses by including maximum potential expenditures in the financial statements for the current period, which increases the chance of making profits and thus guarantees rewards in future periods.

2.4. Earnings Management Methods

Many accounting models and indicators have appeared that can predict whether the company's management is managing profits. These models depend mainly on the information disclosed in the financial statements prepared based on accrual; they are known as accrual accounts optional [16]. Earnings management through these accounts is less likely to be discovered because it needs to be disclosed in the notes supplementing the financial

statements and is carried out within the framework of generally accepted accounting principles. Hence, it is easier for management to practice earnings management through these accounts [32]. These models and indicators were the results of many studies, which we will present in the next part.

Healy's study [31] is one of the first studies that presented an earning management model based on dividing the total entitlements into optional and non-optional entitlements and using optional entitlements as a determinant of the level of earning management. The following equation expresses this model:

$$EDAC_{it} = TAC_{it} / A_{it-1}$$

Where:

$EDAC_{it}$ = The estimated elective entitlements of the company (i) in period (t).

TAC_{it} = The total entitlements of the company (i) in period (t).

A_{it-1} = The company's total assets (i) at the beginning of period (t).

The previous model is one of the simplest inference models for earning management. However, it neglected the changes in non-optional accruals, and it is assumed that they are equal to zero. So, it may include a process for estimating elective entitlements according to this model's significant errors, as it does not consider the normal operations that require a certain level of entitlements [32]. Therefore, the DeAngelo [33] study presented another model, which assumes that the non-optional entitlements follow a random behavior and the optional entitlements are calculated by dividing the total change in entitlements (the difference between the total entitlements at the end of the period and the total entitlements at the beginning of the period) on the total assets at the start of the current period. The following equation expresses this model:

$$EDAC_{it} = (TAC_{it} - TAC_{it-1}) / A_{it-1}$$

Where:

$EDAC_{it}$ = The estimated elective entitlements of the company (i) in period (t).

TAC_{it} = The total entitlements of the company (i) in period (t).

TAC_{it-1} = The total entitlements of the company (i) at the beginning of period (t).

A_{it-1} = The company's total assets (i) at the beginning of the period (t).

Similar to the Healy [31] model, it is expected that the process of estimating the optional accruals in the DeAngelo [33] model will also include errors, as it neglects the variables that affect the accruals in the current year [32]. So, the Jones [34] study presented a third model intending to mitigate measurement errors for the previous two models. The study does this by estimating non-optional accrual accounts and introducing the change in the current period's revenues from the previous period. Therefore, it is considered non-optional and used to estimate optional accruals [32].

As an extension of previous studies, the Dechow et al. [35] study added an amendment to the Jones [34] model. It introduced a change in the accounts under collection when estimating non-optional accrual, assuming that the change in forward sales during the study period is due to

earning management. It is based on the logical assumption that it is easy to manage profit by exercising discretion in recognizing revenues from forward sales [32]. The following equation expresses the modified Jones [34] model:

$$EDAC_{it} = TAC_{it} / A_{it-1} - \left[\begin{array}{l} a_1(1 / A_{it-1}) \\ + b_1 (\Delta REV_{it} - \Delta AR_{it}) / A_{it-1} \\ + b_2(RPE_{it} / A_{it-1}) \end{array} \right]$$

Where:

$EDAC_{it}$ = The estimated elective entitlements of the company (i) in period (t).

TAC_{it} = The total entitlements of the company (i) in period (t).

A_{it-1} = The company's total assets (i) at the beginning of the period (t).

ΔREV_{it} = The change in the company's revenue (i) between the period (t) and the period prior to it (t-1).

ΔAR_{it} = The change in accounts under collection for the company (i) between periods (t) & (t-1).

PPE_{it} = Real estate, equipment, and property of the company (i) in the period (t).

It is summarized from the above that the models following the Healy [31] model came as an attempt to prevent measurement errors of optional entitlements that determine the level of earnings management. However, the difficulty facing the measurement in the previous models (Healy, DeAngelo, and Jones models) lies in determining optional and non-optional entitlements.

As a result, other studies proposed additional indicators to detect earning management based on the classifications provided by the Visvanathan [36] study, which stated that accruals are working capital entitlements [37]. Miller [32] is one of the studies that relied on calculations that included working capital in determining earnings management. This study has developed a model that can detect the extent to which management uses profit manipulation by using short-term accruals through the percentage change in working capital as an element vulnerable to manipulation and cash flow from operating activities as an element that is not exposed to manipulation. It has been called the Miller Ratio, explaining that this ratio is equal to zero in the absence of earning management and moves away from zero as earning management practices increase [38]. It means that if earning management is not practiced, there will be:

$$(\Delta WC / CFO)_{t-0} \square (\Delta WC / CFO)_{t-1} = 0$$

If earning management is practiced:

$$(\Delta WC / CFO)_{t-0} \square (\Delta WC / CFO)_{t-1} \neq 0$$

Whereas:

ΔWC = The change in working capital between the current and previous periods

CFO = Net cash flows from operating activities in the current period

$t=0$ = Current period

$t=1$ = Previous period

This model has been used in the current study for several reasons that will be presented and discussed

in the study variables section within the research methodology.

3. The Board of Directors and Earnings Management

The board of directors is one of the most important control mechanisms, as it is the organization's highest internal governance mechanism Davidson et al. [39]. It is also the main instrument of corporate governance, as it has to play an essential role in protecting the stakeholders' interests by issuing decisions and directives for the company's operations [40].

In previous literature, research has been done on the connection between board makeup and firm performance. Most of the studies are a continuation of Weisbach [41], who discovered that boards predominately made up of outside directors can significantly restrain managers' opportunistic impulses and act in a way that is consistent with the firm's value maximization purpose.

Peasnell et al. [42], one of the pioneering works in this field, contend that boards help improve the reliability of financial statements in the U.K. The study concludes that higher outside representation on the board is related to higher-quality earnings. According to a different study by Klein [43], more independence on the boards and audit committees is related to higher-quality profitability in the U.S. A further finding by Xie et al. [44] is that organizations with boards that contain a higher proportion of independent non-executive members with experience in investment banking are less likely to use accrual-based earnings management.

An extension of the above, Using the 100 largest U.S. companies between 1994 and 2003, Cornett et al. [45] investigated the effects of corporate governance and pay-for-performance on earnings management. The study found that the presence of independent outside directors reduces earnings management. Similarly, Cornett et al. [46] checked how corporate governance mechanisms affected earnings and earnings management at large publicly traded U.S. companies between 1994-2002. The study finds that largely independent boards constrain managers' discretionary behavior. Also, the research conducted by Roodposhti and Chashmi [47] for the period between 2004-2008 in Iran using 196 firms listed on the Tehran Stock Exchange reveals a negative association between board independence and earnings management. In addition, according to Wilson [48] research, the independence of the board and audit committee limits Australian firms' use of earnings management practices.

Contrarily, Hashim and Devi [49] used 200 of the top non-financial companies listed on the Malaysian Stock Exchange to explore the connection between board independence, CEO duality, and accrual management in Malaysia. According to the study, numerous independent executive directors are connected to profit management. Additionally, Shah et al. [50] examined the connection between board makeup and earnings management in Pakistani-listed companies between 2003 and 2007. The analysis discovers no meaningful connection between

board composition and earnings management. In general, the board of directors' makeup would be crucial in balancing the interests of the shareholders and the managers.

4. Financial Incentives for Executives and Earning Management

Financial incentives are among the most critical topics for workers in institutions of all kinds because of their impact on performance and productivity improvement. Therefore, incentives are one of the essential elements for influencing the behavior of the individual [51]. Kim [52] defines incentives as rewarding individuals in return for their work and their commitment to the rules, procedures, and instructions.

In today's complicated business environment, agency theory seeks to reduce agency costs that result from the conflict of interest between owners (shareholders) and controllers (managers). Consequently, the core of agency theory is executive compensation [53]. Executive compensation should be based on business performance to increase shareholder wealth by aligning the managers' interests with those of the shareholders. However, these express and implied executive compensation agreements also encourage managers to boost earnings-bonus awards through the exercise of accounting judgment. Therefore, CEO remuneration for performance can have a significant impact on the manipulation of reported earnings [54].

The effect of CEO pay-for-performance and earnings management on business performance was examined by Cornett et al. in 2008 [55]. They discovered a strong link between incentive-based compensation and traditionally reported corporate performance metrics using a sample of the top 100 firms listed on S&P from 1993 to 2003. However, when corrected for the impact of discretionary accruals, the profitability metrics show a far weaker correlation. Similarly, Zhu and Tian [54] used a sample of 22 industrial enterprises to investigate the association between CEO compensation performance and firm performance when performance is adjusted to consider earnings manipulation. The study demonstrates that the impact of CEO compensation is significantly reduced when performance is subtracted from the effect of opportunistic accounting.

In a different setting, Kang and Kim [19] looked into the possibility of earnings management amplifying the relationship between CG and firm performance. The study finds that the board of directors' compensation, which includes salaries, bonuses, and stock options, is positively associated with real-activity-based earnings management using 1,104 firm-year observations, excluding non-financial firms listed on the Korean Stock Exchange between 2005 and 2007. Also, the association between the CEO's pay and the company's performance may be strengthened through earnings manipulation brought about by an actual transaction. Additionally, the 2012 study by Schran and Zechma sought to assess the impact of executive overconfidence in 49 American companies. The researchers concluded that 25% of businesses engaged in accounting fraud due to CEOs' overconfidence.

5. Review the Relationship between the Board of Directors, Financial Incentives for Executives and Earning Management

Many previous studies have dealt with the issue of earnings management from several aspects. However, this study concentrates on governance mechanisms and their impact on earnings management.

Al-Okaily et al. [56] studied whether auditor-client economic bonding and CG moderate the adverse effects of principal agency problems on earnings quality in U.K.-listed family firms. The study used the characteristics of the board of directors in terms of the double CEO and the proportion of non-executive members, in addition to the effectiveness of the audit committees. It included a sample of family companies listed on the London Stock Exchange between 2005 and 2013. The study concludes that although EM is lower in family firms, there is a higher tendency for EM in those firms with economic bonding. However, such an impact may be moderated by suitable governance mechanisms. The latter may alleviate the adverse effects of the lack of auditor independence on the association between EM and family firms.

Alam et al. [57] examined the impact of the board of directors' characteristics, the chief executive officer's authority, and the sharia control on earnings management. The study sample was chosen from the banking sector, which included 1165 companies that varied between commercial and Islamic banks, covering a period between 2006 and 2016. The corporate governance data and the Sharia Board were collected from the annual reports of the concerned banks. The study concludes that attributes such as board size, firm size, and leverage significantly influence the EM of both Islamic and conventional banks.

Bajra and Cadez's study [58] examined two governance mechanisms, namely the quality of the internal audit function (in terms of formal establishment, efficiency, size, independence, and participation in auditing financial statements) and the board's quality (in terms of board size, independence, number of meetings, financial experience, and board rotation) and their impact on earnings management, in addition to controlling variables including the size of the company's debt and return on assets. The study sample included companies traded on the American market between 2000 and 2013, before and after implementing the Sarbanes-Oxley Act, which significantly changed corporate governance. The study's findings show that the governance mechanisms have the effect of limiting earnings management after implementing the Sarbanes-Oxley Act.

In a 2017 study, Kapoor and Goel [59] examined the connections between board composition, business performance, and earnings management in India. The study was conducted on banks and financial institutions and included 500 companies on the Bombay Stock Exchange from 2007 to 2012. One of the study's most significant findings is that independent board members' preoccupations impact their ability to oversee the board of directors, in addition to the company's profitability, which

works to strengthen the link between the independence of the audit committee and earnings management.

In another study by Chen and Zhang [60], the researchers examined the impact of the 2002 Chinese Code of Corporate Governance on earnings manipulations. The study sample was from Chinese companies listed on the Shanghai Stock Exchange before and after implementing the 2002 Law from 2000–2006. The study used the Jones Revised Profits Measurement Law and found that the 2002 Act positively impacted limiting EM. The study also finds that regulatory reform in CG plays an essential role in deterring the use of EM.

Hassan and Ahmed [61] evaluated Nigeria's relationship between corporate governance, earnings management, and corporate performance. The study sample included 25 non-financial companies listed on the Nigerian Stock Exchange between 2008 and 2010 and used the modified Jones model to measure earnings management practices. The study finds that the independence of board members limits the management of profits and discovers a positive relationship between CEO compensation and company performance.

In the Lo et al. [62] study, the researchers examined whether a good governance structure limits opportunistic behavior in earnings manipulation (in the form of transfer pricing manipulation). The study sample comprised 266 companies on the Shanghai Stock Exchange that disclose gross profit ratios on related-party transactions. The study finds that board directors with more independent members are less likely to manipulate earnings. In addition, companies without a chairperson-double executive and that have financial experts on audit committees are less prone to earnings manipulation. Overall, the research findings reveal that the quality of corporate governance is vital in deterring manipulated transfer prices in related-party sales transactions.

Cornett et al.'s study [46] examined the relationship between governance mechanisms (CEO incentives, board independence, and cost of capital) and their relationship to earnings management, in addition to controlling variables, including the number of board meetings and CEO duplication. The study sample included the largest holding companies in the United States of America for the banking sector from 1994 to 2002. The study concludes that the independence of the board of directors limits the management of profits, while the incentives of the CEO increase the management of profits.

In another paper by Liu and Lu [63], the researchers examined the relationship between earnings management and internal and external corporate governance mechanisms in China, such as the formal establishment of the board of directors, the independence of the board, and the ownership structure of board members. The study sample included Chinese companies listed between 1999–2005 and used the modified Jones model to measure profits. The study concludes that companies with higher levels of corporate governance are less likely to manage profits.

Additionally, Bergstresser and Phillippon's study [64] sought to determine the connection between the financial incentives given to CEOs and the management of the profitability of firms listed on N.Y. Stock Exchange between 1993 and 2001. The study used a modified Jones model to measure earnings management. The findings

demonstrate a statistically significant positive relationship between the management of profits and the incentives and bonuses granted to managers, especially in companies that link incentives to increase stock prices in the financial market.

The 2006 study by Chen et al. [65] looked at the relationship between board composition and ownership structure concerning financial fraud in Chinese enterprises. The study concentrated on the traits of the board of directors, including the proportion of outside directors, the size of the board, the frequency of board meetings, the CEO's tenure, and the chairmanship's length. The data came from the enforcement actions of the Chinese Securities Regulatory Commission (CSRC). The study covered the period between 1999 and 2003, and a simple probability regression model was used. The study finds that the proportion of outside directors, the number of board meetings, and the chairman's tenure are associated with the incidence of fraud.

Another work by Cheng and Warfield [66] aimed to find the relationship between managers' equity incentives arising from stock-based compensation and stock ownership and earnings management. The study used stock-based compensation and stock ownership data from 1993 to 2000. They found a positive relationship between incentives and profit management. In addition, they found that executives who own shares and get high incentives are likelier to manipulate profits to meet analysts' forecasts. The results showed that managers who received fixed bonuses and incentives seldom tampered with profits.

Desai et al.'s study [67] aimed to assess the penal system's impact on the reputations of managers involved in fraudulent accounts in companies in the United States of America. The study verified the management turnover rate and the re-employment process of managers who moved from companies that practiced earnings management in 1997 and 1998. It was also noted that CEO dismissals from positions increased between 1995 and 2003, which increased the compulsory turnover rate. The study's results assured the effectiveness of internal control, as it became difficult to ignore the significant changes in the internal and external control mechanisms that occurred at American companies. It also became possible to focus on corporate governance results to increase the likelihood of senior management being punished for fraud, manipulation, and the detection of accounting violations. The study concludes that penalties should be imposed on managers who deviate from generally accepted accounting principles in their actions and decisions to deprive them of future employment opportunities.

In the Arabian region, Alhassan [68] studied the relationship between corporate governance characteristics (the audit committee and the board of directors), auditing quality, and its impact on earnings management. Companies listed on the Bahrain Stock Exchange between 2010 and 2013 were included in the research sample. The study concludes that the audit committee, the board of directors, and the quality of the audit have a negative impact on earnings management.

Alhaddad's study [7] aimed to examine the impact of two internal mechanisms of corporate governance, namely the characteristics of the board of directors (the

independence of the board of directors, the size of the board of directors, the combination of the positions of the CEO and the chairman of the board of directors), and the ownership structure (administrative ownership and institutional ownership). The study sample included 108 Jordanian joint-stock companies between 2010 and 2014. The study concludes that institutional and administrative ownership contributes to limiting the use of actual profits and voluntary receivables management. In addition, the combination of CEO and chairperson positions amplifies profit manipulation.

Another study by Al-Kababji [10] sought to shed light on the contribution of adherence to the governance dimensions (board of director independence, board size, board meetings, duplication of executives, and audit committee independence) in limiting the practice of earning management in the Palestinian public shareholding industrial companies. The study used the modified Jones model to measure earning management. The study sample included all 13 industrial joint-stock companies from 2012–2015. The study finds that joint-stock industry companies practiced earning management during the study period, in addition to a divergent relationship between corporate governance and earning management dimensions.

Saadeh and Abd's study [69] aimed to measure the impact of executive managers' incentives on earnings management. In order to achieve the study's objective, 170 observations were selected from publicly held industrial companies listed on the ASE for the period between 2008 and 2012. The value of bonuses and incentives in the annual report given to executives was used as an indicator of management incentives. In contrast, the market value-to-book ratio was used to measure earnings management. The study also showed the effect of some controlling variables, such as size, profitability, and indebtedness. In order to select the hypothesis of the study, the multiple linear regression test was used. The study concluded that there was no effect of managers' incentives on earnings management in Jordanian industrial companies. Moreover, the study found a positive relationship between profitability, indebtedness, company size, and earnings management.

The study of Abu Jubbah and Al-Thunaihat [70] aimed to identify the impact of profitability on earnings management in industrial companies listed on the Amman Financial Market. The study measured the effects of independent variables (profit margin ratio, rate of return on assets, rate of return on equity, and profitability share), with the dependent variable (earnings management) represented by optional accruals. The researchers used the standard quantitative approach to decompose financial statements to measure profitability. Moreover, the researchers used the modified Jones model to measure earnings management based on the estimation of voluntary accruals. The study sample consisted of 70 industrial companies in the Amman Financial Market, trading from 2009 to 2013. The study concluded a positive relationship between profitability and earnings management. However, it did not find a statistically significant effect between indebtedness, company size, and earnings management.

Azzoz and Khamees [71] empirically examined the impact of corporate governance characteristics (board size, CEO duality, board composition, audit committee size, committee composition, and audit committee activity) on

earnings quality and management. The sample of this study consisted of all financial companies listed on the ASE (73 companies) from 2007 to 2012. The study used the absolute and signed value of discretionary accruals, calculated by the modified Jones model, to estimate earnings quality and management, respectively. The results show that the audit committee's size and activity are related to earnings quality and management. As a result, the study suggests that Jordanian financial institutions reduce the number of board of directors' members to adjust the proportion of external and non-executive directors on each board of directors and the audit committee.

Aladi and Abdullah [8] studied the role of corporate governance mechanisms in limiting earning management practices by defining the internal and external mechanisms of corporate governance, the most important of which are the board of directors and audit committee. The study sample included 20 joint-stock companies in Syria. The study concluded that applying internal and external governance mechanisms leads to a reduction in the practice of earning management. It also concluded that there is a need to focus on the board of directors' independence and work on developing new laws and legislation that have a supervisory and oversight role for enterprises.

Recently, Alharthy and Abdulrahman [11] conducted a study to measure the effect of executives' incentives on the practice of earnings management. The study selected 60 views from the Saudi banking sector from 2014 to 2018. The value of bonuses and incentives was determined by the annual report presented to executives as an indicator of management incentives. The market value of the book value is used as a measure for managing profits. The study's hypotheses were tested using a simple and multiple linear regression test. The study finds that the motivation of executives is the most critical factor and positively affects earnings management practices, followed by bank debts and then executives' bonuses. There is no effect of the bank's profitability on earnings management practices. The researchers recommended that it be applied to other joint-stock companies in various sectors that suffer from high rewards and incentives and to use other methods to measure earnings management.

Al-Hussein's study [72] aimed to determine the extent of management practices in Saudi companies in the petrochemical sector for earnings management methods. The study covered a period between 2011 and 2015 and used the modified Jones model to study the research hypotheses. As a result, the study finds that the sample practiced earnings management more in some years than others.

Gharib's study [37] aimed to evaluate the effect of company characteristics (size, debt, profitability, and liquidity) and the audit firm's size on managing profits in Saudi companies contributing to the Saudi market (non-financial companies). The study period was between 2010–2014. The researcher used the change in Miller's ratio to measure earnings management. According to the study's findings, profitability, firm size, and the size of the audit facility all negatively affect how earnings are managed. However, it also concludes that debt and liquidity have no impact on earnings management.

6. Conclusion

This study investigates the impact of the board of directors' characteristics and the CEOs' financial incentives on managing earnings. Due to the economic conditions that followed the global financial crisis, creative accounting methods emerged, including earning management, which was practiced by many companies to maximize their profitability and improve their financial position, as reflected in their published financial statements. Therefore, the executive departments of those companies resort to these practices for any reason.

The importance of the research stems from the importance of the published financial statements, since such records are of great interest to their users, including investors, regulatory bodies, and others. In addition, information related to the disclosed earnings is essential for stakeholders because their economic decisions are based on it and it helps users of financial statements predict the extent of these practices. The study also seeks to find an optimal corporate governance structure that can control earnings management.

One of the most influential theories explaining earnings management is the agency theory. The theory assumes that the stakeholder's (shareholders') objectives differ from the agent's (managers') objectives, referred to as the agency cost. Also, this theory assumes that the financial incentives for CEOs can contribute to increasing the earnings of the company owners [73].

The study concluded a positive relationship between the board of directors' independence and earnings management and a positive relationship between leverage and earnings management. On the other hand, the study concluded that the rest of the variables did not affect earnings management.

Future studies will likely show different results from the current study owing to the development of the systems in the countries under study and their efforts to achieve the best. However, future studies will likely include similar studies and apply them to other sectors to find out the impact of the characteristics of the board of directors and the financial incentives of chief executives on earnings management. Also, it is possible to use other measurements of earnings management, such as the modified Jones model, to determine the effect of these variables on earnings management. In addition, studies can be done on other new variables related to the board of directors, such as educational level, gender, age, and the period of holding the position (measurement of earnings before assuming the position and at least one to two years after assuming the position).

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