



RESEARCH ARTICLE

The link between corporate governance and earnings management of insurance companies in Ethiopia

Ayalew Ali^{1*}, Sitotaw Wodajio¹, Taye Teshoma²

Abstract

Corporate governance is essential to minimizing the conflict of interest between shareholders and management. Its effectiveness becomes even more pronounced when managers have the motivation to deviate from shareholders' interests because corporate governance mitigates potential conflicts between shareholders and management, especially when managers might be incentivized to prioritize their own interests over the shareholders' long-term value. Earnings management is used to apply good corporate governance practices and raise a company's market value across the world. The primary goal of this study is to examine the effect of corporate governance on the earnings management of insurance companies in Ethiopia, because more research has been conducted on banks rather than insurance companies. The study utilized econometric panel data from seventeen insurance companies, spanning the period from 2015 to 2022. The study utilized the generalized moment model (GMM) to identify the effect of corporate governance on earnings management. Discretionary accrual is utilized to assess the earnings management with board size, board independence, board meeting frequency, board gender diversity, ownership concentration, and audit committee financial expertise serving as explanatory variables and these variables are considered to act as a strong monitoring tool that enforces management to convey transparent financial information to the stakeholders in the regulated economy like Ethiopia. The results show that the financial competence of the audit committee and the size of the board have a significant and positive impact on earnings management. This is because audit committees have the financial expertise and know-how to manipulate earnings. Moreover, the positive effect of board size on earnings management is because the higher costs associated with decision-making. Conversely, board independence, board meeting frequency, board gender diversity, and ownership concentration have significant and negative effects on earnings management because more ownership concentration, board gender diversity, board meeting frequency and board independence reduce earnings management. Consequently, the study concludes that all the corporate governance proxies examined in the study have a significant impact on the earnings management of insurance companies in Ethiopia. Therefore, it is recommended that regulators and policymakers reassess their corporate governance policies and reforms to mitigate the earnings management practices of insurance companies in Ethiopia.

Keywords: Earnings, Insurance, Board, Independence, Gender.

Introduction

Corporate governance refers to the comprehensive set of processes and practices that govern the administration and management of a corporation. This includes both the legal requirements and policies established by the corporation as

well as the informal culture that is implemented within the organization (B. Black *et al.*, 2017). It serves as a framework for the interaction between various stakeholders, such as regulators, managers, directors, and customers. The primary objective of corporate governance is to provide investors with the assurance that their investments will yield adequate profits (Mansor *et al.*, 2013). Per the principles of stewardship theory, it is incumbent upon company directors to serve as stewards and diligently pursue the objectives of the organization (Davis *et al.*, 1997). Controlling the board of directors' actions is the primary function of corporate governance. It serves as a system of oversight and control, with the board supervising management's efforts to optimize shareholder value (Jebran and Chen, 2020). Corporate governance is a crucial aspect of environmental, social, and governance indices, as it demonstrates its ability to ensure legitimacy (Brammer, 2008; Akhtaruzzaman, 2021; Buallay, 2019; and Miralles *et al.*, 2019).

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The goal of corporate governance is to make it easier for corporations to be effectively monitored and controlled. Its fundamental tenets center on equity, openness, and improved disclosures to protect the interests of diverse stakeholders, Arora, and Bodhanwala (2018). Additionally, it is anticipated that corporate governance structures are expected to contribute to better decision-making processes, thereby improving the overall performance of the firm Shivani *et al.* (2018). Companies have the option to choose between legitimate and unauthorized methods of managing earnings in order to achieve specific goals that can impact the organization's revenue. As a result, stakeholders and investors have expressed worries about fraud, accounting report manipulation, and the efficiency of organizational governance procedures. A substantial amount of scholarly work has tackled the topics surrounding earnings management, which is regarded as a crucial element in financial reporting. Agency theory is essential to comprehending the relationship between board composition and earnings management Hagendorff *et al.* (2018). The agency theory explains the presence of incentives for management to engage in earnings management practices (Salah, 2010).

Manipulating earnings is used to apply good governance practices and raise a company's market value (Yuniarti and Hanim, 2017). Earnings management has become a common term used by managers in their accounting activities and their active participation in the current economic landscape Ofoegbu *et al.* (2019). Oehmichen (2018), managers must carefully review reports to deceive investors by changing contractual outcomes that depend on the revealed accounting numbers and the organization's overall economic management. Moreover, managers manipulate earnings to put their interests ahead of the owners', which exacerbates conflicts (Al-Begali and Phua, 2023; Al-Haddad, 2019; Assad *et al.*, 2023). As such, efforts are continuously directed toward strengthening foreign ownership and creating a strong corporate governance structure to support the effectiveness of managerial control mechanisms.

Earnings management can reduce the effectiveness of corporate governance by allowing managers to manipulate profits to their advantage. Whatever the underlying reason, it is commonly known that earnings management deceives readers of financial reports and hurts the quality of earnings (Jaggi and Tsui, 2007). Despite the adoption of international accounting and auditing standards, Pornupatham (2006) argues that these measures have not been successful in ensuring that financial reports are free from earnings management, even in developed countries. The strength of the capital market and the presence of effective oversight mechanisms, such as internal corporate governance, which has recently attracted a lot of attention in many nations, are key factors that determine investor confidence (Chang, H. Sun, 2009).

There is a growing discussion in the accounting profession about how corporate governance can lessen earnings management. Strong corporate governance practices can discourage earnings management in businesses, according to studies by Katmon and Farooque (2017), Smaraidos *et al.* (2018). Bekiris, L. Doukakis (2011), highlight how corporate governance regulations may limit the manipulation of earnings, enhancing the accuracy of financial reports for companies that are traded on the Athens, Milan, and Madrid Stock Exchanges.

Seng and Findlay (2013) looked into the connection between New Zealand-listed companies' earnings management and corporate governance policies. The results show a positive relationship between the size of the board of directors and earnings management, suggesting that smaller boards may be more adept at oversight than larger ones. Moreover, Chalevas and Tzovas (2010) proposed that corporate governance mechanisms have not impacted the degree to which managers try to manipulate a company's earnings. Therefore, the available research on earnings management and corporate governance practices offers conflicting results. Conflicts of interest between stakeholders and information asymmetry between managers and shareholders may incite managers to withhold crucial information. The global financial crisis serves as evidence that this kind of activity can have negative impacts on the economy as a whole. It is imperative to put in place control mechanisms that can restrict managers' opportunistic conduct to stop such a collapse.

In developed nations, a great deal of research has been done on the relationship between corporate governance and earnings management. However, the same cannot be done in the emerging markets. Numerous investigations, including those carried out by Epps and Ismail (2009), Klein (2002), Xie *et al.* (2003) and Seng and Findlay (2013), Zoysa and Rudkin (2010), have looked into this relationship in nations with sophisticated capital markets. Because of the stark differences in political, cultural, technological, economic, and social aspects between the two markets, it is crucial to remember that the conclusions of these studies cannot be immediately applicable to developing capital markets Waweru and Riro, 2013.

In addition, emerging markets still face numerous market imperfections in comparison to developed markets. Analyzing the impact of corporate governance on earnings management in emerging capital markets is therefore crucial. Furthermore, Bayalign *et al.* (2022) conducted a study on the correlation between corporate governance and financial performance, specifically in Ethiopian insurance companies. The study examines the impact of corporate governance mechanisms such as board size, management soundness, dividend policy, debt, board remuneration, and financial disclosure on financial performance. The study

does not explore their effect on earnings management. Furthermore, Ayalew (2023) investigated the connection between Ethiopian insurance companies' earnings management and audit committee characteristics. Apart from audit committee characteristics, the study does not demonstrate how corporate governance affects earnings management, which this study aims to fill the gap. Mariano *et al.* (2023), investigated how socially conscious businesses manage profitability in relation to seasoned equity issues: Evidence from Spain, France, Germany, and Italy. The study does not provide evidence for the relationship between corporate governance and earnings management. Using data from Indonesia, this study aims to answer the question of how corporate governance influences earnings management.

Similarly, Dian *et al.* (2020) looked into firm strategy, bankruptcy risk, and earnings management. Consequently, there is a research gap in emerging markets like Ethiopia, as no previous study has investigated the relationship between corporate governance and earnings management of insurance companies. The insurance companies are chosen because more researches were conducted on banks compared to insurance companies in Ethiopia. The study is motivated by the fact that Ethiopia, being a developing country with a weak legal environment and the earnings management in insurance companies that are optimistic. Therefore, this study aims to fill this gap by examining the effect of corporate governance on the earnings management of insurance companies in Ethiopia, with the objectives of: to analyze the impact of board size on the earnings management of insurance companies in Ethiopia, to examine the influence of board independence on the earnings management of insurance companies in Ethiopia, to evaluate the effect of board gender diversity on the earnings management of insurance companies in Ethiopia, to determine the correlation between board meeting frequency and the earnings management of insurance companies in Ethiopia, to identify the relationship between audit committee financial expertise and the earnings management of insurance companies in Ethiopia and to investigate the impact of ownership concentration on the earnings management of insurance companies in Ethiopia.

Corporate governance mechanisms (board size, board independence, board meeting frequency, board gender diversity, ownership concentration and audit committee financial expertise) were used as the major explanatory variables that affect the earnings management of insurance companies in Ethiopia because these variables are vital for ensuring a company operates ethically, efficiently, and transparently by managing potential conflicts of interest between shareholders and management, mitigating risks, promoting accountability, and ultimately safeguarding the interests of all stakeholders, leading to increased investor confidence and long-term company value.

From this point forward, the current research endeavors provide the following contributions to the existing corpus of knowledge: First, the study adds to the body of knowledge already available in emerging markets by shedding new light on the relationship between earnings manipulation and corporate governance. Second, the results have implications for standard-setters, regulators, and shareholders in terms of developing suitable rules for-profit management. Thirdly, the study offers insightful guidance on how to limit managers' attitudes and discourage overt earnings manipulation. Our findings also have important ramifications for managers and regulators working to enhance governance procedures and lessen the detrimental effects of earnings management on firm devaluation. Lastly, the study helps investors assess the risk of managerial discretion and determine the best course of action for stopping such opportunistic conduct.

Theoretical literature review

Agency theory

Jensen, W., and Meckling (1976) suggested that agency theory entails a written agreement between a principal and an agent, with the agent having the authority to run the business on the principal's behalf. According to this theory, the company's owner assigned management duties to a representative who was more knowledgeable and experienced in running successful business operations (Sutedi, 2011). There is a conflict of interest because the principal and the agent have different interests. While management wants to improve their well-being, investors want to maximize returns on their capital. Agency issues involving bonding expenses, residual losses, and monitoring arise from this conflict of interest Aulia *et al.* (2017). Agency theory has been applied in a number of studies to explain the relationship between earnings management and corporate governance. According to research by Tjaraka *et al.* (2022), male CEOs are more likely than female CEOs to display tendencies toward earnings management. Consequently, in order to supervise CEOs and prevent the overstatement of a company's performance, it is imperative to implement an effective corporate governance framework. Managers and executives naturally work toward the organization's goals when they act in a way that balances their own motivations, goal achievement, and self-fulfillment with those of the organization (Schillemans, K. and Bjurstrøm, 2020). Agency theory states that non-executive directors should oversee managers' performance on the board of directors. The board should be set up to ensure independent directors' decision-making by preventing conflicts of interest. Malik and Makhdoom (2016) discovered that an independent board of directors significantly influences a company's performance.

To maximize shareholder wealth, corporate governance's main goal is to solve the agency problem and reduce agency

costs. Shleifer and Vishny (1997). Previous research has shown that companies with effective corporate governance practices tend to perform better (Duchin *et al.*, 2010; Larcker and Richardson, 2007), have higher stock liquidity Ali *et al.* (2017), and face a lower risk of default (Bhojraj and Sengupta, 2003). In particular, strong corporate governance contributes to less information asymmetry among outsiders and between insiders (managers, for example) and investors (investors), improving the transparency of business information (Leuz, 2003). Since managers possess private information and firm-specific expertise across various aspects of a company's operations, significant moral hazard issues can arise due to the information asymmetry between insiders and outsiders. Badolato (2014), R. Davidson *et al.*, (2005), and Klein (2002) have produced a wealth of evidence demonstrating the benefits of internal governance structures, including audit committees and board of directors features, in lowering agency costs and information asymmetries and, thus, lowering the possibility of manipulating earnings.

Resource dependency theory

The idea holds that a company's board of directors is essential in providing managers with resources, which they then utilize to achieve organizational goals (Hillman and Dalziel, 2003). According to the theory, the board ought to assist with finance, intangible assets, human resources, and executives. Board members with experience and professionalism can provide training and mentoring to executives to help them improve their performance and skills. Additionally, by using their connections, board members can grant the organization access to vital resources. The theory states that the CEO should make most decisions made by the company, though some may need board approval. In the banking industry, stakeholder theory emphasizes the importance of satisfying depositors, owners, and other relevant stakeholders through an effective governance structure that promotes trust and transparency W. Vicente *et al.* (2020).

The resource-based perspective, therefore, encourages the incorporation of experts on a company's board of directors, highlighting the significance of external directors who can bring valuable insights and connections from other organizations. The theory also supports the idea of a larger board of directors to accommodate a diverse group of directors with in-depth expertise and experience. It is recommended by Ghazali (2010), Ujunwa (2012), Francis *et al.* (2015), and Mori (2014) that a company's boards of directors include non-executive directors and specialists with a wide range of expertise and abilities in order to reduce earnings management.

Empirical Literature Review and Hypotheses Development

Board size and earnings management

There is ongoing debate regarding corporate board size and its impact on earnings management strategies (Al-Haddad, 2019; Gulzar, 2011). According to conventional agency theory, managers in companies with larger boards may find it challenging to be effective due to potential issues with coordination and communication within these boards (Jensen, 1993). As the size of the board increases, it is expected that the level of discretionary accruals will decrease and the quality of financial reporting will improve Muda, 2018). In such cases, board members bring added value to their companies by sharing their diverse experiences, which can reduce the extent of earnings management and facilitate effective communication and timely strategic decision-making (Al-Haddad, 2019). Ahmed *et al.* (2023) investigated how non-financial companies listed on the Nigerian stock exchange were affected by corporate governance. The findings demonstrated that the size of the board has a major and adverse effect on the current discretionary accruals. Some studies suggest that larger boards may be less effective than smaller boards at doing oversight functions Alareeni, 2018; and Wali and Masmoudi, 2020). On the other hand, a larger board might be able to lessen the use of earnings management [Huynh (2020), Diri and Costas (2020). Additionally, Thu *et al.* (2023) investigate how, between 2016 and 2020, foreign ownership and the corporate governance index affected the management of earnings in 169 publicly traded Vietnamese companies. The corporate governance index was found to be detrimental to earnings management. Based on the aforementioned theoretical and empirical arguments, this study formulated the following hypothesis:

H1: Board size has a positive and significant effect on the earnings management of insurance companies in Ethiopia.

Board independence and earnings management

Board independence refers to the number of directors on the board who are independent (Aslam *et al.*, 2020). Agency theory states that boards with more independent directors are more likely to prioritize and monitor higher-quality earnings. A previous study has shown that the interaction between independent non-executive directors and earnings management can lead to conflicts Saona *et al.* (2020). According to Costa (2017), the alliance between the board of directors and the corporate governance structure may be weakened, which could lead to a scarcity of non-executive directors on the board. However, there have been mixed findings in several studies, Saona *et al.*, (2020), Wasan, and Mulchandani (2020) and some studies suggest that board independence is less likely to involve

financial statement manipulation, Luthan and Satria (2016), Uwuigbe *et al.* (2015). On the contrary, several prior studies have found a negative association between board independence and earnings management (Chen *et al.*, 2015; Chi *et al.*, 2015; Fuzi *et al.*, 2016). Moreover, Naz *et al.* (2023) explore the relationship between accruals and real earnings management as well as internal corporate governance mechanisms. According to the study, accruals earnings management was significantly and negatively impacted by board independence. On the other hand, Farzaneh *et al.* (2023) looked at the relationship between audit committee features and earnings management and came to the conclusion that audit committee independence has no bearing on earnings management. Considering the earlier research and empirical data, it can be inferred that a higher proportion of independent directors on governance boards enhances the credibility of financial reports and ensures the quality of earnings. Based on the aforementioned theoretical and empirical discussions, this study proposes the following hypothesis:

H2: Board independence has a positive and significant effect on the earnings management of insurance companies in Ethiopia.

Board meeting frequency and earnings management

The amount of board activity can be determined by looking at the frequency of meetings, which is often considered a sign of the directors' commitment. It is crucial to recognize that there are international differences in corporate governance laws, rules, policies, and standards that are enforced, which can result in differences in board meetings and profit-sharing arrangements (Chakib and Rihab, 2017; Farooq, AbdelBari, 2015; and Aslam *et al.*, 2020). Directors can actively participate in problem-solving and increase the effectiveness of the board by holding regular board meetings (Nuryana and Surjandari, 2019). Additionally, board meetings lower the risk of accounting fraud and encourage effective control monitoring (Obigbemi *et al.*, 2016; and MuktaDir, T. Keyamoni, 2019). In addition, a study conducted by Ofoegbu *et al.* (2019) concluded that the frequency of board meetings plays a crucial role in enhancing the quality of a firm's earnings. Board meetings and earnings management have been found to be strongly and favorably associated with Muda *et al.* (2018) and Obigbemi *et al.* (2016). However, a study by MuktaDir and Keyamoni (2019) shows that board meetings have no discernible impact on managing earnings. Nonetheless, the overwhelming body of research lends credence to the notion that board meetings improve the accuracy and consistency of financial reporting while also serving to mitigate earnings management efforts (Ofoegbu *et al.*, 2019; Gulzar, 2011). Based on these discussions, this study has formulated the following hypothesis:

H3: Board meeting frequency has positive and significant effects on the earnings management of insurance companies in Ethiopia.

Board gender diversity and earnings management

In recent times, gender diversity within the governance structure has garnered significant attention. According to predictions from agency theory, having a diverse board in terms of gender can enhance the monitoring of managers and potentially lead to better detection of earnings management. In the realm of business management, it is commonly observed that women tend to be less inclined towards taking risks, particularly in financial decision-making. Additionally, they are less prone to act unethically to further their interests (Powell and Ansic, 1997). Scholars have contended that gender disparities, moral principles, and female motivations significantly impact the caliber of corporate governance and financial reporting. Several scholarly investigations have examined the correlation between the composition of a board and earnings management, consistently demonstrating that firms with a greater proportion of female board members engage in less earnings manipulation Alqatan (2019), Debnath and Roy (2019), Kyaw *et al.* (2015), Mnif and Cherif, (2020) and Triki (2011). Conversely, there is a negative correlation between earnings management and corporate governance (Keung, 2013; Allan *et al.*, 2018). Another study revealed that the presence of female board members has an impact on earnings management strategies (Sial *et al.*, 2019; and Su *et al.*, 2011). Drawing upon the aforementioned theories and empirical studies, this study formulates the following hypothesis:

H4: Board gender diversity has a positive and significant effect on the earnings management of insurance companies in Ethiopia.

Ownership concentrations and earnings management

From a different perspective, the ownership of shares by directors may undermine their independence and effectiveness in overseeing financial reporting Lin and Hwang, 2010). Additionally, it has been discovered that the shareholdings of directors are linked to a reduction in increases in information asymmetry, which can reduce agency costs and enhance the defense against earnings manipulation (Kanagaretnam *et al.*, 2007) and Beatty and Harris (1999). According to Nues (2018), the ownership of shares by long-term directors contributes to the growth of the shareholders' and board members' common financial interests. With a majority shareholding in the company and a longer-term perspective on ownership, an investor is motivated to prioritize the company's strategic growth. Nues (2018), emphasizes how a short-term ownership viewpoint could be detrimental to the company's and its shareholders' best interests. Previous studies on share ownership by directors and earnings manipulation have yielded inconsistent findings. Peasnell *et al.* (2005) discovered a small but positive correlation between directors' share ownership and profit manipulation. Lin and Hwang (2010)

found no evidence of a significant correlation between ownership concentration and earnings management in their meta-analysis. Based on theoretical predictions and existing empirical literature, this study formulates the following hypotheses:

H5: Ownership concentration has a positive and significant effect on the earnings management of insurance companies in Ethiopia.

Audit committee financial experts and earnings management

The resource dependency theory states that organizations' actions are influenced by external resources (Pfeffer and Salancik, 1978). Therefore, using these outside resources is very beneficial for the strategic management of businesses. Audit committees are coveted as unbiased, outside resources because they are the primary tool for improving financial reporting quality and fortifying corporate governance (Saleh *et al.*, 2007; DeFond and Zhang, 2014). As a result, audit committees have been advocated for by regulatory bodies around the globe. The primary factor that dictates the efficacy of audit committees is their proficiency in finance. Due to the attention this issue has received from standards organizations, academics and accountants have begun to empirically study the impact of audit committee financial knowledge on earnings management. The findings, however, are conflicting; while some studies indicate a negative impact, others find no conclusive proof of a meaningful association (Ben Amar, 2014) and Zalata *et al.* (2018). These conflicting results highlight the need for more investigation into how audit committee financial knowledge affects earnings management (Carcello *et al.*, 2006; Ben

Amar, 2014). Building upon the arguments presented by resource dependency theory and empirical studies, this study has developed the following hypothesis:

H6: Audit committee financial expertise has a significant and positive effect on the earnings management of insurance companies in Ethiopia.

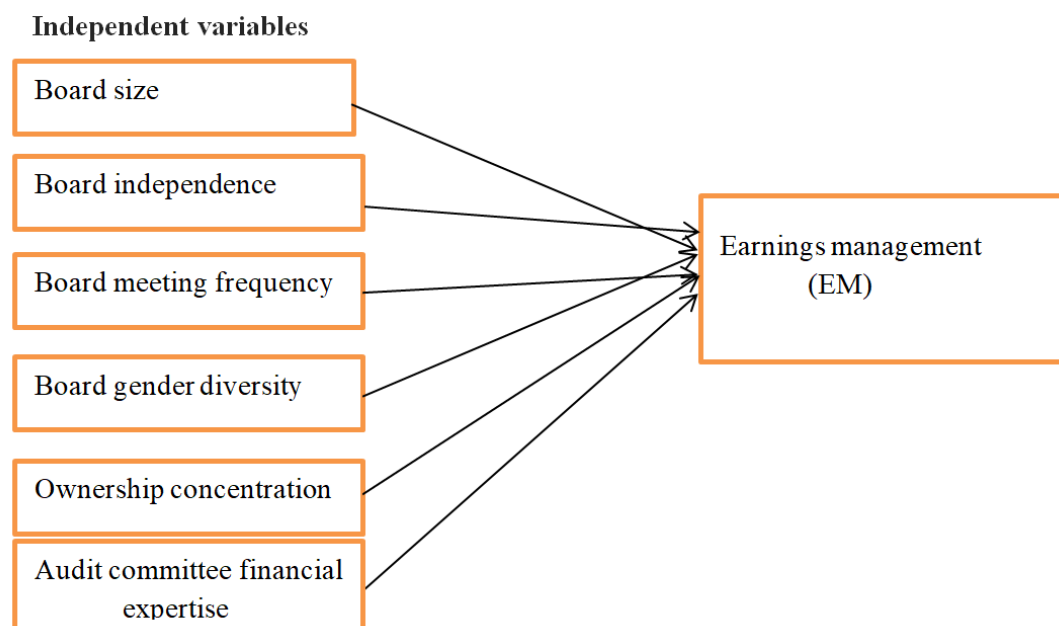
Conceptual framework

Figure 1 below shows the relationship between the study's dependent and independent variables. Earnings management is the dependent variable, and discretionary accruals assess it. Board size, board independence, board meeting frequency, board gender diversity, ownership concentration and audit committee expertise are used as the explanatory variables, which are adopted from previous studies.

Materials and Methods

This research aimed to investigate the impact of corporate governance on the earnings management of insurance companies in Ethiopia. In keeping with the research goal and the quantitative nature of the data, this study employed a quantitative technique to ascertain the effect of corporate governance on the earnings management of insurance businesses. This study employed an explanatory research design to examine the causal relationships between corporate governance and earnings management.

The population is made up of all insurance companies that operated in Ethiopia between 2015 and 2022. Of the eighteen insurance companies in total, seventeen were selected for this investigation. These are Africa Insurance



Source: Adopted from previous empirical studies, 2025

Figure 1: Conceptual framework

Company, Awash Insurance Company, Global Insurance Company, Lion Insurance Company, Nib Insurance Company, Nile Insurance Company, Nyala Insurance Company, Abay Insurance Company, Berhan Insurance Company, National Insurance Company, Oromia Insurance Company, Ethio-Life and General Insurance Company, Tsehay Insurance Company, Lucy Insurance Company, Bunna Insurance Company, United Insurance Company, and Ethiopian Insurance Company, representing 94 percent of the total population. Zemen Insurance Company was founded in 2020, but the analysis does not include it because of insufficient data. The data was taken from seventeen Al-Haddad and Whittinton (2019) insurance companies' annual audit reports. An overview of the selection process is given in Table 1.

Model Specifications and Measurements of Variables

Model specifications

To investigate the intricate relationship between corporate governance and earnings management in Ethiopian insurance companies, this study used a generalized moments (GMM) model. The GMM model is a panel data estimator that uses lagged values of the dependent variable to reduce the endogenous bias associated with static estimate methods. To address the biased and inconsistent results of static estimating methods, Arellano and Bond (1991) proposed the GMM difference estimator. Nevertheless, simulation research has demonstrated that in short or continuous sequences, the GMM difference estimator performs worse and yields instruments of lower quality (Levräu and Van den Berghe, 2007). To overcome the original difference estimator's drawbacks, the GMM system was created. In the GMM technique, lags in the dependent variable serve as instruments for the level equation, while lags in the level conditions serve as instruments for the differentiated equation (Blundell and Bond, 1998). Because it uses multiple procedures, the GMM system is relatively more robust and reliable. As a result, applying it quickly over a large panel improves its accuracy.

The present study utilized the two-step GMM framework to evaluate the impact of corporate governance on earnings management within insurance companies in Ethiopia because the two-step GMM model estimator has proven to be more reliable and effective in handling autocorrelation and heteroscedasticity, as stated by Arellano and Bover (1995). Moreover, GMM provides a computationally convenient method of obtaining consistent and asymptotically normally distributed estimators of the parameters of statistical

models. To validate the results obtained through GMM estimation, diagnostic tests such as the Arellano and Bond tests for second-order serial correlation and the Hansen test for over-identifying restrictions were employed. These tests assume the null hypothesis that the moment conditions hold true. The homogeneity of the subsets of GMM instruments was assessed using Hansen statistics. The inability to reject these null hypotheses indicates the reliability of the GMM estimates. Consequently, the partial adaptation model proposed by Ozkan (2001) was modified to incorporate the key findings of this study. Modified Jones is used to improve the measurement of discretionary accruals and test whether managers managed earnings to shape accounting numbers to obtain benefits from important relief regulation. The modified model is presented as follows under equation 1 and 2 respectively:

$$Y_{it} = (\lambda - 1) - 1 + \beta X_{it} + \mu_i + \mu_t + \varepsilon_{it} \text{ ----- } 1$$

$$EM_{i,t} = (\lambda - 1) - 1 + \beta_1 BS_{i,t} + \beta_2 BI_{i,t} + \beta_3 BMF_{i,t} + \beta_4 BGD_{i,t} + \beta_5 OC_{i,t} + \beta_6 ACFE_{i,t} + \varepsilon_{it} \text{ ----- } 2$$

Where:

$EM_{i,t}$ is the earnings management of insurance company i at time t , BS is the board size of the insurance company i at time t , BI is the board independence of insurance company i at time t , BMF is the board meeting frequency of insurance company i at time t , BGD is the board gender diversity of insurance company i at time t , OC is the ownership concentration of insurance company i at time t , $ACFE$ is the audit committee financial expertise of insurance company i at time t and ε is the error term.

Variables constriction

Earnings management was the dependent variable in the study, and the independent factors were ownership concentration, audit committee financial expertise, board size, independence, frequency of meetings, and gender diversity. Table 2 provides a summary of the study variables.

Dependent Variable

Earnings management

Earnings management is the practice of using tricks to misrepresent or reduce the transparency of the financial reports. Moreover, Earnings management is choosing an accounting treatment that is either opportunistic (maximizing the utility of management only) or economically efficient. There are two approaches that are frequently used to define earnings management: the method based on balance sheets, Healy (1985) and Jones (1991) and the method based on cash flow, Vinten *et al.* (2005). In this study, the balance sheet-based approach was utilized due to its ability to treat accruals as investments for future periods. By

Table 1: Study sample

Total number of insurance companies	18
Number of insurance companies with missing data	1
Final study sample	17

Source: National Bank of Ethiopia 2024

leveraging the information obtained from the balance sheet, the estimated accruals serve as better indicators of growth. These accruals include both the inorganic growth brought about by mergers and acquisitions, as well as the organic growth in working capital shown in the cash flow statement (Zhang, 2007). Accrual accounting is an accounting method where revenue or expenses are recorded when a transaction occurs. Accruals refer to the recording of revenues a company has earned but has yet to receive payment for and expenses that have been incurred but the company has yet to pay. This method also aligns with the matching principle, which says revenues should be recognized when earned and expenses should be matched at the same time as the recognition of revenue.

Researchers use total accrual earnings (TA) data to evaluate the management of earnings. Non-discretionary accruals (NDA) and accrual accounting variables are the two parts of TA. NDAs are outside of management's control and reflect the unique business circumstances of each unit. On the other hand, discretionary accruals (DA) can be adjusted by managers through the implementation of specific accounting policies to manipulate earnings. To calculate these values, the study employs the Jones (1995); model, following a series of steps in equations 1, 2, 3 and 4 respectively.

- Determine the total accrual value, which is the difference between net income and operating cash flow:

$$TA_{it} = NI_{it} - CFO_{it} \text{ ----- (1)}$$

Where:

TACit = Total accruals of the company i at time t

NIit = Net income company i at time t

CFOit = cash flow from operation activity of company i at period t

- Calculate the estimated accruals value using a regression equation.

$$\frac{TCA_{it}}{TA_{it-1}} = \beta \left(\frac{1}{TA_{it-1}} \right) + \beta_1 \left(\frac{\Delta REV}{TA_{it-1}} \right) + \beta_2 \left(\frac{PPE_{it}}{TA_{it-1}} \right) + \varepsilon_{it} \text{ ---- (2)}$$

Where:

TCAit = total company accrual i at year t;

TAit-1 = total assets for company i for year t – 1;

ΔREVit = change in net revenues for sample company i at year t;

PPEit = fixed assets (gross property, plant, and equipment) of the company at period t.

- Calculate non-discretionary accruals (NDA) as follows:

$$NDA_{it} = \frac{TCA_{it}}{TA_{it-1}} = \beta_0 \left(\frac{1}{TA_{it-1}} \right) + \beta_1 \left(\frac{\Delta REV - \Delta REC_{it}}{TA_{it-1}} \right) + \beta_2 \left(\frac{PPE_{it}}{TA_{it-1}} \right) + \varepsilon_{it} \text{ --- (3)}$$

Where:

NDAit = non-discretionary accrual at year t;

ΔRevit = change in net revenues for sample company i at year t;

ΔRecit = change in net receivables for sample company i at year t;

PPEit = fixed assets (gross property, plant, and equipment) of the company at period t;

TAit-1 = total assets for sample company i at year t – 1;

β = the fitted coefficient obtained from the regression results in the calculation of total accruals.

- Calculate discretionary accruals (DA) as a proxy for earnings management as follows:

$$DA_{it} = \frac{TCA_{it}}{TA_{it-1}} - NDA_{it} \text{ ----- (4)}$$

Where:

DAit = discretionary accruals of insurances i at year t

TCAit = total company accrual i at year t

TAit-1 = total assets for company i for year t – 1

NDAit = non-discretionary accrual of insurance company i at year t

Independent Variables

Board size

A board's size is determined by the total number of directors on it (Panasian *et al.*, 2003; Ntim *et al.*, 2015; Levrau *et al.*, 2006). The optimal number of executive and non-executive directors for the board should be appointed, Goshi *et al.* (2002). The board needs an efficient organizational structure to run the business. Because each nation has its own culture, it has been noted that board sizes vary among them. This indicates that there is no ideal or typical board size for businesses worldwide. A good indicator of the size of the board is the total number of directors within the governance body Adeolu and Oseko, 2016).

Board independence

A board's independence is measured by its proportion of independent, non-executive directors to total directors (Prabowo and Simpson, 2011). The degree of independent directors or non-executive directors on the board can also be used to characterize it, Shamsul and Nasir (2004). A minimum of two independent directors, or one-third of the total number of board members, is required for businesses to maintain a balanced board of directors. As the number of independent directors increases, John and Senbet (1998), the board of directors becomes increasingly independent. The percentage of independent directors is a typical metric used to evaluate board independence Iraya *et al.* (2015).

Board meeting frequency

The board of directors' characteristics can be measured by the number of meetings they hold. Numerous studies have emphasized the significance of board meetings in overseeing management and ensuring the quality of accounting information. However, empirical studies conducted in both

developed and developing countries have produced mixed results regarding the correlation between board meetings and the quality of financial reporting. There is no consensus on the exact number of meetings required. Xie *et al.* (2003), González and Garcia (2014), highlighted the importance of board activity in enhancing monitoring functions and reducing discretionary accruals. On the other hand, Kharashgah (2019) found a significant negative relationship between board meetings and real earnings management in Jordan. Similarly, Jamel *et al.* (2018) reported a negative association between board meetings and real earnings management in the Tunisian context, thereby ensuring the reliability of financial information provided to stakeholders. In some cases, the number of meetings held by board committees per year can serve as a proxy for the frequency of board meetings Hong *et al.* (2016).

Board gender diversity

Diverse gender representation on boards is very beneficial to companies. The contributions, skills, and expertise of female directors can positively impact management operations (Ferreira, 2010; and Amy *et al.*, 2007). Because of these attributes, female directors can provide new and insightful viewpoints to board meetings, which helps to break the cycle of collective thinking [Anderson *et al.* (2010) and Belaounia *et al.* (2020)]. Thus, female directors contribute to the effectiveness of the board. Moreover, there is a lower probability of errors, non-compliance, or information omission (Pucheta *et al.* (2016), because female directors are less likely to falsify financial records for their gain Srinidhi *et al.* (2011) and Zalata *et al.* (2018). They are also less associated with fraudulent financial reporting (Capezio and Mavisakalyan, 2016), Kaplan *et al.* (2009) and Sun *et al.* (2017) and financial restatements Abbott *et al.* (2012). Additionally, they contribute to increased voluntary disclosures in annual reports (Nalikka, 2009) and a reduction in earnings management (Arun *et al.*, 2015; Belaounia *et al.*, 2020; Gavius *et al.*, 2012; and Orazalin, 2020). The percentage of women on the board of directors serves as a proxy for board gender diversity Mnif and Cherif, 2020; and Kyaw, 2015).

Ownership concentration

Ownership concentration, defined as the proportion of shares held by a single individual or entity, can significantly impact corporate governance structures and decision-making processes (Alhababsah, 2019). The paradigm of agency theory states that ownership concentration creates a distinct dynamic in principal-agent relationships (Barroso and Cédric, 2018). In the overall system of corporate governance, researchers often focus on the component of ownership concentration. The concept of ownership concentration is a crucial aspect of the broader concept of corporate governance. Jensen *et al.* (1976) utilize the term

“ownership concentration” to describe the distribution of capital among members within the company (the direct management component) and external investors who do not hold direct management roles.

Audit committee financial expertise

The investigation of board members' financial backgrounds is a topic of great interest to regulators. According to Beekes *et al.* (2014), directors should possess sufficient monitoring incentives and a comprehensive understanding of the consequences of financial reporting decisions to effectively fulfill their role as a monitoring mechanism. It can be argued that directors who possess the necessary financial background are better equipped to comprehend the intricacies of financial reporting, raise pertinent questions that challenge managers, grasp auditors' judgments', and provide support in auditor-management disputes DeZoort and Salterio (2018), Kalbers and Fogarty (1993), Levitt (2000), Mangena and Pike (2005) and Zhang (2007). Since the financial reporting process falls under the purview of the audit committee's financial expertise (ACFE), board members serving on the AC must be equipped with the necessary knowledge, abilities, and training to carry out their responsibilities and evaluate the plausibility of CEO explanations. Meah *et al.* (2021) suggest that the percentage of audit committee members with accounting knowledge can serve as an indicator of the audit committee's financial expertise.

Result and Discussions

Descriptive statistics

Table 3 presents the statistical data for various variables related to insurance companies in Ethiopia. The mean value of earnings management (EM) is 2.429758, with a range of 0.2279321 to 4.031067. The deviation from the mean for earnings management is 0.9326071. The average board size (BS) is 2.219662, ranging from 2.079442 to 2.70805. The deviation from the mean for board size is 0.0792209. Board independence (BI) ranges from 0.22 to 1, with an average value of 0.9655882. For board independence, the variation from the mean is 0.1607702. The mean value of board meeting frequency (BMF) is 2.019908, ranging from 1.386294 to 2.564949. The deviation from the mean for board meeting frequency is 0.3377121. The mean value of board gender diversity (BGD) is 0.1567647, with a range of 0 to 0.44. The deviation from the mean for board gender diversity is 0.0970062. During the study period, it was observed that insurance companies in Ethiopia have a minimum board gender diversity value of zero (0), which indicates the absence of female members on the board. The average ownership concentration (OC) is 1.772059, ranging from 1 to 3. The deviation from the mean for ownership concentration is 0.8161963. Finally, the audit committee's

Table 2: Variables and their measurement

<i>Variables</i>	<i>Symbol</i>	<i>Measurement</i>
Dependent variable		
Earnings management	EM	Discretionary Accruals (DA) measured by the modified Jones model. $EM = \frac{\text{Total company accutal}}{\text{Total asset at } t-1}$ that is supported with H. Etemadi, H. Moghadam (2014 and N. Katmon, O. Farooque (2017). Then Lan transformation is made.
Independent variables		
Board size	BS	Lan to total number of directors inside the governance body.
Board independence	BI	Percentage of independent directors $ACI = \frac{\text{Independent director}}{\text{Total number of board members}}$ that is supported with A. Marra, P. Mazzola, A. Prencipe (2011), A. Latif, F. Abdullah and C. Iraya, M. Mwangi, G. Muchoki (2015).
Board meeting frequency	BMF	Lan to number of meetings of boards committees per year.
Board gender diversity	BGD	Percentage of women on the board of directors $BGD = \frac{\text{Number of female in the board committee}}{\text{Total number of board members}}$ that is supported with Y. Mnif, I. Cherif (2020) K. Kyaw, M. Olugbode, B. Petracchi (2015) and A. Alqatan (2019).
Ownership concentration	OC	1 if the boards have no ownership, 2 if boards have minority ownership, 3 if boards have majority ownership that is supported with N. Waweru, G. Riro (2013), M. Adeolu, S. Oseko (2016 and R. Belhadj, A. Omrane, B. Regaieg (2016.
Audit committee financial expertise	ACFE	$ACE = \frac{\text{Number of financial expert}}{\text{Total number of audit committees in the board member}}$ that is supported with L. Man, R. Yang (2014), V. Sharma, C. Kuang (2014) and I. Lubis, D. Adhariani (2019).

Source: Adopted from previous related empirical studies

expertise ranges from 0.012 to 0.3985, with a mean value of 0.2101. The skill of the audit committee deviates from the mean by 0.0803.

Correlation matrix

A value of 0.0236 in Table 4 shows a strong correlation between board size and earnings management. Additionally, there is a positive correlation ($p = 0.1737$) between earnings management and the financial expertise of audit committees in Ethiopian insurance businesses. Conversely, board independence, board meeting frequency, board gender diversity, and ownership concentration in Ethiopian insurance companies exhibit negative correlations with earnings management, with coefficients of -0.1963, -0.2020, 0.2572, and -0.1077, respectively.

Regression analysis

Table 5, presented illustrates the correlation between corporate governance and earnings management within insurance companies in Ethiopia. The adjusted R^2 value revealed that the variables in the model account for 52.365% of the overall variability in earnings management. The results indicate that the GMM diagnostic tests meet the fundamental requirements. The Hansen statistics' P-value validates the correctness of the GMM results; nevertheless, the P-value of the AR^2 test shows that there is no proof of second-order serial correlation. The Wald statistics emphasize the significance of the explanatory factors, while the Hansen test discrepancy verifies the consistency of the instrument subsets in predicting the dependent variable.

Table 3: Descriptive statistics

<i>Variables</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
EM	136	2.429758	0.9326071	0.2279321	4.031067
BS	136	2.219662	0.0792209	2.079442	2.70805
BI	136	0.9655882	0.1607702	0.22	1
BMF	136	2.019908	0.3377121	1.386294	2.564949
BGD	136	0.1567647	0.0970062	0	0.44
OC	136	1.772059	.8161963	1	3
ACFE	136	0.3497794	0.1222715	0.11	0.55

Source: Results from STATA 14

Table 4: Correlation matrix

	<i>EM</i>	<i>BS</i>	<i>BI</i>	<i>BMF</i>	<i>BGD</i>	<i>OC</i>	<i>ACFE</i>
EM	1.0000						
BS	0.0236	1.0000					
BI	-0.1963	0.0179	1.0000				
BMF	-0.2020	0.0015	0.2801	1.0000			
BGD	-0.2572	0.1655	0.1855	0.1556	1.0000		
OC	-0.1077	0.0252	0.2040	0.2173	-0.0028	1.0000	
ACFE	0.1737	-0.1700	0.2406	-0.1498	0.1103	-0.0970	1.0000

Source: Result from STATA 14

Additionally, at a 5% level of significance, the lagged EM (EMit-1) proves to be significant in favor of the GMM estimations of the coefficients.

The findings indicate that the size of the board (BS) has a significant and positive impact on the earnings management of insurance companies in Ethiopia, with a coefficient of 0.336554 at a 5% significance level. This implies that, while keeping other explanatory variables constant, a 1% increase in the board size of insurance companies results in a 33.6554% increase in earnings management of insurance companies in Ethiopia. The significant and positive effect of board size on the earnings management of insurance companies in Ethiopia indicates that board size increases the earnings management by 33.6554%. The positive relationship between board size and earnings management can be attributed to the higher costs associated with decision-making, as highlighted by Jensen (1993). Additionally, this relationship may be influenced by the presence of conflicts of interest among board members, as explained by [Etemadi and Moghadam (2014) and Rahman *et al.* (2006)]. Consequently, smaller boards are likely to have fewer conflicts of interest and therefore be more effective

in their monitoring role, aligning with agency theory. This study's findings contradict those published by [Chouaibi *et al.* (2015) 157, Triki (2018)], which maintain that bigger boards can better halt profit management strategies than smaller boards. As a result, the study accepts the alternative hypothesis and rejects the null hypothesis.

The research discovered that board independence (BI) has a significant and negative effect on the earnings management of insurance companies in Ethiopia, with a coefficient of 0.7115 at a 5% significance level. This indicates that a 1% increase in board independence results in a 7.115% decrease in the earnings management of insurance companies in Ethiopia. This result suggests an adverse relationship between earnings management and board independence. The negative relationship between board independence and earnings management indicates that the earnings management of insurance companies decreased by 7.115% as boards is independent in Ethiopia. This finding align with the conclusions drawn by Peasnell *et al.* (2005) and Ali *et al.* (2009)] as well as agency theory, which argues that the establishment of a board capable of effectively monitoring management actions relies on its

Table 5: The two-step system GMM estimation results

<i>EM</i>	<i>Coef.</i>	<i>Std. Err.</i>	<i>Z</i>	<i>P> z </i>	<i>[95% Conf. Interval]</i>	
Emit-1	0.542	0.236541	1.32	0.025**	0.1265321	6.54561
BS	0.336554	.8716112	1.53	0.0125**	-.3717725	3.044881
BI	-0.7115	7.176038	2.19	0.029**	1.646719	29.77627
BMF	-0.8044	.6897466	2.62	0.009***	.4525655	3.156322
BGD	-0.27611	9.232604	2.85	0.004***	8.180536	44.37168
OC	-0.316201	3.626636	-1.19	0.0234**	-11.42428	2.791875
ACFE	0.48532	16.64005	0.48	0.0629*	-24.56537	40.66243
cons	-24.49828	14.36362	-1.71	0.088	-52.65045	3.653897
Wald stat	11.325					
AdjR ²	52.365					
AR ² (p-value)	0.019					

Source: Result from STATA 14

***, **, * indicates significant at 1, 5 and 10% significance level, respectively.

independence. Consequently, there is a greater chance that an independent board with a significant proportion of non-executive directors dedicated to overseeing management's conduct and performance will be vigilant in identifying agency problems. Because of this, the impartial board can identify and address trends and behaviors related to profit management. The results of this investigation, however, ran counter to those of Chatterjee (2019), who contend that the existence of independent directors has little influence on earnings management. As a result, the study rejects the null hypothesis and accepts the alternative hypothesis.

The earnings management of insurance companies in Ethiopia is significantly and negatively affected by the frequency of board meetings, with a coefficient of 0.8044 and a 1% significance level. This means a 1% increase in board meeting frequency results in an 80.44% decrease in the earnings management of insurance companies in Ethiopia. The association between the frequency of board meetings and earnings management is negative, indicating that a higher frequency of board meetings results in greater participation in problem resolution, enhanced board effectiveness, less likelihood of accounting fraud, and simpler implementation of control oversight. Moreover, the negative and significant relationship between board meeting frequency and earnings management indicates that as board meeting frequency increase earnings management of insurance companies become decreased in Ethiopia by 80.44%. These findings align with previous studies conducted by Chakib, G. Rihab (2017), Farooq, A. AbdelBari (2017) Aslam *et al.* (2020) Nuryana, D. Surjandari (2019). Furthermore, the inverse link suggests that the frequency of board meetings improves the quality of the company's earnings concerning earnings projections and stability, which aligns with the results of Ofoegbu *et al.* (2019). However, the results of this study contradict the findings of Muda *et al.* (2018) and Obigbemi *et al.* (2016). Based on the findings the study rejects the alternative hypothesis and accepts the null hypothesis.

The research found that the presence of a diverse gender composition on boards has a significant and negative impact on the manipulation of earnings by insurance companies in Ethiopia at a 1% level of significance and with a coefficient of 0.27611. This means that a 1% increase in board gender diversity leads to a 27.611% decrease in earnings management of insurance companies in Ethiopia. This unfavorable link results from boards with a higher proportion of female members typically adopting more cautious accounting procedures. Moreover, the presence of female directors on the board is linked to less earnings management, suggesting that gender diversity inhibits management manipulation of reported results and helps lessen information asymmetry. Similarly, the presence of females on the board reduces the earnings management of

insurance companies in Ethiopia by 27.611%. The findings of this study align with previous studies conducted by García *et al.* (2019), Harakeh *et al.* (2019) Triki (2018). The study's findings corroborate the resource dependency theory, which contends that because directors have a variety of viewpoints, gender disparities in areas like ethical sensitivity improve the quality of information the board provides to CEOs. However, the findings of this study contradicted the results of Waweru and Prot *et al.* (2018). Based on the findings, the study rejects the alternative hypothesis and accepts the null hypothesis.

The research discovered that there is a significant and negative correlation between ownership concentration and earnings management in Ethiopian insurance companies. This correlation is statistically significant at a 5% level, with a coefficient of 0.316201. This means that when all other explanatory variables are held constant, a 1% increase in ownership concentration leads to a 31.6201% decrease in earnings management of insurance companies in Ethiopia. This negative and significant relationship suggests that ownership concentration improves the performance of insurance companies, enhances the effectiveness of the board, and reduces earnings management practices by 31.6201%. The findings of this study are consistent with a previous study conducted by Liu (2012). Additionally, the result is aligned with the agency theory, which posits that boards with no ownership stake are more likely to engage in earnings management. However, the finding of this study is contradicted by the result of Peasnell *et al.* (2005), who found a positive relationship. Based on the findings, the study rejects the alternative hypothesis and accepts the null hypothesis.

Finally, the study found that audit committee financial expertise (ACFE) has a significant and positive impact on the earnings management of insurance companies in Ethiopia at a 10% significance level and with a coefficient of 0.48532. This implies that a 1% increase in audit committee financial expertise results in a 48.532% increase in the earnings management of insurance companies in Ethiopia. The positive relationship between audit committee financial expertise and earnings management indicates that the existence of a financial expert on the audit committee with a clear know-how to manipulate earnings. Moreover, the positive and significant relationship between audit committee financial expertise and earnings management indicates that more audit committee financial expertise on the board increases the earnings management of insurance companies in Ethiopia by 48.532%. This theory is backed by A. Ayalew (2024). The result of this study contradicts the results of [Helal Udd (2024), Fidyah Aff Sagita and Menik Indrati (2024), Chi-keung (2024), Syed Farhan Shah *et al.* (2024). The resource dependency theory claims that audit committees' financial knowledge is sought as an external,

independent resource to improve corporate governance and the caliber of financial reporting; our conclusion runs counter to that notion. As a result, the study accepts the alternative hypothesis and rejects the null hypothesis.

Test of statistical assumptions

Multicollinearity

The regression analysis's independent variables' tolerance and variance inflation factor (VIF) are shown in Table 6. To find out if there is a considerable amount of multicollinearity between the independent variables, the VIF statistics are computed for each one. A VIF greater than 10 is deemed to indicate the presence of multicollinearity. Additionally, the tolerance (1/VIF) is used to assess multicollinearity, with values below 0.1 indicating its presence. According to the data in Table 6, all VIF values are below 10, indicating no multicollinearity. Furthermore, there are no tolerance values below 0.1. Therefore, our investigation is not hindered by multicollinearity.

Normality test

Table 7 demonstrates the conformity of the data to the standard distribution assumption, as evidenced by the probability values of 0.211 in the Shapiro-Wilk W test statistics. Furthermore, it implies that inferences made about population parameters using sample parameters appear to be reliable.

Heteroscedasticity and autocorrelation

In treating heteroscedasticity and autocorrelation, the two-step GMM estimator approach is more consistent and asymptotically effective, M. Arellano, O. Bover (1995). Since this study used a two-step GMM model, heteroscedasticity and autocorrelation are not a problem for this study.

Table 6: Multicollinearity test for explanatory variables

<i>Variables</i>	<i>VIF</i>	<i>1/VIF</i>
BI	1.25	0.798131
BMF	1.20	0.834096
ACFE	1.20	0.835001
BGD	1.10	0.908663
OC	1.09	0.914870
BS	1.07	0.930717
Mean VIF	1.15	

Source: Result from STATA 14

Table 7: Normality test

<i>Variables</i>	<i>Obs</i>	<i>W</i>	<i>V</i>	<i>Z</i>	<i>Prob>z</i>
residual_hat	136	0.93808	6.626	4.265	0.211

Source: Result from STATA 14

Conclusion

Corporate governance is intended to prevent potential earnings manipulation by companies and improve supervision and control over organizations. The relationship between corporate governance and earnings management is still unclear despite much study on the topic. According to financial research, financial institutions' corporate governance practices may differ from those of non-financial institutions. This can limit directors' ability to make decisions, particularly in highly regulated financial environments where stringent rules and regulations must be adhered to. Therefore, this research aims to examine the relationship between corporate governance and the profitability control of Ethiopian insurance businesses. A sample of 17 insurance companies in Ethiopia was analyzed over the period from 2015 to 2022. The research examined earnings management as the dependent variable and ownership concentration, board size, independence, frequency of board meetings, gender diversity on the board, and financial expertise of the audit committee as the independent variables.

The empirical data found that board size has a strong positive and significant effect on the earnings management of insurance companies in Ethiopia, which is supported by agency theory. The results also showed that board independence had a strong negative and significant effect on the management of earnings by Ethiopian insurance companies, which is supported by agency theory. The study also found that board meeting frequency has a strong negative and significant effect on the earnings management of insurance companies in Ethiopia. The study also found that there is a strong negative and significant effect on the earnings management of insurance companies in Ethiopia, which is supported by both the agency and resource dependency theory. This suggests that accounting rules tend to be more conservative and there is less manipulation of reported profitability when there are more female board members. Therefore, decreasing information asymmetry and limiting managerial incentives to manipulate earnings are two benefits of having a diverse gender representation on the board.

Additionally, the study found that ownership concentration has a strong and significant negative effect on earnings management of insurance companies in Ethiopia, which is supported by agency theory. This is because concentrated ownership enhances board effectiveness and reduces manipulation of earnings management. Lastly, the research revealed that having financial expertise within the audit committee has a weak and significant positive impact on earnings management of insurance companies in Ethiopia, which is supported by agency theory. This suggests that the presence of a financial expert on the audit committee can help restrain the manipulation of earnings by insurance company managers. In conclusion, the corporate

governance indicators board size, board gender diversity, ownership concentration, board meeting frequency and board independence have a strong and significant influence on earnings management of insurance companies in Ethiopia. However, the audit committee's financial expertise has a weak positive and significant effect on the earnings management of insurance companies in Ethiopia.

The study has several implications. First, theoretically, the study adds to the existing body of knowledge on corporate governance by examining its relevance in an emerging market like Ethiopia. Second, practically, this research provides valuable insight to investors and stakeholders, to know the importance of corporate governance mechanisms in curbing opportunities for earnings manipulation. Moreover, the results of this study also call for regulators and policymakers to reevaluate their policies in light of these findings. Therefore, regulators and policymakers should reconsider their policies and reforms to enhance gender diversity on corporate boards. The insurance companies' managers should increase the number of female directors, ensuring that at least one woman is represented on the board, and promote the appointment of independent female directors because including more females on the board reduces the manipulation of earnings. Moreover, the insurance companies' managers should consider recommending practices that encourage optimal board size. It is crucial not to overlook the significance of policies, reforms, and initiatives that promote effective board membership, particularly in emerging markets like Ethiopia. Furthermore, the results suggest that regulators and policymakers should determine the optimum number of financial expertise on the board because a high number of financial expertise on the board increases the manipulation of earnings management. It is also important to ensure that outside directors are independent from management to enhance the monitoring and resource provision functions of the board, because independent directors on the board reduce the manipulation of earnings. Lastly, the presence of blockholders is recommended to effectively monitor management and prevent opportunistic behavior, including earnings management.

Research limitations

The findings of the study are subject to limitations. To assess the impact of particular corporate governance methods on earnings management, the analysis first concentrated only on those procedures. Other governance characteristics, though, might affect how much earnings management is done. Second, discretionary accruals were the only basis used to measure earnings management. Finally, other than insurance businesses, the study's findings do not apply to other industries.

Future Research Suggestions

Future studies should employ alternative indicators of earnings management, such as earnings persistence, earnings predictability, and conservatism. Lastly, this research exclusively targeted insurance companies, suggesting that future investigations should encompass other sectors such as banks and microfinance institutions.

References

- B. Black, A. Carvalho, V. Khanna, W. Kim, B. Yurtoglu, Corporate governance indices and construct validity, *Corporate Governance, an International Review* 25(6) (2017) 397–410.
- N. Mansor, A. Che, N. Ahmad, A. Osman, Corporate Governance and Earnings Management: A Study on the Malaysian Family and Non-Family Owned PLCs, *Procedia Economics and Finance* 7 (2013) 221 – 229.
- J. Davis, F. Schoorman, L. Donaldson, Toward a stewardship theory of management. *Academy of Management Review* 22(3) (1997) 611–613.
- K. Jebran, S. Chen, Can we learn lessons from the past? COVID-19 crisis and corporate governance responses, *International Journal of Finance and Economics* 26 (1) (2020) 1- 9.
- S. Brammer, S. Pavelin, Factors influencing the quality of corporate environmental disclosure, *Business Strategy and the Environment* 17(2) (2008)120–136.
- M. Akhtaruzzaman, S. Boubaker, Z. Umar, COVID-19 media coverage and ESG leader indices, *Finance Research Letters* 451 (2021) 102–170.
- A. Buallay, Is sustainability reporting (ESG) associated with performance? Evidence from the European banking sector. *Management of Environmental Quality, An International Journal* 30 (1) (2019) 98–115.
- M. Miralles et al., ESG performance and shareholder value creation in the banking industry, *International differences. Sustainability* 11(5) (2019) 1-15.
- A. Arora, S. Bodhanwala, Relationship between corporate governance index and firm performance: Indian evidence, *Global Business Review* 19(3) (2018) 675–689.
- M. Shivani, P. Jain, S.Yadav, Governance structure and accounting returns: A study of nifty-five corporates, *Business analysis* 37(2) (2017) 179–194.
- J. Hagendorff, K. Keasey, F. Valscas, When Banks Grow Too Big for Their National Economies, *The Journal of Financial and Quantitative Analysis* 53(5) (2018) 2041-2066.
- A. Salah, Earnings management in the years following the integrated corporate tax within Dutch Housing Association (Unpublished master's thesis). Erasmus University, Rotterdam (2010) 1-90.
- E.Yuniarti, N. Hanim, Effect on Value Earnings Management Company with Good Corporate Governance Practices as Moderating Variable, *SHS Web of Conferences* 34 (2017) 1-7.
- C., G. Ofoegbu, J. Nnam, D. Chukwunwike, Effects of corporate governance board leadership models and attributes on the earnings quality of quoted Nigerian companies, *Cogent Asogwa Business & Management* 6(1), (2019) 1–24.
- J. Oehmichen, East meets west Corporate governance in Asian emerging markets: A literature review and research agenda, *International Business Review* 27(2) (2018) 465–480.

- S. Al-Begali, L. Phua, Accruals, real earnings management and CEO demographic attributes in emerging markets: Does concentration of family ownership count? *Cogent Business & Management* 10(2) (2023) 1–34.
- L. Al-Haddad, M. gWhittinton, The impact of corporate governance mechanisms on real and accrual earnings management practices: evidence from Jordan, *The International Journal of Business in Society* 19(6), (2019) 1167–1186.
- N. Assad, A. Jaafar, P. Zervopoulos, The interplay of real earnings management and investment efficiency: Evidence from the US, *Cogent Business & Management*, 10(2) (2023) 1–21.
- B. Jaggi, J. Tsui, Insider trading, earnings management, and corporate governance: empirical evidence based on Hong Kong firms, *Journal of International Financial Management and Accounting*, 18 (3) (2007) 92–122.
- S. Pornupatham, An empirical examination of earnings management, audit quality, and corporate governance in Thailand, Perceptions of auditors and audit committee members (unpublished doctoral dissertation). University of Wales, Cardiff, (2006) 295–316.
- J. Chang, H. Sun, Crossed-listed foreign firms' earnings in formativeness, earnings management, and disclosures of corporate governance information under SOX', *The International Journal of Accounting* 44(1) (2009) 1–32.
- N. Katmon, O. Farooque, Exploring the Impact of Internal Corporate Governance on the Relation Between Disclosure Quality and Earnings Management in the U.K. Listed Companies, *Journal of Business Ethics* 142(2) (2017) 345–367.
- V. Smaraidos, V. Thanasas, A. Filiou, The impact of corporate governance on earnings management in emerging economies: The Greek evidence, *International Journal of Comparative Management* 1(3) (2018) 317–330.
- F. Bekiris, L. Doukakis, Corporate governance and accruals earnings management, *Managerial and Decision Economics* 32 (2011) 439–456.
- D. Seng, J. Findlay, Corporate governance and earnings management in New Zealand, *Corporate Ownership and Control* 10(2) (2013) 40–55.
- C. Chalevas, C. Tzovas, The effect of the mandatory adoption of corporate governance mechanisms on earnings manipulation, management effectiveness, and firm financing, *Managerial Finance* 36(3) (2010) 257–277.
- R. Epps, T. Ismail, Board of directors' governance challenges and earnings management, *Journal of Accounting & Organizational Change* 5(3) (2009) 390–416.
- A. Klein, Audit committee, board of director characteristics, and earnings management, *Journal of Accounting and Economics* 33(3) (2002) 375–400.
- [29]. B. Xie, W. Davidson, P. DaDalt, Earnings management and corporate governance: The role of the board and the audit committee, *Journal of Corporate Finance* 9(3) (2003) 295–316.
- A. Zoysa, K. Rudkin, An investigation of perceptions of company annual report users in Sri Lanka, *International Journal of Emerging Markets* 5 (2) (2010) 183–202.
- N. Waweru, G. Riro, Corporate governance, firm characteristics, and earnings management in an emerging economy, *Journal of Applied Management Accounting Research* 11(1) (2013) 43–64.
- Z. Bayelign, A. Ayalew, W. Sitotaw, Corporate governance and financial performance in the emerging economy: The case of Ethiopian insurance companies, *Cogent Economics & Finance* 10 (1) (2022).
- A. Ayalew, Audit committee characteristics and earning management of insurance companies in Ethiopia, *Cogent Business & Management* 11(1) (2024) 1–43.
- G. Mariano, S. Ana, M. Eva, Earnings management in socially responsible firms around seasoned equity offerings: Evidence from France, Germany, Italy and Spain, *Heliyon*, 9(2023) 1–19.
- A. Dian, P. Nur, P. Yani, Earnings management, business strategy, and bankruptcy risk: evidence from Indonesia. *Heliyon*, 6(2020)1–9.
- M. Jensen, W. Meckling, Theory of the firm: managerial behavior, agency costs, and ownership structure, *Journal of Financial Economics* 3(4) (1976) 305–360.
- A. Sutedi, on internalization of good corporate governance concept into Indonesian corporation law and regulations, *Sinar Grafika* (2011) 1–275.
- A. Aulia, D. Hapsoro, Pengaruh Kualitas Audit, Leverage, dan Growth Terhadap Praktik Manajemen Laba, *Jurnal Akuntansi* 5(2) (2017) 99–110.
- H. Tjaraka, W. Hidayat, R. Rusdiyanto, The role of earning management as a mediator of the effect of the facial width to height ratio CEOs on leverage, *Cogent Business & Management* 9(1) (2022) 2115733.
- T. Schillemans, K. Bjurström, Trust and verification: Balancing agency and stewardship theory in the governance of agencies, *International Public Management Journal* 23(5) (2020) 650–676.
- M. Malik, D. Makhdoom, Does corporate governance beget firm performance in Fortune 500 companies? *Corporate Governance* 16(4) (2016) 747–764.
- A. Shleifer, R. Vishny, A survey of corporate governance, *The Journal of Finance* 52(2) (1997) 737–783.
- R. Duchin, J. Matsusaka, O. Ozbas, When are outside directors effective? *Journal of Financial Economics* 96(2) (2010) 195–214.
- D. Larcker, S. Richardson, I. Tuna, Corporate governance, accounting outcomes, and organizational performance, *The Accounting Review* 82(4) (2007) 963–1008.
- S. Ali, B. Liu, J. Su, Corporate governance and stock liquidity dimensions: Panel evidence from pure order-driven Australian market, *International Review of Economics and Finance* 50 (2017) 275–304.
- S. Bhojraj, P. Sengupta, Effect of corporate governance on bond ratings and yields: The role of institutional investors and outside directors, *Journal of Business*, 76(3) (2003) 455–475.
- C. Leuz, D. Nanda, P. Wysocki, Earnings management and investor protection: An international comparison, *Journal of Financial Economics* 69(3) (2003) 505–527.
- P. Badolato, D. Donelson, M. Ege, Audit committee financial expertise and earnings management: The role of status, *Journal of Accounting and Economics* 58(2) (2014) 208–230.
- R. Davidson, J. Goodwin, P. Kent, Internal governance structures and earnings management, *Accounting and Finance* 45(2) (2005) 241–267.
- A. Hillman, T. Dalziel, Boards of directors and firm performance: Integrating agency and resource dependence perspectives, *Academy of Management Review* 28(3), (2003) 383–396.
- W. Vicente, K. Reymundo, L. Pari, N. Rudas, P. Rodriguez, The effect

- of good corporate governance on banking profitability, *Management Science Letters* 10(9) (2020) 2045–2052.
- N. Ghazali, Ownership structure, corporate governance, and corporate performance in Malaysia, *International Journal of Commerce & Management* 20(2), (2010) 109–119.
- A. Ujunwa, Board characteristics and the financial performance of Nigerian quoted firms, *The International Journal of Business in Society* 12(5) (2012) 656–674.
- B. Francis, I. Hasan, Q. Wu, Professors in the boardroom and their impact on corporate governance and firm performance, *Journal of Financial Management* 44(3) (2015) 547–581.
- N. Mori, Directors' diversity and board performance: evidence from East African microfinance institutions, *Journal of African Business* 15(2) (2014) 100–113.
- M. Gulzar, Corporate governance characteristics and earnings management: empirical evidence from Chinese listed firms, *International Journal of Accounting and Financial Reporting* 1(1) (2011) 133–155.
- M. Jensen, The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance* 48(3) (1993) 831–880.
- I. Muda, W. Maulana, H. Sakti N. Indra, The analysis of the effects of good corporate governance on earnings management in Indonesia with a panel data approach, *Iranian Economic Review* 22(2) (2018) 599–625.
- I. Ahmed, S. Kabiru, M. Aliyu, M. Jamila, Corporate Governance and Earnings Management of Listed NonFinancial Companies in Nigeria, *Lafia Journal of Economics and Management Sciences* 8(1) (2023) 79–90.
- B. Alareeni, Does corporate governance influence earnings management in listed companies on the Bahrain Bourse?, *Journal of Asia Business Studies* 12(4), (2018) 551–570.
- S. Wali, S. Masmoudi, Internal control and real earnings management in the French context, *Journal of Financial Reporting and Accounting* 18(2) (2020) 363–387.
- Q. Huynh, A triple of corporate governance, social responsibility, and earnings management, *The Journal of Asian Finance, Economics, and Business* 7(3) (2020) 29–40.
- E. Diri, L. Costas, A. Mohammad, Corporate governance and earnings management in concentrated markets, *Journal of Business Research* 108(3) (2020) 291–306.
- T. Thu, Y. Thi, N. Kim, The impact of foreign ownership, corporate governance on earning management: Fuzzy-set qualitative comparative analysis, *Cogent Business & Management* 10(3) (2023) 1–19.
- E. Aslam, R. Haron, S. Ahmad, A comparative analysis of the performance of Islamic and conventional banks: does corporate governance matter? *International journal of Business Excellence* 20(3) (2020) 1–13.
- P. Saona, L. Muro, M. Alvarado, How do the ownership structure and board of directors' features impact earnings management? *Journal of International Financial Management & Accounting* 31(1) (2020) 98–133.
- A. Costa, Corporate Governance and Fraud: Evolution and Considerations, *Corporate Governance and Strategic Decision Making* 23(1) (2017) 15–23.
- P. Wasan, K. Mulchandani, Corporate governance factors as predictors of earnings management, *Journal of General Management* 45(2) (2020) 71–92.
- E. Luthan I. Satria, Effect of good corporate governance mechanism to earnings management before and after IFRS convergence, *social and behavioral sciences* (2016) 465 – 471
- U. Uwuigbe, O. Uwuigbe, B. Okorie, Assessment of the effects of firm characteristics on the earnings management of listed firms in the Nigerian, *Economic and Financial Review* 5(2) (2015) 218–228.
- X. Chen, Q. Cheng, X. Wang, Does increased board independence reduce earnings? management? Evidence from recent regulatory reforms, *Review of Accounting Studies* 20(2) (2015) 899–933.
- C. Chi, K. Hung, H. Cheng, P. Lieu, Family firms and earnings management in Taiwan: influence of corporate governance, *International Review of Economics & Finance* 36, (2015) 88–98.
- S. Fuzi, S. Halim, M. Julizaerma, Board independence and firm performance, *Procedia Economics and Finance* 37 (2016) 460–465.
- A. Naz, M. Nadova, I. Farheen, M. Cvirik, A. Michalkova, Nexus between corporate governance and earnings management in family and nonfamily firms, *E&M Economics and Management* 26(2) (2023) 42–57.
- N. Farzaneh, A. Davood, S. Ali, F. Mahdi, Audit committee features and earnings management, *Heliyon* 9(2023) 1–14.
- K. Chakib, G. Rihab, Did corporate governance mechanisms affect earnings management? Further evidence comes from GCC Islamic banks, *International Journal of Islamic and Middle Eastern Finance and Management* 10(1) (2017) 2–23.
- O. Farooq, A. AbdelBari, Earnings management behavior of Shariah-compliant firms and non-Shariah-compliant firms: Evidence from the MENA region, *Journal of Islamic Accounting and Business Research* 6(2) (2015) 173–188.
- Y. Nuryana, D. Surjandari, The Effect of Good Corporate Governance Mechanisms and Earning Management on Company Financial Performance, *Global Journal of management and business research* 19(1) (2019) 27– 39.
- I. Obigbemi, E. Omolehinwa, D. Mukoro, E. Ben, O. Olusanmi, Earnings management and board structure: evidence from Nigeria, *Sage Open* 6(3) (2016) 1–15.
- D. Muktadir, T. Keyamoni, Corporate governance and earnings management practices among listed firms: A study on the post-stock market crisis period in Bangladesh, *Journal of Asian business strategies* 9(1) (2019) 1–9.
- M. Powell, D. Ansic, Gender differences in risk behavior in financial decision-making: An experimental analysis, *Journal of Economic Psychology* 18(6) (1997) 605–628.
- A. Alqatan, The association between board diversity, earnings management, and firm performance in Kuwait: A research agenda, *Corporate Governance: Search for Advanced Practices* (2019) 254–274.
- D. Debnath, C. Roy, Gender Diversity in Corporate Governance and Earnings: An Indian Panorama, 21(3) (2019) 31–44.
- K. Kyaw, M. Olugbode, B. Petracci, Does a gender-diverse board mean less earnings management? *Finance Research Letters* 14 (2015) 135–141.
- Y. Mnif, I. Cherif, Female board directorship and earnings management, *Pacific Accounting Review* 33 (1) (2020) 114–141.
- S. Triki, Gender diverse boards and earnings management: evidence from French-listed companies, *Sustainability Accounting, Management, and Policy Journal* 9(3) (2018) 289–312.

- C.Keung, Corporate governance and Earnings management: A Survey of literature, *Journal of Applied Business Research* 29 (2) (2013) 391-418.
- A. Allan, N. Kasim, M. Mustapha, S. Shah, An overview of Jordanian manufacturing sector in light of current regional political situation, *International Journal of Economics, Commerce and Management* 6(5), (2018) 373-377.
- M. Sial, Z. Chunmei, N. Khuong, Do female and independent directors explain the two-way relationship between corporate social responsibility and earnings management in Chinese listed firms? *International Journal of Accounting & Information Management* 9(3) (2019) 289–312.
- J. Sun, G. Liu, G. Lan, Does female directorship on independent audit committees constrain earnings management? *Journal of Business Ethics* 99(3) (2011) 369–382.
- W. Lin, M. Hwang, Audit Quality, Corporate Governance, and Earnings Management: A Meta-Analysis, *International Journal of Auditing* 14 (2010) 57-77.
- K. Kanagaretnam, *et al.*, Does good corporate governance reduce the information asymmetry around quarterly earnings announcements? *Journal of Accounting Public Policy* 26(4) (2007) 497–522.
- L. Beatty, G. Harris, The Effects of Taxes, Agency Costs, and Information Asymmetry on Earnings Management: A Comparison of Public and Private Firms (4) (1999) 299-326.
- O. Nues *et al.*, The Norwegian Code of Practice for Corporate Governance, *Norwegian Corporate Governance Board (NCGB)* 5, (2018) 1-57.
- K. Peasnell, F. Peter, S. Young, Board Monitoring and Earnings Management: Do Outside Directors Influence Abnormal Accruals? *Journal of Business Finance & Accounting* 32 (2005)1311–46.
- W.Lin, M. Hwang, Audit Quality, Corporate Governance and Earnings Management *International journal of audit* 14(1) (2010) 55-77.
- J. Pfeffer, G. Salancik, The external control of organizations: A resource-dependency perspective, *Harper & Row New York* 32(7) (1978) 1311–1346.
- N. Saleh, T. Iskandar, M. Rahmat, Audit committee characteristics and earnings management: Evidence from Malaysia, *Asian Review of Accounting* 15(2) (2007) 147–163.
- M. DeFond, J. Zhang, A review of archival auditing research, *Journal of Accounting and Economics* 58(2), (2014) 275–326.
- E. Alzoubi, Audit committee, internal audit function, and earnings management: evidence from Jordan, *Mediterranean Accountancy Research* 12(1) (2019) 1–15.
- A. Ben Amar, The effect of audit committee financial experts on earnings management, *International Journal of Managerial and Financial Accounting* 6(2) (2014) 156–166.
- A. Zalata, V. Taurigana, I. Tingbani, Audit committee financial expertise, gender, and earnings management: Does gender of the financial expert matter? *International Review of Financial Analysis* 55 (2018) 170-183.
- J. Carcello, C. Hollingsworth, A. Klein, T. Neal, Audit committee financial expertise, competing corporate governance mechanisms, and earnings management (2006)1–55.
- M. Arellano, S. Bond, Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations, *The Review of Economic Studies* 58(2) (1991) 277–297.
- A. Levrau, L.Van den Berghe, Corporate Governance and Board Effectiveness: Beyond Formalism, *ICFAI Journal of Corporate Governance* 6(4) (2007) 58–85.
- R. Blundell, S. Bond, Initial conditions and moment restrictions in dynamic panel data models, *Journal of Econometrics* 87(1) (1998) 115–143.
- M. Arellano, O. Bover, Another look at the instrumental variable estimation of error-component models, *Journal of Econometrics* 68(1) (1995) 29–51.
- A. Ozkan, Determinants of capital structure and adjustment to long-run targets: Evidence from UK company panel data, *Journal of Business Finance & Accounting* 28(1) (2001) 175–198.
- P. Healy, The effect of bonus schemes on accounting decisions, *Journal of Accounting and Economics* 7(1) (1985) 85-107.
- J. Jones, Earnings Management during Import Relief Investigations, *Journal of Accounting Research* 29 (2) (1991) 193-228.
- Y. Vinten, C.Kuen, J. Zhou, Audit quality and earnings management for Taiwan IPO firms, *Managerial Auditing Journal* 20 (1) (2005) 86–104.
- X. Zhang, Accruals, Investment, and the Accrual Anomaly, the *Accounting Review* 82(5) (2007) 1333–1363.
- T. Jones, Instrumental Stakeholder Theory: A *Synthesis of Ethics and Economics*, *Academy of Management Review* 20(2) (1995) 404–437.
- C. Panasian, A. Prevost, H. Bhabra, Board composition and firm performance: The case of the Dey report and publicly listed Canadian firms, the *financial review* 43(1) (2003) 1-81.
- C. Ntim, C. K. Opong, J. Danbolt, Board size, corporate regulations and firm valuation in an emerging market: A simultaneous equation approach, *International Review of Applied Economics* 29(2) (2015) 194–220.
- Goshi *et al.*, Board structure, executive compensation, and firm performance: Evidence from India. Mumbai, India. *Indra Ghandi Institute of Development Research* (2002) 1-38.
- M. Adeolu, S. Oseko, Corporate governance and management of earnings: Empirical evidence from selected Nigerian-listed companies, *Investment Management and Financial Innovations* 13(2) (2016) 189–205.
- M. Prabowo, J. Simpson, Independent Directors and Firm Performance in Family-Controlled Firms: Evidence from Indonesia, *Asian-Pacific Economic Literature* 25(1) (2011) 121–132.
- A. Shamsul, N. Nasir, Accrual management and the independence of the board of directors and audit committees, *Journal of economics and management* 12(2004) 49-80.
- K. John, L. Senbet, Corporate governance and board effectiveness, *Journal of Banking and Finance* 22 (1998) 371-403.
- C. Iraya, M. Mwangi, G. Muchoki, The effect of corporate governance practices on the earnings management of companies listed at the Nairobi Securities Exchange, *European Scientific Journal* 11(1) (2015) 169–178.
- J. González E. Garcia, Does corporate governance influence earnings management in Latin American markets? *Journal of Business Ethics* 121(3) (2014) 419-440.
- K. Kharashgah, N. Amran, R. Ishak, Board of directors' structure and real earnings management: Jordanian evidence, *International Journal of Academic Research Business Society* 9(12) (2019) 742–760.

- C. Jamel, H. Moez, B. Naj, The Effect of Board Director's Characteristics on Real Earnings Management, *Journal of Knowledge Economy* 9(3) (2018) 999–1013.
- B. Hong, Z. Li, D. Minor, Corporate Governance and Executive Compensation for Corporate Social Responsibility, *Journal of Business Ethics* 136(2016) 199–213.
- D. Ferreira, Board Diversity and Corporate Governance: A Synthesis of Theory, Research, and Practice (2010) 225–242.
- J. Amy, H. Christine, A. Albert, J. Cannella, Organizational Predictors of Women on Corporate Boards, *The Academy of Management Journal* 50(4) (2007) 941–952.
- R. Anderson, D. Reeb, A. Upadhyay, W. Zhao, The economics of director heterogeneity, *Financial Management* 40(1) (2011) 5–38.
- S. Belaounia, R. Tao, H. Zhao, Gender equality's impact on female directors' efficacy: A multi-country study, *International Business Review* 29(5) (2020) 1–13.
- B. Srinidhi, F. Gul, J. Tsui, Female directors and earnings quality, *Contemporary Accounting Research* 28(5) (2011) 1610–1644.
- M. Pucheta, I. Bel, G. Olcina, Corporate governance, female directors, and quality of financial information. *Business Ethics, A European Review* 25(4) (2016) 363–385.
- A. Capezio, A. Mavisakalyan, Women in the boardroom and fraud: Evidence from Australia, *Australian Journal of Management* 41(4) (2016) 719–734.
- S. Kaplan, K. Pany, J. Samuels, J. Zhang, An examination of the association between gender and reporting intentions for fraudulent financial reporting, *Journal of Business Ethics* 87(1) (2009) 15–30.
- J. Sun, P. Kent, B. Qi, J. Wang, Chief financial officer demographic characteristics and fraudulent financial reporting in China, *Accounting & Finance* 59 (4) (2017) 2705–2734.
- L. Abbott, S. Parker, T. Presley, Female board presence and the likelihood of financial restatement, *Accounting Horizons* 26(4) (2012) 607–629.
- A. Nalikka, Impact of gender diversity on voluntary disclosure in annual reports, *Journal of accounting & taxation* 1(1) (2009) 101–113.
- T. Arun, Y. Almahrog, Z. Aribi, Female directors and earnings management: Evidence from UK companies, *International Review of Financial Analysis* 39 (2015) 137–146.
- I. Gavius, E. Segev, R. Yosef, Female directors and earnings management in high-technology firms, *Pacific Accounting Review* 24(1) (2012) 4–32.
- N. Orazalin, Board gender diversity, corporate governance, and earnings management: evidence from an emerging market, *Gender in Management, An International Journal* 35(1) (2020).
- E. Peni, S. Vahamaa, Female executives and earnings management, *Managerial Finance* 36(7) (2010) 629–645.
- S. Alhababsah, Ownership structure and audit quality: An empirical analysis considering ownership types in Jordan, *Journal of International Accounting, Auditing and Taxation* 35 (2019) 71–84.
- R. Barroso, L. Cédric, Block holders' ownership and audit fees: The impact of the corporate governance model, *European Accounting Review* 27(1) (2018) 149–72.
- W. Beekes, P. Pope, S. Young, The link between earnings timeliness and earnings behavior: evidence from Thai financial institutions, *Working paper* 12(1) (2014) 1–59 2004–2015.
- F. DeZoort, S. Salterio, The effect of corporate governance experience, financial reporting, and audit knowledge on audit committee members' judgments, *Journal of practice and theory* 20(2) (2001) 32–47.
- L. Kalbers, T. Fogarty, Audit committee effectiveness: an empirical investigation of contribution of power, *Journal of Auditing* 12(1) (1993) 1–24.
- A. Levitt, Speech by SEC Clzaimurn: Renzark.s Befive the Conjerence on the Rise and Effectiveness of New Corporate Governance Standards, *Federal Reserve Bank* 6(1) (2000) 1–7.
- M. Mangena, R. Pike, The effect of audit committee shareholding, financial manipulation: an analysis of firms subject to enforcement actions by the SEC 35(4) (2005) 327–349.
- M. Meah, K. Sen, M. Ali, Audit Characteristics, Gender Diversity, and Firm Performance: Evidence from a Developing Economy. *Indian Journal of Corporate Governance* 14 (1) (2021) 48–70.
- H. Etemadi, H. Moghadam, The Competition between Regression and Artificial Evidence from ASX-listed Companies, *International Journal of Economics and Finance* 15(3)(2014).
- A. Marra, P. Mazzola, A. Prencipe, Board Monitoring and Earnings Management Pre- and Post-IFRS, *The International Journal of Accounting*, 46(2) (2011) 205–230.
- A. Latif, F. Abdullah, The Effectiveness of Corporate Governance in Constraining Earnings Management in Pakistan, *The Lahore Journal of Economics* 20(1) (2015) 135–155.
- R. Belhadj, A. Omrane, B. Regaieg, The Effects of Governance Mechanisms on Financial Information Quality, *Communications of the IBIMA*, (2016) 1–17.
- L. Man, R. Yang, Does industry regulation matter? New Evidence on Audit Committees and Earnings Management, *Journal of Business Ethics*, 123(4) (2014) 573–589.
- V. Sharma, C. Kuang, Voluntary Audit Committee Characteristics, Incentives, and Aggressive Earnings Management: Evidence from New Zealand, *International Journal of Auditing* 18(1) (2014) 76–89.
- I. Lubis, D. Adhariani, Corporate Governance, Earnings Management, and Tax Avoidance, *International Conference* (2019) 1–9.
- R. Rahman, F. Ali, R. Haniffa, Board, audit committee, culture and earnings management: Malaysian evidence, *Managerial Auditing Journal* 21 (7), (2006) 783.
- J. Chouaibi, M. Harres N. Brahim, The effect of board directors' characteristics on real earnings management: Tunisian-listed firms, *Journal of Knowledge Economics* 9(3) (2015) 999–1013.
- S. Ali, S. Butt, A. Hassan, Corporate Governance and Earnings Management an Empirical Evidence form Pakistani Listed Companies, *European Journal of Scientific Research* 26, (2009) 624–638.
- S. Chatterjee, Market Power and Spatial Competition in Rural India, *Cambridge Working Papers in Economics University of Cambridge* 1921 (2019) 1–77.
- S. García, N. Hussain, J. Martínez, E. Ruiz, Impact of disclosure and assurance quality of corporate sustainability reports on access to finance, *Corp Soc Resp Env Ma* 26(2019) 832–848.
- M. Harakeh, W. El-Gammal, G. Matar, Female directors, earnings management, and CEO incentive compensation: UK evidence, *Research in International Business and Finance* 50 (2019) 153–170.
- N. Waweru, N. Prot, Corporate Governance Compliance and Accrual Earnings Management in Eastern Africa, *Managerial Auditing Journal* 33(2018) 171–191.
- J. Liu, Board monitoring, management contracting, and earnings

management, *International journal of economics and finance* 4(12) (2012) 121–136.

Md Helal Udd, *The Relationship Between Corporate Governance and Earnings Management: Evidence From Banglade* 15 (1) (2024) 36-51.

Fidyah Afif Sagita, Menik Indrati, *The effect of good corporate governance mechanism on earning management* 1(1) (2024) 121-132.

Chi-keung M. (2024). *Corporate Governance and Earnings Management: A Survey of Literature*. *The Journal of Applied Business Research*, (29(2), 391-418.

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