The impact of board characteristics on the extent of earnings management: conditional evidence from quantile regressions

Abstract

Purpose -This paper examines the impact of board characteristics on earnings management among UK non-financial firms.

Methodology - Using a sample of the UK FTSE 350 firms from 2010 till 2019, we investigated the relationship between board characteristics (board size, board gender diversity, board tenure, board independence, CEO-duality, board meetings) and earnings management by using quantile regression technique.

Findings - We found a non-linear association between board characteristics and discretionary accrual. The empirical evidence showed that board mechanisms reduce the extent of earnings manipulation among UK firms with higher discretionary accruals than firms with low and medium discretionary accruals levels.

Implications - Our results will benefit UK firms by helping them to rethink their board composition. It will also help policymakers understand how the corporate board can help ensure the quality of financial reports.

Originality/value – We used the quantile regression approach, which helps to clarify the mixed findings of prior studies that used conventional regression techniques.

KEYWORDS

Corporate Governance, Earnings Management, Quantile Regression, Board characteristics

1. Introduction

Reported earnings are a vital indicator employed by investors when assessing capital investment risk and return characteristics. Singh et al. (2016) highlighted that the integrity of financial statements is the focus of regulators, investors, and analysts. The increasing concern regarding firms' reported earnings is due to a series of high-profile accounting frauds across European countries and the United States of America (USA), including Barring Bank, Enron, Xerox, and WorldCom. Goncharov (2005) concluded that the phenomenon of earnings management (EM) was at the core of these accounting scandals.

Strong governance mechanisms in a company help limit the opportunities for managers to misrepresent their earnings and improve financial reporting quality (Cho and Chun, 2016, Gerged et al., 2020, Gerged et al., 2021, Alhaddad et al., 2021). In contrast, weaker Corporate Governance (CG) encourages managers to engage in various financial malpractices, including earnings management, profit smoothing, impression management, and aggressive accounting (Kim, 2015, Van Rinsum et al., 2018). The Financial Reporting Council (2018) argued that various CG guidelines introduced by UK authorities act as a tool to strengthen company directors' power to competently carry out their statutory duties and render accountability to its shareholders, employees, trading partners, and the State.

Despite these CG guidelines, numerous studies reported that UK firms continue to adopt accounting techniques that deliver predetermined profits or achieve a consensus earnings figure expected by market analysts (Peasnell et al., 2005, Zalata and Roberts, 2017, Owusu et al., 2020). To add to the ongoing debate in the EM literature, we employed quantile regression since prior studies that use conventional methods (ordinary least squares (OLS), fixed, and random effects) have inconclusive findings (Peasnell et al., 2000, Alhadab, 2018, Usman et al., 2022). For instance, the OLS method observes the average behaviour of the sample outside the central region and poorly describes the tail behaviours of the sample. Quantile regression methods used various conditional percentile functions that examine different forms of the sample heterogeneity. It employs a smooth and continuous function to measure the non-uniform relationships among the variables of interest that can address the inconclusive findings of prior studies.

Therefore, using a sample of 140 UK firms, we examine the relationship between board characteristics and the extent of discretionary accrual (EM). We found that the relationship between board characteristics and EM substantially changes based on the quantiles considered. Particularly, we found that board size and board gender diversity are negatively associated with EM mainly among the third (0.50 to 0.75) and fourth (0.75 and above) quantile where the firms manipulate their earnings aggressively. The negative result implies that large and gender-diverse boards are more effective in mitigating earnings management. We also show that board tenure is negatively related to EM among all the percentiles quantile regression. Overall, we document evidence that board characteristics have a negative impact on earnings management.

We contribute to the literature in several ways. First, our study is the first to investigate the association between the extent of discretionary accrual and board characteristics among UK firms. We focused on the UK, given the uniqueness of the shareholder-oriented corporate governance environment (Ezeani et al., 2021, Ezeani et al., 2022). In a shareholder approach to governance, the board's effort is geared towards mitigating managerial opportunism. Although previous studies have examined earnings management using samples of the UK firms, these studies focused on audit characteristics and the impact of gender on earnings management(Arun et al., 2015, Owusu et al., 2020, Chowdhury and Eliwa, 2021). We contribute to this body of literature by showing that board characteristics mitigate earnings management among UK firms.

Secondly, we provide further evidence that boards help companies obtain transparent and unbiased financial statements for firms with a high level of discretionary accruals. Particularly, we show that the association between EM and board characteristics widely varies across the quantile levels of discretionary accruals. Finally, the quantile regression approach used in this study helps to clarify the mixed findings of prior studies that used conventional regression techniques.

2. Literature Review and Hypothesis Development

2.1 Theoretical Framework

Agency theory postulate that the primary role of the board is to ensure that the actions of senior management staff "agents" protect the interest of owner shareholders "principals" in an uncertain business environment (Jensen and Meckling, 1976, Fama and Jensen, 1983). Managers (agents) hold more superior information than outside investors (principals). They could take advantage of their privileged position to misrepresent earnings (Salem et al., 2020, Salem et al., 2021, Komal et al., 2021, Usman et al., 2022) by adopting various EM techniques like accrual earnings management (AEM).

Agency theorists identified two consequences of asymmetric information between agents and principals regarding the published financial statement. First is moral hazard, which occurs when managers publish financial reports containing errors, misstatements, and falsified transactions (i.e., materiality) in the hope of diminishing the ability of shareholders to deduce and relate effort expended to remuneration accurately. The second is called adverse selection, which happens because exploitative agents would choose to present financial statements riddled with omissions and incomplete operations. Consequently, agency literature suggests the need to monitor managers to ensure that their actions align with the interest of shareholders (Jensen, 1986, Jensen and Meckling, 1976). Consistent with the agency theory, previous studies have examined the impact of corporate governance characteristics and CEO compensation on earnings management (AlHares et al., 2020, Sial et al., 2019, Usman et al., 2022, Assenso-Okofo et al., 2020).

2.2 Board Characteristics and earnings management

2.2.1 Board Size

Board size is an important factor that influences the effectiveness of corporate governance systems (Ezeani et al., 2022, Ezeani et al., 2021). Both small and large board sizes have their benefits and shortcomings. The smaller boards are easy to coordinate, and directors are likely to know each other well, which will make the discussions effective and enable them to reach true consensus swiftly (Yermack, 1996, Abdou et al., 2021). Small-sized boards may have fewer independent directors and are likely to be dominated by management staff, making them less efficient in detecting EM (Alareeni, 2018). Previous studies pointed out that larger boards effectively reduce earnings mismanagement since they are directed by a good number of experienced and skilled members (Peasnell et al., 2005, Assenga et al., 2018). In contrast, larger boards may suffer from a conflict of interest and bureaucracy (Elghuweel et al., 2017). Hence, we propose the following hypothesis:

H1: *Board Size is significantly and negatively linked with EM.*

2.2.2 Board Gender Diversity

Prior studies pointed out that female directors' presence on the board consolidates its efficiency and effectiveness (Zalata et al., 2019, Zalata et al., 2022). Women are assumed to be more ethically minded than their male counterparts and are expected to abstain from unethical activities like earnings management (Komal et al., 2021, Nekhili et al., 2022). Previous studies highlighted that the female directors on the board benefit the governance process of the firm through an influx of abilities, skills, and fresh perspectives and by bringing newer dynamics to board deliberation that can retrain managers to involve in earnings mismanagement (Geiger and Marlin, 2016, Nguyen et al., 2020). Davies Report (2015) confirmed that the number of female board directors in FTSE350 firms is higher than the historical level. This study proposes the following hypothesis:

H2: *The presence of female directors is significantly and negatively correlated with EM.*

2.2.3 Board Tenure

The board members with long-term employment are likely to have extensive knowledge and experience that enhance the usefulness of their involvement in the organisation (Kroll et al., 2008). Earlier studies noted that short-tenured boards have an insufficient understanding of their job role and the corporate governance environment they operate (Wilson Jr, 2016, Livnat et al., 2020). Hence, their influence on corporate behaviour compared to longer-tenured board members will be limited.

On the other hand, Bouaziz et al. (2020) argued that long-tenured CEOs exacerbate the earnings management problem by taking advantage of their familiarity with the firm's governance framework. However, Livnat et al. (2019) claimed that directors with longer tenure have a strong reputation over time. They are also more likely to perform their job conscientiously since their involvement in dishonest activities such as earnings manipulation could damage their reputational capital. It is hypothesised that:

H3: *The tenure of board directors is significantly and negatively related to EM.*

2.2.4 Board Independence

Agency theory suggests that an independent board that comprises a minimum number of non-executive directors is more likely to mitigate the conflicts of interests between shareholders and company management. Independent boards contribute both expertise and objectivity to the board's decisions (Fama, 1980, Bhagat and Black, 2002, Ezeani et al., 2022). Several studies pointed out that independent board members offer effective monitoring to maintain their prestige (Waweru and Riro, 2013, El Diri et al., 2020).

Prior studies emphasize the impact of independent board in protecting the interest of shareholders (Fama and Jensen, 1983, Bhagat and Black, 2002, Ezeani et al., 2021, Ezeani et al., 2022). Dechow et al. (1996) show that board independence is negatively related to earnings management. Similarly, Beasley (1996) find that firms with a higher proportions of outside directors and unlikely to engage in earnings management. From the above discussion, we propose the following hypothesis:

H4: Board independence policy is significantly negatively associated with EM.

2.2.5 CEO Duality

The agency theory suggests that the CEO-chairman's combined role diminishes directors' monitoring function by discouraging autonomous voice in the boardroom. Karim et al. (2013) argues that CEO duality influences the choice of auditors. Owusu et al. (2022) suggests that CEOs' risk appetite grows in line with their tenure, implying the need to separate their role to minimise entrenchment issues. CEO duality is linked with the risk of bankruptcy, and overly exceptional financial reports. CEO duality may result in earnings misrepresentation to maintain the status quo (Ishak et al., 2016, Bouaziz et al., 2020). Baker et al. (2019) reported that the magnitude of earnings manipulation is higher where the CEO is also the chairman. Also, they found that the separation of roles averts the usage of accrual earnings management (AEM). Hence, we propose the following hypothesis:

H5: CEO duality is significantly positively associated with EM.

2.2.6 Board Meetings

Active boards that meet frequently have higher chances of performing their monitoring duties effectively and controlling managerial behavioural issues like financial reporting integrity, earnings management (EM), and conflict of interest (Qu et al., 2015, Kharashgah et al., 2019). Another benefit of a higher frequency of board meetings is that it is related to higher board effectiveness, constraining E.M. Carcello et al. (2002) highlighted that board diligence includes elements other than the frequency of board meetings itself, such as preparation before the meeting, participation, attentiveness, and post-meeting follow-up. However, it is often the case that the number of board meetings is the only publicly available information. The original UK Cadbury Report (1992) and the subsequent UK Combined Code on corporate governance (2003) recommended that companies must hold at least three and four meetings a year to efficiently discharge their duties (Zalata and Roberts, 2016). Hence, we propose the following hypothesis:

H6: The frequency of board meetings is significantly negatively associated with EM.

3. Methodology

3.1 Data

The Financial Times Stock Exchange (FTSE) 350 index is the initial population from which our study sample is drawn from 2010 to 2019. The FTSE 350 index represents the largest collection of UK firms that were continuously listed on the London Stock Exchange (LSE) by market capitalisation. We excluded financial, utilities, and mining firms as they have unique financial reporting requirements and differing regulatory frameworks (Klein, 2002, Habbash, 2019). Also, industries with less than six companies are excluded from our empirical analysis to be assured of unbiased outcomes from statistical modelling and the validity of their generalisation to the management of organisations in the UK (Gras-Gil et al., 2016, Duong and Pescetto, 2019).

3.2 Accrual Earnings Management

We employed the modified Jones model introduced by Dechow et al. (1995) to improve the original model's Jones (1991) model as previous literature recommended that the modified Jones model is effective and provides strong EM tests compared to the Jones model (Dechow et al., 1996, Waweru and Prot, 2018). The modified Jones (1995) model's objective is to extract DACC by subtracting the non-discretionary portion from total accruals. This study used a two-step procedure to estimate DACC.

The first step is to estimate the following model to measure the non-discretionary portion:

$$\frac{TAC_t}{A_{t-1}} = \beta_1 \frac{1}{A_{t-1}} + \beta_2 \frac{(\Delta REVS_t - \Delta RECS_t)}{A_{t-1}} + \beta_3 \frac{P,P,E_t}{A_{t-1}} + \varepsilon_t \qquad (1)$$

Where, TAC_t represents total accruals, measured as earnings before extraordinary and abnormal items minus the cash flow from operations, aligning with the cash flow approach. $\Delta REVS_t$ represents change in company revenues in year t. $\Delta RECS_t$ denotes change in company receivables in year t. The symbols P, P, E_t stand for property, plant, and equipment in year t. Lastly, ε_t is the residual in year t.

Following prior literature, this study used a lag of total assets (A_{t-1}) in the model as a deflator (Dechow et al., 1995, Gul et al., 2003, Arun et al., 2015). The choice of one period lagged asset value is to lessen the heteroscedasticity in residuals (White, 1980). To measure discretionary accruals (DACC), the second step is to use the following model:

$$DACC_t = \left[\frac{TAC_t}{A_{t-1}}\right] - \left[\beta_1 \frac{1}{A_{t-1}} + \beta_2 \frac{(\Delta REVS_t - \Delta RECS_t)}{A_{t-1}} + \beta_3 \frac{P,P,E_t}{A_{t-1}} + \varepsilon_t\right] \qquad (2)$$

DACC variable of primary interest and is used as a proxy to represent accounting earnings' misreporting through the accrual earnings management (AEM) method. The absolute value of DACC is used instead of signed DACC. This is because we aim to capture the magnitude of earnings manipulation rather than the direction (Dimitropoulos and Asteriou, 2010).

Quantile Regression

A random variable y with the probability distribution function:

$$f(Y) = \Pr(y \leq Y) \tag{3}$$

The τ-th quantile of Y is defined as the inverse function as follows:

$$Q(\tau) = \inf [\, f(Y) \leq \tau] \tag{4}$$

Where $0 < \tau < 1$, median case is Q (1/2). The random variable y is defined as a vector space [Y1…, Yn], and hence, the median of the sample is the value that minimises the total of absolute deviations. It is as follows:

$$\underset{\xi \in R}{Min} \sum_{i=1}^{n} |Y_i - \xi| \tag{5}$$

Hence, the general $\boldsymbol{\tau}$-th sample quantile $\xi(\tau)$ that is like Q ($\boldsymbol{\tau}$), can be classified to solve the problem of optimisation as follows:

$$\underset{\xi \in R}{Min} \sum_{i=1}^{n} \rho_\tau(Y_i - \xi) \tag{6}$$

Where $\rho_\tau(z) = z(\boldsymbol{\tau}\text{-}I(z<0))$, and $0 < \boldsymbol{\tau} < 1$. The I(.) represents the indicator function. To estimate linear conditional quantile, the following can be used:

$$\overset{\Lambda}{\alpha}(\tau) = \arg \underset{\alpha \in R^p}{min} \sum_{i=1}^{n} \rho_\tau(Y_i - x'\alpha) \tag{7}$$

$\boldsymbol{\tau} \in (0,1)$ is for any quantile. The quantity $\overset{\Lambda}{\alpha}(\tau)$ is known as the $\boldsymbol{\tau}$-th regression quantile. The case $\tau = ½$ minimises the absolute residual sum and corresponds to the regression median.

For instance, if the conditional distribution $\boldsymbol{\rho}$-th quantile of the dependent variable, the QR conditional model can be donated as:

$$Y_{it} = x'_{it}.\, \alpha_\rho + u_{\rho it}$$

$$QNT_\rho\ (Y_{it}|x_{it}) = \inf\,[y: f_{it}(Y|x)\ \boldsymbol{\rho}] = x'_{it}\ .\ \alpha_\rho \qquad (8)$$

$$QNT_\rho\ (u_{\rho it}|x_{it}) = 0$$

Where, $QNT_\rho\ (u_{\rho it}|x_{it})$ is the $\boldsymbol{\rho}$-th quantile (conditional) of Y_{it} on the repressor vector (x_{it}), α_ρ represents the vector parameters that are estimated for various $\boldsymbol{\rho}$-values in (0,1), the error term is $u_{\rho it}$ with a cumulative density function $f_{u\rho}$ (.|x) and $F_{u\rho}$ (.|x). The conditional distribution of the explained variable on x is used to defend the $f_{u\rho}$ (. |x) value. The entire distribution of y conditional on x will be shown by switching the $\boldsymbol{\rho}$ value from 0 to 1.

However, the α_ρ the estimator can be acquired by minimising the absolute residual sum by using the following model:

$$\min \textstyle\sum_{it:\, u_{\rho it}>0} \rho\ x\ |u_{\rho it}| + \sum_{it:\, u_{\rho it}<0} (1-\rho) x\ |u_{\rho it}|$$

$$= \min \textstyle\sum_{it:\, Y_{it}-\, x'_{it}.\alpha_\rho>0} \rho\ x\ |Y_{it} - x'_{it}.\, \alpha_\rho| + \qquad (9)$$

$$\min \textstyle\sum_{it:\, Y_{it}-\, x'_{it}.\alpha_\rho<0} (1-\rho)\ x\ |Y_{it} - x'_{it}.\, \alpha_\rho|$$

Hence, the α_ρ estimated values in equation 9 have no explicit form and the techniques of linear programming can be used for the equation to resolve the problem of minimisation. We used E-views to run QR and obtained the α_ρ estimators.

This study classified data into four percentiles to reflect the motive and degree of earnings manipulation by the offending managers. In line with Jones (2010), it is assumed that earnings management estimates in the bottom percentile (0 to 25) are dominated by firms where the preparers of account statements are uninventive or less skilled in applying the flexibility afforded to them by the myriad of accounting conventions. Hence, they rigidly adhere to traditional valuation rules and regulations with very rare departures. Firms within the 25 to 50 percentiles are expected to comprise account preparers who are more likely to adopt accounting conventions to produce a "true and fair" value of the business's transactions. This is the ideal scenario for users as the managerial team makes the most flexibility within the accounting conventions to maximise the value generated for their stakeholders. In the third quantile, firms within the 50 to 75 percentiles are presumed to be managed by staff exploitative in the way they interpret and apply conventional accounting reporting policies to serve their interests primarily. The last category of firms (above 75 percentile) is reported to involve account preparers who aggressively exaggerate conventional accounting rules and guidelines to suit their interests at the expense of users. To the best of our knowledge, this study is the first to examine how CG characteristics affect the firms' earnings management activities within these four distinctive boundaries of earnings management.

The regression model used to investigate the association between EM and CG is as follows:

$$DACC_t = \beta_0 + \beta_1\,(BC_t) + \beta_2\,(CV_t) + \varepsilon_t \qquad (10)$$

The BC symbol stands for board characteristics and represents a vector of corporate board characteristics, including board size, board gender diversity, board tenure, board independence, CEO duality, and board meetings. CV represents the vector of control variables and is associated with company characteristics. Following Charitou et al. (2004), we categorise the various company characteristics used in this study into five classes. They are (i) financial leverage (total liabilities divided by total assets), (ii) operating cash flows (cash flows from operations divided by total assets), (iii) liquidity (current assets divided by total assets), (iv) profitability (return on assets calculated as earnings before interest and taxes scaled by total assets) and (v) market ratio (market to book value).

4. Data Analysis and Discussion

4.1 Descriptive Statistics

Table I reports the descriptive statistics of all the variables underpinning our empirical analysis. It presents mean, median, maximum, minimum, and standard deviation values. The mean value of the modified jones model (MJM) is 0.045, meaning that managers do involve in earnings mismanagement by using accrual earnings management (AEM).

In terms of corporate board characteristics, the mean value of board size (BS) for the full sample of study (FTSE 350) is 9.6298, suggesting that an average UK company has around ten directors on its board. Similarly, Peasnell et al. (2005) and Zalata and Roberts (2016) reported comparable mean values of BS 8.010 and 8.47, respectively, for the UK firms. Also, the maximum and minimum value of BS range from 21 to 4, indicating a significant variation in the number of directors on the board of UK companies. The mean value of board gender diversity (BGD) is 16.25, meaning that a typical UK non-financial firm has roughly two females for every ten directors on the board. The mean value of board tenure (BT) for our full sample of the sample derived from the original list of the FTSE 350 is 5.61, indicating that an average director spends approximately six years on the board. The NBM mean value of the full sample of 134 companies is 8.594, suggesting that boards at a typical UK non-financial firm meet around nine times in a normal year.

Insert Table I

4.2 Correlation Matrix

This study used the Kendall Tau-b correlation presented in Table II to test whether there are multicollinearity issues between the set of independent variables. Prior studies highlighted that the correlation coefficient must be equal to or less than 70 percent to conclude that there is no multicollinearity problem (Alqatan et al., 2019, Salem et al., 2020). Nevertheless, the results in table 3 suggest that the potential for multicollinearity among the explanatory variables in our regression model is low since all the estimated coefficients are below 70 percent. The highest correlation coefficient reported is 45 percent between market to book value (MR) and cash flows (OCF).

Insert Table II

4.3 Quantile Regression Results and Discussion

We examine the impact of corporate governance (CG) on earnings management (EM) among UK non-financial firms. A quantile regression results on the partial correlation between CG characteristics and earnings management approximated using the Jones model are presented in Appendix Table IIIa and IIIb for the percentiles 0.05 to 0.95. The BS is negatively and significantly associated with EM, mainly among the third (0.50 to 0.75) and fourth (0.75 and above). The negative result implies that large boards are more effective in mitigating EM compared to smaller boards among the companies that engage in a greater extent of earnings manipulation (Xie et al., 2003, Saona et al., 2020). Hence, the insignificant relationship results in the other quantiles are probably because the number of board members has passed the optimum level; hence the disadvantages somewhat cancel out the benefits mentioned earlier across the percentiles.

The analysis suggests that BGD is negatively and significantly associated with earnings mismanagement at the third quantile (50 to 70) and fourth quantile (75 and above). This shows that women are more attentive to detail, hence more likely to discover inaccurate entries in the accounting statements. Hence, the large coefficients at the top quantiles suggest that female directors greatly impact firms who aggressively manipulate their earnings to attain personal gains. Indeed, the agency theory perspective pointed out that female directors enhance the monitoring process of the board due to their ethical and risk-averse behaviour, which reduces agency costs and leads to a high quality of financial reporting (Gull et al., 2018, Orazalin, 2019, Sial et al., 2019).

Insert Table IIIa

Insert Table IIIb

The BT is negatively related to EM among all the percentiles of quantile regression. In terms of significance, it is most important among the bottom quantile that captures firms who rarely engage in overt EM practices. The negative result highlighted that long-tenured board directors help reduce the incidence of EM among our sample of UK non-financial companies since they have an in-depth knowledge of the company operations and practices compared to short-tenured board directors (El Diri et al., 2020). However, BT's insignificance at the top percentile indicates that these long-term experienced directors are more likely to get away with collaboration with those dishonest managers involved in false accounting.

In terms of BIP, results in table shows that it is positively but insignificantly associated with EM across all the percentiles. Also, E_CEO is mostly insignificant and positively associated with EM among the bottom and the middle quantiles except some of the third and fourth quantile where it is positive and significant. This positive finding is supported by evidence in prior studies (Nuanpradit, 2019, Bouaziz et al., 2020). The proponents of agency theory claimed that it is essential for both roles to be separated to limit the possibility that members of the senior management team would initiate accounting reporting policies that help them achieve their objectives at the expense of shareholders.

Regarding NBM, it is reported that the coefficient on this variable is significantly negatively associated with EM across the third and fourth quantile. It is noteworthy that prior studies have also observed that frequent meetings enable board directors to discuss more complicated issues in greater detail, which in turn enhances the monitoring function of the board with a concomitant reduction in earnings misreporting (Xie et al., 2003, Sajjad et al., 2019).

Additional Analysis

For additional analysis, we used the alternative model of accrual earnings management to investigate whether board characteristics have similar impact on it or not. Kothari et al. (2005) pointed that the modified jones model doesn't take the performance of the firm into consideration that can cause misspecification in the EM proxy. Hence, they introduced performance-adjusted model and added return on assets (ROA) to address the misspecification and heteroskedasticity issues. Therefore, we used the following model:

$$\frac{TAC_t}{A_{t-1}} = \beta_1 \frac{1}{A_{t-1}} + \beta_2 \frac{(\Delta REVS_t - \Delta RECS_t)}{A_{t-1}} + \beta_3 \frac{P,P,E_t}{A_{t-1}} + \beta_4 \frac{ROA_t}{A_{t-1}} + \varepsilon_t \qquad (11)$$

We used the standard deviation of the performance-adjusted model residuals of the DACC as a proxy of EM during the five years window before the year t.

Insert Table IVa

Insert Table IVb

The table IVa and IVb confirms that the results are consistent with the main analysis. We find that board size, board tenure and board gender diversity is inversely associated with the EM. Also, consistent with the main result, NBM is negatively associated with E.M. Overall, the additional analysis shows that board characteristics mitigate earnings management.

Conclusion

We investigated whether there is a non-uniform association between EM and board characteristics. Our results show that the association between EM and board characteristics widely vary across the quantile levels of discretionary accruals. We document evidence that board size and female board members reduce the extent of earnings manipulation, especially where companies are aggressively using EM. Also, the tenure of board members is negatively linked with EM since they have the experience and knowledge to improve the monitoring process. It is also found that board meeting helps companies to reduce earnings manipulation as it provides them with more opportunity to discuss such issues and enhance the monitoring process. For additional analysis, we used a performance-adjusted model and reported similar results.

One of the limitations of our study is that it is limited to UK firms. Future studies will benefit from a larger sample that includes firms from both shareholder-oriented and stakeholder-oriented corporate governance environments. Also, examining the impact of both board and audit characteristics on earnings management may make a significant contribution to earnings management literature. Our results will benefit UK firms by helping them to rethink their board composition. It will also help policymakers understand how the corporate board can help ensure the quality of financial reports.

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