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THE EFFECT OF CORPORATE GOVERNANCE ON EARNINGS MANAGEMENT IN NIGERIA'S FINANCIAL INSTITUTIONS: MODERATING ROLE OF CEO COMPETENCY

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ABSTRACT

The purpose of this paper is to examine the moderating effect of CEO competency on the relationship between corporate governance (CG) and earnings management (EM) of Nigerian financial firms. The sample covered 37 financial firms listed in the Nigeria Stock Exchange (NSE) from 2010 to 2019. This study adopted a panel regression estimator to analyse the testable hypotheses. It was found that CEO competency only moderated the relationship between audit committee and EM but not on the other CG variables. This finding implied that CEO competency was important when accounting oversight was in balance with EM. While the agency hypothesis on CG was supported, the study upheld the idea that CEO competency undermined EM. As a result, the study advocates for broader CEO oversight and resource measures, including CEO remuneration and CEO social capital, to

lessen the impact of CG in the EM of financial institutions. The effect of the Covid-19 crisis on the link between CG and EM should be the subject of future studies. Future research should examine how the Covid-19 issue affects the CG mechanism's ability to reduce EM and determine whether the effect is positive or negative.

Keywords: Corporate governance, earnings management, CEO competency, financial firms.

INTRODUCTION

The agency theory states that managers tend to pursue their personal interests to the detriment of the returns of owners' capital. It is often implied that CEOs manipulate earnings to enhance stocks price to maximise their compensation packages (Kumar et al., 2020). When there is too much pressure to perform or when compensation is based too heavily on ambitious goals, managers have a propensity to prioritise short-term gains. Earnings management (EM) occurs when managers deliberately manipulate or influence their reported earnings by using different accounting methods, including storing earnings in profitable periods for use in unprofitable periods (Naidu & Patel, 2013). However, under the "free cash flow hypothesis", not all managers have the ability to use the available free cash flows for profitable investments, so some of them might engage in earnings manipulations (Chalak & Mohammadnezhad, 2016). Theoretical evidence from the corporate governance literature showed that EM in general cannot be ignored when estimating accounting and market performance (Dechow et al., 1995).

To mitigate earnings management, a good corporate governance (CG) mechanism is needed. Firms should structure executive compensation so that it does not reward reckless tactics to achieve short-term goals or discourage a prudent, long-term value strategy (Pepper & Gore, 2015). Furthermore, managers can be rewarded for producing sustainable earnings and increasing stakeholder value. A good corporate governance policy can prevent or reduce a manager's intention to involve in earnings manipulations. However, CG mechanism can be effective only if board monitoring helps to reduce agency costs and safeguard the interests of shareholders (Azim, 2009). CEOs frequently have a substantial impact on the board selection process, according

to the critics of corporate governance, which is one of the main reasons boards lack adequate oversight over EM (Tien et al., 2013). This suggests that when a CEO is involved in directors' selection, it may have serious corporate governance concerns, especially in the selection of independent directors that oversee the top management.

Based on the upper echelons theory (Hambrick & Mason, 1984), many studies have looked at whether personal attributes, including age, financial, and legal experience, affect the CEO's operational and reporting decisions (Bamber et al., 2010; Dyreng et al., 2010; Call et al., 2017). CEOs with no professional knowledge are ineffective since understanding the company's operation requires time and professional knowledge Alderfer (1986). Evidently, the educational profile of the CEO has an impact on how CEOs approach reporting based on their knowledge and experiences (i.e., CEOs usually use their skills to reduce some time to participate in EM). A CEO's figures are more reliable with the more experience they have (Hu et al., 2013). Several studies also found that accounting-trained executives are less aggressive in their accounting management activities than administrators of other professional backgrounds. While the accounting profession is conservative, resulting in the implementation of less aggressive accounting practices, a CEO with training from the Association of Chartered Certified Accountants (ACCA) or Institute of Chartered Accountants of Nigeria (ICAN) is more risk-averse, and members of these bodies are part of the business elite who put a high emphasis on conformity and custom (Finkelstein & Hambrick, 1996). A CEO with a Master of Business Administration (MBA) can create more precise disclosure styles and is more resilient to the negative effects of making inaccurate forecasts (Bamber et al., 2010), while those with executive rationalisation, business education (e.g., ICAN, ACCA, Association of National Accountants of Nigeria [ANAN], etc.) can increase the probability of accounting fraud and earnings manipulation. Business education is linked to more self-interested behaviour, and executives with MBAs are more likely to be involved in illegal corporate financial activity (Daboubetal, 1995). Matsunaga and Yeun (2008) found that a company's discretionary accruals are influenced by the manager's financial expertise, while Jiang et al. (2013) asserted that financially experienced CEOs are less likely to participate in actual earnings management. Zouari et al. (2015) agreed with a connection between CEO expertise and EM as Baatwah et al. (2015) found a connection between CEO competency and earnings management.

The objective of this study is to examine the moderating effect of CEO competency on the relationship between CG and EM of Nigerian financial firms. This study focused on Nigerian banks because the corporate financial scandal has been on the high side in Nigeria since the notable case on Cadbury Nigeria in 2006, which involved an overstating 13 billion Naira (85 million dollars). Subsequently, several banks have been involved in financial scandals as discussed above. This situation shows that the problem of EM is widespread, especially in Nigerian banking. As a resort, the Central Bank of Nigeria (CBN) had to reduce the size of the Nigerian banking industry by increasing the minimum capital base from N2 billion to N25 billion in 2005, which resulted in many issues in the banking industry. CBN together with the Nigeria Deposit Insurance Corporation (NDIC) had nationalised three Nigerian Stock Exchange-listed banks in 2011, namely Bank PHB Plc, Afribank Nigeria Plc, and Spring Bank Plc as a result of unethical earning manipulation. In 2019, Skye Bank Plc was also discovered to be involved in a financial scandal by allegedly engaging in repeated manipulations, fraudulently masking documents with the primary goal of deceiving authorities, including CBN and the Nigerian Stock Exchange (NSE). Skye Bank Plc subsequently lost its operating licence and was renamed Polaris Bank. The trend of bank collapse in Nigeria has continued in early 2019, which saw the takeover of the distressed Diamond Bank Plc by Access Bank Plc.

Nigerian financial institutions have a high tendency towards EM, especially those with CEOs who receive international training; instead of using their expertise to mitigate the scandal, they use it to enrich themselves. The locally educated CEOs were less involved in the scandals, possibly due to a lack of necessary skills. This problem does not occur in non-financial firms.

The contribution of this study is in two folds. First, existing studies on CG mechanism and EM have explored the moderating effects of CEO (attributes, i.e., qualification and experience) and board characteristics, including gender mix, managerial ownership, and board competency (Abed et al., 2012; Bouaziz et al., 2020; González & García-Meca, 2014; Hassan & Ahmed, 2012, and less on CEO and their competencies in their related fields. To the best of the authors' knowledge, this research is among the best to empirically test how CEO competency moderates the link between corporate governance and EM. Second, this study revalidated the Jones model of discretionary accruals on deposit money banks in Nigeria. Although there are other

models of discretionary accruals estimation, such as the Beneish M-Score model, the current study investigated the Jones model due to its advantage in estimating nondiscretionary accruals as a function of change in revenues, depreciation, and firm assets.

This study documented that CEO competency significantly affected EM. While a strand of literature argued that CEO competency impacted EM (Altuwaijri & Kalyanaraman, 2020; Amedu & Dulewicz, 2018), the current study's results contradicted theirs, suggesting that CEOs use their competencies to entrench themselves more than facilitate the reduction of conflicts between capital owners and managers. While past studies documented the significance of corporate social responsibility (CSR) disclosure and CG mechanisms (Bouaziz et al., 2020; Ching et al., 2015; Hassan & Ahmed, 2012) to reduce EM's effects, it was found that CEO competency helps to moderate CG mechanisms in reducing EM. Although it does not totally erode its effects, the magnitude of EM's effects decreases with increasing CEO competency.

Apart from the introduction, the paper includes the theoretical framework and hypothesis development, the methodology involving research design and data collation, and the empirical results and findings. Lastly, the conclusions based on the findings are provided.

THEORETICAL FRAMEWORK AND RESEARCH HYPOTHESES

CG Mechanism and Earnings Management

CG failure in Nigeria is caused by weak institutional mechanisms, misuse of shareholders' rights, directors' low level of commitment, noncompliance with the regulatory policies and framework, poor enforcement and monitoring systems, and a general lack of stewardship disclosure and accountability (Okpara & Iheanacho, 2014). For instance, in 2007, 2008, and 2018, corporate financial impropriety was reported in major scandals involving Cadbury Nigeria, Halliburton Nigeria, and Skye Bank, respectively.

Several studies have explored the moderating role of CG on EM and financial performance (Abed et al., 2012; Bouaziz et al., 2020; González & García-Meca, 2014; Hassan & Ahmed, 2012). However,

most of these studies considered the monitoring functions of CEOs and Directors without considering the significant role of the resource provision functions, i.e., competencies (degree in accounting and finance, professional qualification, tenure, and work experience) of CEOs. The existing studies that investigated moderating effects of firm-level factors focused on CG mechanisms, characteristics of board of directors, and CSR disclosure. However, CEO competency has not yet been extensively studied as a firm-level moderator on the CG-EM nexus.

In better understanding the effect of board characteristics and EM, this analysis is based on the agency theory (Hagendorff & Keasey, 2018). The agency theory explains the presence of an incentive for management to use EM (Salah et al., 2010). According to Jensen and Meckling (1976), an agency arrangement is a contract where one or more people (the principals) choose another person (the agent) to provide services on their behalf and grant the agent certain decision-making authority. Brennan (2015) posited that the agency problem usually arises if an agent fails to act in the shareholders' best interest (the principal). This can happen when managers choose to serve their interests at the company's shareholders' expense to increase their rewards or fulfil a certain earnings target or debt covenant. Because of the division of ownership, control, and information asymmetry, this is possible (since managers have more information than the real owners of a company). Management could manipulate earnings to conceal a company's true financial condition and relevant details that investors should have known. The agency theory clarifies the possibility for managers to manage earnings; managers can create a biased financial report with no way for anyone to see through it. Because of an agent's opportunistic behaviour, a corporation employs a mechanism to align the principal and the agent's interest by establishing the board of directors (Buniamin et al., 2012). Therefore, their action as agents of shareholders may better monitor management, leading to transparent and quality reporting. Shareholders appoint the board of directors to monitor management's successful performance to maintain and maximise its value and satisfy its obligations to its employees and other stakeholders. The principal and the agent would face monitoring and bonding costs in most agency relationships. In a corporate entity, to oversee the management operation and constraint the management's opportunistic behaviour, the shareholders invest in an information and monitoring system, including employing the board of directors, audit committee, and auditors (Alarussi & Shamkhi, 2016).

Board size means the strengths of individuals in the board committee. The recommended board member size for an organisation is five to seven, and it is a critical variable in EM because it has a major impact on monitoring ability. Indeed, empirical research has shown that the board of directors' size is related to unrestricted accretion. The existence of good corporate governance systems minimises or mitigates the incidence of opportunistic EM. First, on corporations' board of directors that act as oversight bodies, there was mixed evidence in the literature on the effectiveness of large versus small board size. For example, a large board size can lead to a greater difference among board members, reducing their success in performing their oversight role (Cudia & Dela Cruz, 2018). Some academics asserted that a smaller board would give better financial reporting oversight and have a positive effect on EM. A similar argument was made by several other researchers, who claimed that the size should be four to six individuals to be more effective. Having moderate board members also facilitates operational cooperation and tactical decision-making (Tsegba & Upaa, 2015). Besides that, more board members could be talented enough to be drawn from a larger pool of mutual practices (Uwuigbe et al., 2014). Eventually, a bigger board would have more independent directors with financial experts who can better handle EM while not avoiding shareholder income (Hamid & Bello, 2019). Indeed, empirical research has shown that the board of director's size is related to unrestricted accretion. Jensen (1993) claimed that a small board may efficiently monitor CEOs' actions, whereas a larger board could be more concerned with etiquettes at the cost of monitoring. Based on Abbott et al. (2004), small boards interact more easily and with fewer misunderstandings. Smaller boards are also more responsive to investor confidence issues, especially in financial reporting, and therefore, less likely to engage in EM. Lanfeng and Anlin (2014) posited that when the board size is large, its EM will be higher. However, the level of EM is reduced when there is a smaller number of directors on the board. Given the above, it is hypothesised that:

H_{1a}: Board size is negatively related to earnings management.

The Securities and Exchange Commission (SEC) of Nigeria requires publicly listed firms to have at least two independent directors or a number of independent directors that represents 20 percent of the board members, whichever is fewer, but no less than two, under the updated CG Code (code of 2006 and that of 2011). The board's

most influential individuals may be non-executive directors. They should evaluate and carefully examine the managerial and executive directors' methodologies and practices, particularly in relation to strategy, performance assessment, and important appointments (Corporate Governance Code for Nigeria, 2011). Most literature, like Siregar and Utama (2008), and Banderlipe (2009) discovered that board independence had no effect on EM because executive directors outnumbered the relatively small number of independent directors. However, based on Omoye (2014), board independence had a positive and significant relationship with EM. The audit committee independence negatively affected the possibility of Nigerian companies adopting absolute high EM. Matthew and Stephen (2016) also reported that board independence, audit committee independence, and audit committee size were all positively correlated with EM. Moradi et al. (2012) analysed and discovered a negative but not statistically significant connection between board independence and EM. In the same vein, Roodposhti and Chashmi (2011) analysed the impact of CG on EM and discovered a significant negative relationship between board composition and EM. Based on the above, this study hypothesised that:

H_{1b}: Board independence is negatively related to earnings management.

The term CEO duality refers to a company's chairman of the board and CEO as the same person. According to Jensen (1993), when a CEO acts as board chairperson, it allows the firm management to operate more flexibly by enabling the CEO to monitor what information is accessible to other directors. Davidson et al. (2004) concluded that CEO duality gives the CEO greater control over the firm's financial reports perception. This practice places more power in the hands of the CEO and allows for more managerial discretion. The stewardship theory also argues that CEO duality encourages decision-making responsibility (Donaldson & Preston, 1995). However, according to the agency theory, CEO duality encourages CEO entrenchment and reduces the board of directors' general obligations (Mallette & Fowler, 1992; Finkelstein & Daveni, 1994). Nigerian firms as Uwuigbe et al. (2014) reported that CEO duality had a significant positive impact on EM. However, Al-Sraheen and Alkhatib (2016) stated that CEO duality and discretionary accruals had a constructive and important relationship while Lakhal (2005) discovered that CEO duality and EM had a negative relationship. Banderlipe (2009), Ebrahim (2007), and Marra et al. (2011) also found that CEO duality did not affect

a company's discretionary accruals to influence reported earnings in pre-IFRS and post-IFRS cycles. Furthermore, Baker et al. (2018) suggested that in organisations with CEO duality, EM was higher and that the separation of roles reduced EM from being used. Therefore, given the above, this study made the following hypothesis:

H_{1c}: CEO duality is positively related with earnings management.

According to the Nigerian Corporate Governance Practice Code, the audit committee must be largely independent, extremely professional, and has a high degree of competence. The audit committee is in charge of overseeing the external auditors' independence and objectivity and reviewing financial reporting integrity. Accountants and auditors (internal or external) are more inclined, according to DeZoort and Salterio (2011), to assist an auditor in a dispute with a company`s management. As reported by Carcello and Neal (2011), the greater the number of independent external directors on the audit committee, the greater the chance of an auditor publishing a growing concern report for an entity in financial distress. Musa et al. (2013) asserted that audit committee independence and independent external audit positively correlated with discretionary accruals. It was found that audit committee independence had no effect on EM in a sample of businesses listed on the Indonesia Stock Exchange between 2005 and 2007 (Moradi et al., 2012). An audit committee was examined by Lin and Yang (2016) to evaluate if its existence affected EM. There was a negative correlation between audit committees and EM practices according to the data. Based on García-Sánchez et al. (2017), audit committee independence raised investors' trust by restricting EM. It is claimed that audit committee independence increased investor confidence by restricting EM. A positive correlation between audit committee ownership and EM was found by Lynall et al. (2015). Cudia and Dela Cruz, (2018) found that audit committee independence did not diminish the occurrence of EM, as posited by Abbott et al. (2004). Size of the audit committee was associated with EM negatively (Yang, 2015). Given the above, it is hypothesised that:

H_{1b}: The independency of the audit committee is negatively related with earnings management.

The Moderating Role of CEO Competency

As the company's highest-ranking director, the CEO is required to use their discretion in determining appropriate accounting practices

and what facts can be disclosed on the financial statements (Cheng & Lo, 2006). To earn the board of directors and shareholders' confidence in Nigeria, the CEO must be competent in all aspects of the company's operations and demonstrate integrity and credibility (SEC, 2014). Financial expertise, in essence, is a vital aspect that assists the CEO in handling the company's finances (Zouari et al., 2015). Implementing effective accounting practices and overseeing the financial reporting process are essential responsibilities for a CEO with financial expertise (Baatwah et al., 2015). Previous research has shown that financial experience among CEOs decreased the influence of EM. A CEO with financial experience, according to Jiang et al. (2013), provided higher-quality earnings data. They also claimed that the CEOs' financial expertise helped them identify and reduce the real EM trend. There was a negative relationship between CEOs' financial expertise and actual EM operations (Baatwah et al., 2015). In other words, a CEO with a strong financial background and previous job experience in finance is most likely to put the expertise to work to increase reporting accuracy.

The Nigerian banking industry's management environment is marked by inconsistency in office tenure, ineptitude, sheer incompetence, or even interpersonal disagreement and hostility within the board, which often lead to divisions of rank. Instead of planning for the company's profit and survival, board members and senior management staff often take advantage of the polarisation by forming empires, using arbitrage opportunities, and participating in rent-seeking practices that have a widespread detrimental effect on the sector (Effiok & Effiong, 2012).

This study predicted that CEO competency moderates the relationship between CG and EM. If the CEO has a higher competency, the CG effectiveness can be enhanced. While H1a hypothesised that a bigger board size leads to higher chances of EM, a competent CEO mitigates and coordinates effective communication among board members.

CEO competency in Nigeria reduces the effect of board size on EM. This revealed that CEO competency is insignificant in moderating the relationship between board size and EM. This result implied that CEO competency is not an efficient resource provision mechanism in addressing the complexity in larger boards as seen in many boards of financial firms in Nigeria. Although the agency theory noted that a smaller board size influences the board's efficiency, CEO competency may not be a significant factor to reduce the effects of a larger board

size (such as internal director conflicts and boardroom issues) on EM (Che-Adam et al., 2019). Larger boards in Nigeria financial firms weaken the influence of CEO competency because CEOs might not have requisite experience to deal with high costs of forming coalitions among board members (Firth et al., 2007). While the notion of a larger board size contradicts the agency theory, it, however, supports the assumption of the resource dependency theory that a larger board size has more amounts of expertise and resources from board members. Since the number of board members (both executive and non-executive directors) possess higher expertise, the competency of the CEOs may be insignificant because independent directors with financial expertise are members of various CG committees involved in reducing EM. Thus, the composition of board with diverse and financial expertise nullifies the competencies of CEOs since independent directors belonging to different CG committees might have been addressed at the committee level. Based on the above arguments, CEO competency in Nigerian firms is not that effective to undermine corporate board control.

CEO competency in Nigeria reduces the effect of board independence on EM. The result revealed that CEO competency did not moderate the relationship between board independence and EM. In situations where most of the board members appointed to the board are involved in family ownership, the board independence is weak. Given the more shareholdings of family members, CEOs may not be willing to exercise their competence in reducing earnings manipulations to avoid being relieved of their responsibilities. Another issue may be a high presence of stakeholder activism in the board. Here, CEO competency may be less important to institutionalise decreasing EM. In addition, the stewardship role of independent directors seems to also be in line with the monitoring role on the CEOs, and the calibre of people holding significant and high ownership may further inhibit the CEOs' competency. Again, the proliferation of shareholders' associations weakens CEO competency and therefore, leads to lack of transparency and trust.

$H_{2a\text{-}c}$: The association between BODs and earnings management is moderated by CEO competency.

Hypothesis 2c examined that CEO competency in Nigeria reduces the effect of CEO duality on EM. Bushman et al. (2018) discovered that the relationship between CEO dualism and EM was not moderated by CEO skill. These results can be attributed to the fact that, despite the

CEO's competency, most financial organisations do not implement CEO duality. As a result, the CEO may not be in the best position to reduce EM. A CEO's competency would then be useless because there is no concentration of authority and the company does not use CEO duality, which is another critical consideration. In response to international CG mechanisms and in line with the Committee on Corporate Governance of Public Companies in Nigeria, the increasing separation of duties over the years has resulted gradually into declining EM (Soyemi et al., (2020). Thus, CEO competency plays no role in the absence of CEO duality. Egbunike and Ezelibe (2015) found that boardroom feuds, insider abuse, fraud and forgeries, inadequate internal control systems, and occasional violations of statutory regulations characterize banks new generation. Furthermore, CG weaknesses make the CEO use their competency to be involved in the appointment of audit members, resulting a lower level of independence and competence on the part of the audit committee. Ultimately, the CEO engages in self-serving action at shareholders expense when given an opportunity (Alzeban, 2018).

H_{2d}: The association between audit independence and earnings management is moderated by CEO competency.

This study further tested that CEO competency in Nigeria reduces the effect of audit committee on EM. It revealed that there is a significant interaction between CEO competency and audit committee. This implied that CEO competency plays a resource provision function in reducing EM practices. It is clear that there is a lack of auditor independence in Nigeria's banking sector, which results to falsifying financial reports. As a result, CEO competency is crucial in ensuring that the deficiencies in the firm's CG system are reduced. A CEO uses their professional qualifications to ensure that auditor deficiencies are minimised as a result of auditors' inability to discharge their responsibilities effectively. Thus, this demonstrates the CEO's superiority over audit committee, which is frequently exposed to the corrupt Nigeria environment.

RESEARCH DESIGN

The total population size was 67 firms; however, the sample size was 37 financial firms listed in the Nigerian Stock Exchange because they were

large enough to represent the whole population. This was determined by applying the following criteria in the selection process. Firstly, a firm must meet the criterion of being listed on the NSE within 2010–2019 and should not have been delisted within that period. Secondly, a firm must have published its executives/management team profile and have information on the study variables. The companies without a full ten years of annual reports were also excluded. Based on this, banks and insurance companies were selected based on judgmental sampling techniques to perform regression. As such, a total of 370 (10 years x 37 companies) observations were obtained from annual reports of the sample companies.

Measuring CEO Competency

This research was built on a previous work (Tien et al., 2013) by incorporating CEO degree, professional qualification, tenure, and work experience and then measuring a composite index of CEO competency as shown below:

Competency = Degree + Professional + Tenure + Working

Where Degree equals 1 if the CEO has an accounting or finance-related degree and 0 if otherwise; Professional is equal to 1 and is expressed as a dummy. This study used median as the criterion to decide on the other two quantitative competency dimensions, i.e., tenure and work experience. Tenure is 1 if the CEO stays in the firm above five years and 0 if otherwise. The study found that most of the CEOs that participated in the scandal were in their second tenure. However, CEOs with a tenure of above five years did indeed capture this fact. The median of CEO work experience in the sample was 22 years, so Working is 1 if a CEO possesses 22 years or more of work experience and 0 if otherwise.

Measuring Earnings Management with Discretionary Accruals

Based on Dechow et al. (1995), the original Jones model could not capture the impact of sales-based manipulation because accounts receivables should not be considered nondiscretionary accruals. As a result, they suggested the Modified Jones model, a revision of the original Jones model (1995). The adjustment was meant to get rid of the Jones model's alleged propensity to incorrectly compute discretionary accruals when discretion is employed over revenues. Dechow et al. (1995) found that the Modified Jones model is now the best at EM

detection. Today, this model is the most well-known for EM detection. In both the Jones and the cross-section Jones model, it is assumed that any variations in sales are nondiscretionary. Nonetheless, managers may manage profits by using credit sales. The Modified-Jones model's only adjustment is that it subtracts change in accounts receivable from sales revenue change. The fundamental principle is that EM is responsible for all accounts receivable changes. This is centred on the following logic: managing earnings from accounts receivable is much simpler for managers than managing earnings from cash sales. As Benkel et al. (2006) pointed out, the model implicitly assumes that EM is the cause of all changes in credit sales during the event period.

This study used discretionary accruals to measure EM. The Modified Jones (1995) model was used to extract the discretionary accrual, the residual values obtained after regressing in the Modified Jones model. Since account receivables should not be considered nondiscretionary accruals, Dechow et al. (1995) posited that the original Jones model was unable to capture the effect of sale-based manipulation. As a result, they suggested a Modified Jones model to replace the Jones model (1995). The study adopted the Modified Jones (1995) model because it is widely tested and accepted by many scholars. It is the best model to estimate discretionary accruals with minimal error (Islam et al., 2011). Furthermore, both Gulzar and Wang (2011) and Johari et al. (2009) used this model to estimate the extent of EM.

Model Specification

The model's essence is to study the impact of CG mechanisms on EM and also the moderating role of CEO competency. It is depicted as follows:

The definition and measure of all the involved variables are summarised in Table 2.

$$\mathrm{DAC}_{it} = \beta_0 + \beta_1 \mathrm{ROA}_{it} + \beta_2 \mathrm{SIZE}_{it} + \beta_3 \mathrm{OCASH}_{it} + \beta_4 \mathrm{LEVERAGE}_{it} + \beta_5 \mathrm{BSIZE}_{it} + \beta_6 \mathit{BINDEP}_{it} + \beta_7 \mathrm{DUALITY}_{it} + \beta_8 \mathrm{AUDIT}_{it} + \mathrm{e}_{it} \quad (1)$$

$$\begin{aligned}\mathrm{DAC}_{it} = {} & \beta_0 + \beta_1 \mathrm{ROA}_{it} + \beta_2 \mathrm{OCASH}_{it} + \beta_3 \mathrm{LEVERAGE}_{it} + \beta_4 \mathrm{FSIZE}_{it} + \\ & + \beta_5 (\mathrm{COMPETENCY}_{it} \mathrm{xBSIZE}_{it}) + \beta_6 (\mathrm{COMPETENCY}_{it} \mathrm{x} \mathit{BINDEP}_{it}) \\ & + \beta_7 (\mathrm{COMPETENCY}_{it} \mathrm{xDUALITY}_{it}) + \beta_8 (\mathrm{COMPETENCY}_{it} \mathrm{xAUDIT}_{it}) \beta_9 \\ & \mathit{COMPETENCY} + \beta_{10} \mathrm{BSIZE}_{it} + \beta_{11} \mathit{BINDEP}_{it} \\ & + \beta_{12} \mathrm{DUALITY}_{it} \\ & + \beta_{13} \mathrm{AUDIT}_{it} + \mathrm{e}_{it}\end{aligned} \quad (2)$$

Table 2

Variables Measurement

Dependent Variable	Measurement
EM (Discretionary Accruals)	The absolute values of discretionary accruals (residual obtained from the modified Jones model (by Dechow et al. (1995)).
Control Variables:	
Firm Size (SIZE)	Natural logarithms of total asset.
Return on Asset (ROA)	EBIT/Total Asset.
Cash Flows in operating activities (OCASH)	Net cash flows in operating activities/ Total Assets.
Firm's Leverage (LEVERAGE)	Total Debt/Total Assets.
Focus Variables:	
Board Size (BSIZE)	It is measured as the total number of board members in the firm.
Board Independence (BINDEP)	The proportion of non-executive directors to the total number of board members in the firm.
CEO Duality (DUALITY)	By taking the position of CEO function at the same the Chairman. CEO that holds the position of CEO and Chairman is 1, otherwise is 0.
Audit Committee (AUDIT)	The proportion of audit committee members to the total number of board members in the firm.
Competency	Degree + Professional + Tenure + Working (The summation of these four CEO attributes is an index) where Degree is equal to 1 if the CEO has an accounting or finance-related degree and 0 if otherwise; Professional equals 1 if the CEO has an accounting or finance-related degree and 0 if otherwise; Tenure is 1 if CEO stay in the firm for five years and 0 if otherwise; Working is 1 if CEO has 22 years' experience and 0 if otherwise.

Dependent Variable: Discretionary Accruals Measurement

This study used discretionary accruals to measure EM. The Modified Jones (1995) model was also utilised to extract the discretionary accrual, the residual values obtained after regressing in the Modified Jones model. Since account receivables should not be considered nondiscretionary accruals, Dechow et al. (1995) asserted that the original Jones model was unable to capture the effect of sale-based manipulation as it assumed that account receivables should not be considered as nondiscretionary accruals. Thus, they modified the original Jones model to include account receivables and named it as the Modified Jones Model (1995). The study adopted the Modified Jones (1995) model because it is widely tested and accepted by many scholars as the best model to estimate discretionary accruals with minimal error (Kabir et al., 2011). Furthermore, Gulzar and Wang (2011), Johari et al. (2008), and Jackson (2018) used this model to estimate the extent of EM.

The steps in calculating the Modified Jones Model discretionary accruals are as follows:

Step 1:
Total Accrual = Net Income – Cash Flow from Operating Activities

Step 2:
Modified Jones Model

$$\frac{\text{Total Accrual}}{A_{it}-1} = \alpha 1\left(\frac{1}{A_{it}-1}\right) + \alpha 2\frac{(\Delta REV_{it} - \Delta REC_{it})}{A_{it}-1} + \boldsymbol{\alpha 3}\left(\frac{\boldsymbol{PPE_{it}}}{\boldsymbol{A_{it}-1}}\right) + \boldsymbol{\varepsilon}$$

Where:
A_{it-1} = Total asset in period t_{-1}
Δ REV_{it} = Changing in revenues for period $_t$
Δ REC_{it} = Changing in net receivables for period $_t$
PPE_{it} = Property, Plant and Equipment for period $_t$
α1, α2, α3 = Regression coefficients

Step 3:
Equation (1) is estimated to derive the residuals. The measure of discretionary accruals (DA) is the residuals from firm-specific regression of changes in non-cash sales and gross level of property, plant, and equipment. The fitted values from Equation (1) are then generally classified as a 'normal' level of accruals (NDA -

nondiscretionary accruals), with the residual, that is, εi, being the 'discretionary' component of accruals. The discretionary accruals are embedded in the error term. The error term or residuals contain all other factors not included in the NDA. This is in line with the studies of Jackson (2018) and Beiruth et al. (2021).

CONTROL VARIABLES

In this study, firm size, return on assets (ROA), cash flow, and leverage were used as control variables to control the relationship between CEO competency and EM. These variables are often used by many researchers when determining the impact of board characteristics on EM.

Return on assets was used as a control variable by Gulzar and Wang (2011) and Johari et al. (2008). ROA gives an idea as to how efficient management is at using its assets to generate earnings. Dechow et al. (1995) asserted that discretionary accruals had a positive relationship with firm performance. Discretionary accruals might represent changes in the sample firms' performance if they were not controlled for.

Firm size is used in most EM studies to control many factors, such as political cost and economies of scale. The firm scale has been shown to have a negative effect on EM in previous research (Dechow et al., 1995; DeFond & Jiambalvo, 1994). As a result, it is assumed that discretionary accruals have a detrimental association with firm size. According to Abed et al. (2012), smaller companies were subject to less control from authority and, therefore, engaged in EM activities. Still, some scholars argued that EM activities increase as the size of a company increases. Firm size had a significant positive association with EM, according to Osemene et al. (2018).

Managers can use a company's cash flow to invest in projects to raise its shareholders' wealth. On the contrary, an opportunistic perspective may be used to maximise the managers' benefit. According to the free cash flow theory, executives often invest surplus cash funds in purchases that increase their personal profits instead of their clients' wealth, intensifying the classic agency problem (Jensen, 1986). Empirical evidence was gathered for businesses with high

free cash flows but poor growth prospects, implying that a higher degree of free cash flows offers more options for managers to invest in EM by discretionary accruals (Bukit & Iskandar, 2018; Chalak & Mohammadnezhad, 2016).

The level of indebtedness of a company is measured by its financial leverage. Firms engage in EM for various reasons, one of which is to control contractual outcomes, especially in the case of debt covenants. As part of the borrowing arrangement, debt covenant provisions enable businesses to retain or reach a certain earnings level. This puts pressure on businesses to participate in EM to influence contractual results in their favour. Managers use voluntary accounting reforms to boost profits and in the long run, stop breaching debt covenants or contractual arrangements (Beiruth et al., 2021). As a result, highly leveraged firms are more likely to indulge in opportunistic EM to avoid breaching debt covenants or other contractual obligations and projecting a financial distress image.

RESULTS

Descriptive Statistics

The description of the variables is discussed in this section. One of the analyses performed in hypotheses testing was descriptive statistics. This research depicted both continuous variables (EM, board size, board independence, audit committee, ROA, firm size, operating cash flows, leverage) and dummy and index variables (CEO competence and CEO duality). The results of the descriptive statistics performed are shown in Table 1 below. The descriptive statistics included minimum, maximum, mean, median, standard deviation, kurtosis, and skewness of the variables.

The dependent variable in this study was EM. The mean value of EM was -3.054 and the median was -2.892, which were within the range of -7.601 and -0.653. According to Shen and Chih (2007), the higher the EM, the lesser the earnings smoothing. The mean value of -3.054 was quite low, suggesting that financial firms hardly engaged in EM to boost earnings. This value was quite lower than the values reported in past studies on EM (Cho & Chun, 2016; Shen & Chih, 2007).

In relation to CG mechanisms, the mean score of board size was 9.888, approximately 10. This result connoted that on average, the sampled financial firms had ten board members who were both executive and non-executive members as directors. The results were also in line with Kajola (2008), who reported a board size average of 9.257 and maximum of 16 for Nigerian listed firms.

In regard to board independence, the mean score was 36.69 percent, indicating that more than 30 percent of board size in the Nigerian financial institutions were non-executive directors who were independent or outside directors. This percentage was low and in support of Adegbite (2015) that Nigerian firms still needed real board independence. A dispersal of share ownership is a precursor to enhance board independence in Nigeria. Adegbite (2015) attributed this issue to the regulatory and legal framework in Nigeria where members of shareholders' association can be appointed to the board and are often corrupted by the executive managers.

The average score of audit committee was approximately 3 (mean = 2.641). On average, three members constitute the audit committee in Nigerian financial institutions, although with a maximum of five members. According to the Companies and Allied Matters Act (CAMA) in Nigeria, an audit committee should have a majority of non-executive directors in its membership (Okike, 2007). Meanwhile, with the low level of board independence in place, it implied that the independence of the audit committee may be questioned. The maximum score for audit committee was 5.0, which was in line with the recommendations of CAMA (1990) that the audit committee should consist of an equal number of directors and representatives of the shareholders of the firm (subject to a maximum of six members) (Okike, 2007:184).

This section also presents the descriptive statistics for CEO duality (measured using a dummy variable) and the moderating variable measure as an index – CEO Competency. CEO Duality is reported to have the minimum score and maximum score of 0.000 and 1.000 as shown in Table 5.1. The mean of CEO Competency was 2.762 (median = 3.00), suggesting that the CEOs of the sampled financial institutions in Nigeria had at least two attributes of CEO competency (degree, professional qualification, tenure, and work experience). Thus, on average, they were competent but not strongly competent.

Table 1

Descriptive Statistics

Variables	Min.	Max.	Mean	Std. Dev.	p25	p50	p75	Kurtosis	Skewness
Earnings Management	-7.601	-0.653	-3.054	1.106	-3.579	-2.892	-2.299	4.888	-1.108
Board Size	8.000	13.000	9.886	1.862	8.000	9.000	12.000	1.949	0.673
Board Independence	18.750	57.143	36.696	8.959	30.000	33.333	44.444	2.437	0.504
Audit Committee	1.000	5.000	2.641	0.885	2.000	3.000	3.000	3.112	0.579
CEO Duality	0.000	1.000	0.429	0.496	0.000	0.000	1.000	1.081	0.284
CEO Competency	1.000	4.000	2.762	1.014	2.000	3.000	4.000	1.754	-0.090
ROA	-3.627	6.692	1.944	3.008	0.434	1.893	3.933	2.385	-0.201
Firm Size	6.557	9.854	7.836	0.975	7.054	7.382	8.855	1.879	0.645
Cash Flows	-0.225	0.269	0.023	0.076	-0.023	0.023	0.071	3.691	0.157
Leverage	28.682	89.726	62.333	22.237	41.971	61.687	85.470	1.472	-0.129

Regression Results for the CG Mechanisms as Determinants of EM

The estimation on Model 1 on the relationships between CG mechanisms and EM is reported in Table 3. An analysis was made using pooled model, fixed-effects, and random effects panel regression. This study conducted the Pool Ability test, the Breusch-Pagan LM test, and the Hausman test to find out which model was appropriate. The result showed that ultimately, the random effect model was preferred over the fixed-effect model and Pooled model. The study further estimated its robust standard errors in column 4 to be used as the inference on the relationship between CG mechanisms and EM. The estimations in column 4 showed that board size was positive but insignificant. This was similar for board independence and CEO duality; thus, hypotheses H_1, H_2, and H_3 were not supported. The coefficient value for audit committee was -0.0039 and it was significant at the 5 percent level, suggesting that a sound audit committee in place reduced EM practices. Therefore, hypothesis H_4 can be supported. Concerning the control variables, only cash flows and profitability were significantly influencing EM practices in Nigerian financial firms. The diagnostic tests revealed that the results were reliable. The study found that there was no multicollinearity problem. The mean VIF was 1.79 less than the threshold value of 5.00 (Hair et al., 2018).

Table 3

Relationship between CG and EM

Variables	Pooled Model	Fixed Effect	Random Effect	Random Effect With Robust Standard Error
	(1)	(2)	(3)	(4)
Constant	-0.0168	-0.0280	-0.0191	-0.0191
	(0.1960)	(0.5280)	(0.2360)	(0.1360)
Control Variables				
Leverage	-0.0002**	-0.0001	-0.0002	-0.0002
	(0.0460)	(0.2960)	(0.1200)	(0.1670)
Cash Flows	-1.1162***	-1.1134***	-1.1157***	-1.1157***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Firm Size	0.0025	0.0033	0.0025	0.0025
	(0.1660)	(0.5720)	(0.3000)	(0.2590)
Profitability	0.0142***	0.0147***	0.0144***	0.0144***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)

(continued)

Variables	Pooled Model	Fixed Effect	Random Effect	Random Effect With Robust Standard Error
	(1)	(2)	(3)	(4)
Focus Variables				
Board Size	0.0008	0.0011*	0.0010	0.0010
	(0.2360)	(0.0830)	(0.1220)	(0.1620)
Board Independence	0.0001	0.0001	0.0001	0.0001
	(0.5370)	(0.3530)	(0.3910)	(0.3380)
CEO Duality	-0.0028	-0.0038*	-0.0034	-0.0034
	(0.2270)	(0.0980)	(0.1250)	(0.1260)
Audit Committee	-0.0036**	-0.0042***	-0.0039***	-0.0039***
	(0.0170)	(0.0050)	(0.0070)	(0.0040)
R Square	0.9524	0.9519	0.9523	0.9523
F-value	833.26**	765.7**		
Wald X2			6770.95***	3324.22***
Multicollinearity (Mean VIF)	1.79			
Serial Correlation			29.848	
			0.0000	
Poolability Test	2.14***			
	0.0003			
Breusch-Pagan LM Test			12.25***	
			0.0002	
Hausman Test		4.00		
		0.8569		
Obs.	342	342	342	342

Note: The asterisks *, **, and *** are significant at the 10%, 5%, and 1% levels, respectively. Values in the brackets are p-values.

Regression Results for the Role of CEO Competency on EM

In Table 4, it was found that the pooled effect model was appropriate to examine the nexus between CEO competency and EM. This study further reported the robust standard errors of the pooled model in column 4. Given the estimation in column 4, CEO competency had a significant negative relationship with EM at the 5 percent level with a coefficient of -0.0022, implying that the increasing level of CEO competency reduced EM practices. As for control variables, cash flows, firm size, and profitability were positively significant, showing that large-size firms and high profitable firms were more likely to engage in EM practices. Contrary to expectation, cash flows had a

negative relationship with EM, suggesting that when more cash flows were available, EM practices were more likely to reduce.

Table 4

Relationship between CEO Competency and Earnings Management

Variables	Pooled Model	Fixed Effect	Random Effect	Pooled Model With Robust Standard Error
	(1)	(2)	(3)	(4)
Constant	-0.0205**	-0.0290	-0.0212*	-0.0205*
	(0.0390)	(0.5010)	(0.0730)	(0.0560)
Control Variables				
Leverage	-0.0001*	-0.0002	-0.0001*	-0.0001
	(0.0730)	(0.1910)	(0.0980)	(0.1390)
Cash Flows	-1.1300***	-1.1196***	-1.1267***	-1.1300***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Firm Size	0.0035**	0.0044	0.0036*	0.0035*
	(0.0460)	(0.4480)	(0.0780)	(0.0740)
Profitability	0.0141***	0.0147***	0.0143***	0.0141***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Focus Variables				
CEO Competency	-0.0022**	-0.0011	-0.0022*	-0.0022**
	(0.0430)	(0.6930)	(0.0880)	(0.0440)
R Square	0.9561	0.9553	0.9560	0.9561
F-value	1449.69***	1230.10***		899.53***
Wald X2			7101.65***	
Multicollinearity	2.02			
Serial Correlation			20.094	
			0.0001	
Poolability Test	1.42***			
	0.0623			
Breusch-Pagan LM Test			0.57	
			0.2248	
Obs.	339	339	339	339

Note: The asterisks *, **, and *** are significant at the 10%, 5%, and 1% levels, respectively. Values in the brackets are p-values.

Regression Results for the Role of CEO Competency on the Relationships between CG Mechanisms and EM

The results of the moderating role of CEO competency on the relationship between CG mechanisms and EM are presented in Table

5. The study adopted the orthogonal approach to treat moderating effects. The orthogonal approach to moderating the analysis was very effective in the sense that it used the residuals of the product of the two interaction variables (i.e., CG mechanisms and CEO competency) to avoid any potential multicollinearity problem.

Four models are presented in Table 5 to examine the interaction effect of CEO competency with four CG variables, i.e., board size, board independence, CEO duality, and audit committee, in Models 1 to 4, respectively. In Model 1, CEO competency had a negative impact on EM, significant at the 5 percent level. Similar results were shown in Models 2 to 4, where CEO competency also had significant negative impacts on EM at the 5 percent level. Thus, this study found considerable evidence that CEO competency reduced EM practices. In relation to the moderating effects, the interaction between CEO competency with board size, board independence, and CEO duality were all statistically insignificant. Therefore, only the interaction between CEO competency and audit committee was significant with a coefficient of 0.0067. Concerning the control variables, the results depicted that both leverage and cash flows decreased EM practices while firm size and profitability increased EM. The study also performed some diagnostic tests to ensure that results of the relationships between variables were reliable. The four models showed that there were no multicollinearity and serial correlation problems. The multicollinearity values across the four models were less than 5.000, which according to Hair et al. (2018), there are no serious multicollinearity assumption problems.

Table 5

Moderating Role of CEO Competency on the Relationship between CG and EM

Variables	Model 1	Model 2	Model 3	Model 4
Constant	-0.1004***	-0.0892***	-0.0926***	-0.0790***
	(0.0010)	(0.0030)	(0.0010)	(0.0080)
Focus Variables				
Board Size	0.0009			
	(0.5150)			
Board Independence		-0.0001		
		(0.6980)		
CEO Duality			-0.0036	

(continued)

Variables	Model 1	Model 2	Model 3	Model 4
			(0.4780)	
Audit Committee				-0.0036
				(0.2940)
Moderating Variable				
CEO Competency	-0.0063**	-0.0063**	-0.0064**	-0.0065**
	(0.0260)	(0.0250)	(0.0240)	(0.0200)
Moderating effects				
CEO Competency X Board Size	0.0021			
	(0.1350)			
CEO Competency X Board Independence		0.0001		
		(0.8500)		
CEO Competency X CEO Duality			-0.0033	
			(0.5090)	
CEO Competency X Audit Committee				0.0067**
				(0.0210)
Control variables				
Leverage	-0.0004*	-0.0004*	-0.0004*	-0.0003
	(0.0730)	(0.0670)	(0.0750)	(0.1030)
Cash Flows	-1.4398***	-1.4380***	-1.4384***	-1.4504***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Firm Size	0.0152***	0.0155***	0.0155***	0.0146***
	(0.0020)	(0.0020)	(0.0020)	(0.0030)
Profitability	0.0171***	0.0171***	0.0171***	0.0171***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)
R Square	0.7812	0.7797	0.7802	0.7836
F-value	177.55***	175.95***	176.43***	180.02***
Multicollinearity (Mean VIF)	1.68	1.68	1.68	1.68
Serial Correlation	0.325	0.074	0.062	0.079
	0.5721	0.787	0.8053	0.7796
Obs.	356	356	356	356

Note: The asterisks *, **, and *** are significant at the 10%, 5%, and 1% levels, respectively. Values in the brackets are p-values.

CONCLUSION

The aim of the present study was to investigate the influence of corporate governance (CG) on earnings management (EM). In line with the resource dependency theory that both resource provisions and resource monitoring are important for board effectiveness (see Hillman & Dalziel, 2003), this study integrated the agency theory and resource dependency theory to investigate the moderating role of CEO competency (CEO degree, CEO professional qualification, CEO tenure, and CEO work experience) on the relationship between CG mechanisms and EM of financial firms in Nigeria. The findings were: first, in terms of CG, not only audit committee significantly reduced EM but also no support from board size, board independence, and CEO duality. This could be due to the fact that financial firms have been complying with the Nigerian Code of Corporate Governance, stipulating that the audit committee of a firm should meet at least once in every quarter, thus, four times a year. The significance of the audit committee signifies that its members have been meeting often to address issues concerning business operations and other international financial reporting regulations.

Meanwhile, board size and independence were insignificant not because of their sizes or the number of outside directors in the board but because of the quality of the board, that is, how often such board members meet to discuss the business, financing, investment, and operating events of the firm. Nigerian firms should be more concerned about the board quality and not the size and independence. Second, by using the CEO competency index combining CEO tenure, CEO professional qualification, CEO degree, and CEO work experience, it was found that although CEO competency could reduce EM, a significant positive was obtained by interacting effect with only the size of audit committee. Therefore, reducing the size of audit committee could actually mitigate the effect of CEO competency on EM. According to CAMA in Nigeria, audit committees include a majority of non-executive directors (Okike, 2007), implying that the independence of the audit committee may be questioned.

LIMITATIONS OF THE STUDY

The findings and scope of the present study have some limitations for future studies ranging from theoretical limitations to methodological

gaps. The study used the agency theory to examine the link between CG mechanisms and EM. Thus, it focused on the monitoring effects of management in reducing EM. However, it did not address institutional factors (such as foreign institutional shareholders, effective shareholder activism, and transparent information disclosure) through institutional theory assumptions to examine the CG mechanisms-EM nexus. A "one size fits all" is not desirable for CG studies. Furthermore, the study did not examine the series of financial and political events in the financial industries that have affected the value and performance of firms. For instance, the continued merger process across financial firms may impact EM practices (Gonçalves & Coelho, 2019; Njah & Jarboui, 2013).

SUGGESTIONS FOR FUTURE STUDIES

The limitations of a study results in suggestions for further studies that are inevitable and the present study is not an exception. This study provided a few suggestions for further studies on CG as mentioned below. First, future studies should investigate how the number of events that happened in the financial sectors in Nigeria influenced the CG-EM relationship. By using the event methodology approach, future studies may explore how mergers and acquisitions (M&A) deals, and corporate actions (e.g., dividend announcements, audit partner rotation, additional listing, director's retirement, and notice of annual general meeting) influence the effect of CG mechanisms on EM. Kempf et al. (2017) stated that investors' attention matters for corporate actions. Thus, investors' responses to corporate market value and performance may influence the choice of CG mechanisms to mitigate EM practices.

Second, future research should investigate the influence of Covid-19 crisis on the relationship between CG and EM. Future studies should examine whether the presence of Covid-19 crisis strengthens or weakens the effectiveness of CG mechanism in reducing EM. In such situation, effective risk committee functions and enterprise risk management (ERM) would be much more needed to mitigate the negative effects of Covid-19 on companies' performance. Recent studies have documented a comparative analysis of CG mechanisms

across countries during the Covid-19 crisis (Gelter & Puaschunder, 2020; Jebran & Chen, 2021; May & Mackin, 2020; Zattoni & Pugliese, 2021).

Third, future studies should capture not only Nigeria by exploring financial firms in West African countries, and this will aid the generalization of findings on the CG-EM nexus. This is also supported by the fact that most banks in West Africa and Africa in general are subsidiaries of their holding companies and do have headquarters and branches across African countries. Fourth, future studies should explore various methodologies of EM. They should also examine the models of Jones (1991), Modified Jones (Dechow et al., 1995), Industry based of Dechow and Sloan (1991), Jeter and Shivakumar (1999), Kasznik (1999) and Kothari (2005) for the performance-matching approach of accrual EM. Future studies should also use the Roychowdhury (2006) model of real EM. The above listed models of accrual and real EM would have varying results on the role of CEO competency on the relationship between CG mechanisms and EM.

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APPENDIX

Table 1

CEOs Competency and Financial Scandal (at nominal latest year 2019)

CEO in Financial Firm	Total	Accounting degree	Professional qualification	Foreign working experience	Confirmed scandal cases	Suspect scandal cases
Panel A: CEO in Financial Firm						
Foreign trained	30	21	9	30	22	-
Local trained	37	22	17	37	16	3
Total	67	43	26	67	38	
Panel B: CEO in Non-Financial Firm						
Foreign trained	32	24	6	19	1	1
Local trained	80	31	16	73	4	-
Total	112	55	22	92	5	4

Table 2

Variables Measurement

Variable	Measurement
Focus variable	
Board size	Board size is measured as the total number of board members in the firm.
Board independence	Board independence is proxied as the proportion of non-executive directors to the total number of board members in the firm.
CEO duality	CEO duality is proxied using a dummy by assigning the value of '1' if the CEO functions as the CEO as well as the chairman of the board, and '0' if otherwise.
Audit committee	Audit committee is measured by the proportion of audit committee members to the total number of board members in the firm.
Dependent variable	
Earnings management	The absolute values of discretionary accruals (residual obtained from the modified Jones model (Dechow et al., 1995).
Moderating variable	
CEO competency	CEO competency index of the dummies of CEO degree, CEO professional qualification, CEO tenure, and CEO work experience.
Control variables	
Firm size	Natural logarithms of total assets.
Cash flows	The proportion of net cash flows in operating activities to total assets.
Firm's leverage	The ratio of total debt to total assets
Return on asset	The ratio of earnings before interest and taxes on total asset