

# The impact of corporate governance on controlling discretionary accrual: A study of impacts on earnings management based on FTSE350, UK

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## Abstract

*While the interests of shareholders contradict with the interests of the managers, agency problem appears. However, the principle of the agency theory is to establish the relationship between the shareholders and managers; and this paper relies on the involvement of corporate governance who can resolve the issues between earnings management and the underlying causes of the earnings management based on the FTSE350, UK. This study has considered the performance matched discretionary accruals to measure the magnitude of the discretionary accruals by considering OLS regression model.*

*The findings of this paper reveal the mixed results as board independence, non-executive director's fees and block holder have significant impact whereas Board Meeting, the presence of female in the board and board size do not have significant impacts on controlling discretionary accruals.*

*In terms of the estimation of discretionary accruals, there are various models identified in the past. Hence, it is recommended that the models have to be tested and compared regularly to identify the most significant one; to conduct research for a particular market. On the other hand, identifying most effective models to calculate the value of discretionary accruals is quite crucial as most of the researchers are still using Modified Jones's Model (1995).*

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## 1. Introduction

Since the beginning of 21<sup>st</sup> century earnings management has been a huge issue within the corporations, their internal and external stakeholders. In the conference in September 1998, the chairman, Arthur Levitt, of the Security of Exchange Commission proclaimed that "the SEC in no uncertain terms to a serious, high-priority attack on earnings management" (Loomis, 1999, P. 76), hence, they formed a Blue-Ribbon Panel by the Public Oversight Board.

There used to be long arguments on earnings management concerns. It is so widespread that the managers and directors of the organisations used to adopt earnings management practice as a tool to meet the expectations of different parties involved in the organisation (Loomis, 1999).

Hence, the relevance of the controlling device of the earnings management has been the area of interest to ensure that the earnings quality has been properly maintained. This research endeavours to estimate the value of discretionary accruals by adopting performance matched discretionary accruals and identifies associations between various factors of corporate governance.

**Research Aim:** analysing the Impact of corporate governance on controlling earnings management practice in the UK.

### Research Objectives:

- To Estimate the value of earnings management by using performance matched discretionary accruals model.
- To assess and analyse the Impacts of corporate governance variables on controlling earnings management.

### 1.1. Earnings Quality and Earnings Management

This research has prepared the concept to explore earnings management based on various models. Since Healy (1985) this topic has drawn the attention of the researchers, regulators, accountants, auditors, financial analyst, and other users of financial statements. This research has adopted the method of estimating earnings management driven through accruals accounting system; hence, identify the impacts of governance factors on manipulating earnings quality.

Subsequently, the development in the study of earnings management model has been abundantly moved forward. It was developed by Deangelo (1986) with a minor change from Healy (1986). He assumed that the nondiscretionary accruals are constant. This model has ignored the economic changes of the business. Further, Jones (1991) has developed the model where the consideration of changes in revenue and property, plant and equipment was made relevant, while computing non-discretionary accruals. This model was later further developed by Dechow, Sloan, and Sweeney (1995) which is also identified as modified Jones' model. This model has been developed by inserting changes in total receivables while computing non-discretionary accruals. changes in receivables have been reduced from changes in revenue, in the model.

Modified Jones' model (1995) was later concluded as less powerful model in case of extreme financial performance by Dechow et al (1986); the reason is that in these situations isolating discretionary accruals is an issue. The other important changes in advancing models of earnings management have been appeared when Kasznik (1999) developed Kasznik model. This model was formed by introducing another independent variable which is changes in net cash flow from operating activities.

After Kasznik (1999) Model, another effective earnings management model formed as Kothari-Jones Model (2005). This model was basically based on firm performance; hence, this is also called as Performance Matched Model. The contribution in developing models after performance matched discretionary accruals has not been very significant despite of changes in IFRS and Corporate Governance codes.

Therefore, the relevance of the research on earnings management is increasing. Identifying the better explanatory models of earnings management is equally important. The use of manipulating earnings figure has been very important since the rise of larger corporations. Accounting scandals at the start of first decade of this century has reached in culmination and many corporates has faced bad fortunes due to audit failures around the world for instance; Xerox, Enron, WorldCom, Health South in the USA, Parmalat, Vivendi in Europe, Satyam Computer Services, Sino-Forest in Asia (Abdullahi, 2015; Agrawal and Chatterjee, 2015).

Hence, Lev (1989) suggests that the earnings quality is major part to be considered in the research on continuous basis since there can be manipulations all the time. The managers and directors consider their discretionary rights and smooth earnings relying of the accounting principles. Hence, the practice of earnings management is undeniable as per the practice of these concepts in today's activities of the corporations (Barnea et al, 1976).

### 1.2. Corporate Governance and Earnings Management

Earnings management does reflect the true value of the financial performance of the organisation; hence, this sometime is not reliable resource to use as a tool for financial decision-making factor. This practice may misguide the stake holders while making financial decision. If the managers' opportunistic behaviour is avoided, the practice of earnings management may create reliable financial report, hence, may help in right decision making to the investors and shareholders (Wild, 1996; Dechow et al, 1995; Chang et al, 2010). The implications of earnings management can have impact on stock markets regulators, shareholders, creditors, suppliers, investors, and other concerned stakeholders. The rise in the concept of earnings management have been started since the larger organisation as mentioned earlier have been collapsed.

Hence, all the interested parties are more interested in controlling earnings management from when corporate governance started playing very important role. These are considered as monitoring system to earnings management. The main idea of developing the strategy of putting corporate governance in place

is to resolve the issues and concerns of the agent. The agency problem is a tension between the shareholder's interest and manager's interest (Demsetz & Lehn, 1985; Colaco et al, 2011).

The remaining part of the paper gets followed by section 2 which deals with the literature review and theoretical framework. Further, section 3 deals with research design, section 4 embraces the empirical models and discussions. In the end section 5 includes the conclusions and future research context.

## **2. Literature Review and Hypothesis Development:**

### **2.1. Introduction**

The theoretical approaches in terms of corporate governance cannot be bound in certain fixed framework as there are various point of views in establishing, operating and developing the business activities. However, as per the concerned matters of this study, mainly, this study deals with four different types of theoretical framework names as agency theory, stakeholder theory, stewardship theory and institutional theory.

### **2.2. Agency Theory**

This theory deals with the relationship between the owners and the managers. This theory alludes that all the interested parties are motivated by their own interest; hence, this may cause the contradiction between the parties' interest. For instance, employees are interested to bonuses and pay-rise while shareholders are interested in profit maximisation and wealth maximisation. Therefore, the organisation needs someone who basically represent the agent and play the intermediary role to solve the issues among different parties (Xu et al, 2010).

This concept is even more relevant in the modernised industry as the shareholders do not get directly involved in the management activities. In terms of accounting concept, while adopting agency theories, the interest of the owners and administrators are separately handled (Wulandari & Suganda, 2021). The shareholders hire managers to run the organisation by making best use of the available resources. As the interest of the managers conflict with the interest of the shareholders, the shareholders are more cautious with the behaviour of the management; therefore, the potential agreements are developed in the contractual form. Monitoring activities by the shareholders results very expensive economic practice which may, in practice, result the salary of managers get reduced (Wulandari & Suganda, 2021).

### **2.3. Stewardship Theory**

Stewardship theory basically deals with psychological and sociological drive. This is quite opposite concept of agency theory; as per stewardship theory, the objectives of the organisation and the shareholders play key role while the corporate executives perform their role within the organisation. This concept basically rests on empowerment and facilitation rather than control and direct. This theory does not accept the concept of the agency theory because agency theory is more individualistic and relied on the fact that the corporate executives are more motivated with their self-interest (Kankanamage, 2015).

The perspectives of the stewardship are different from the perspectives of the agency theory. In stewardship theory, it is believed that the managers and directors of the organisation are reliable and trustworthy, hence, consideration of huge efforts and money in monitoring the performance of the managers is not necessary (Kankanamage, 2015). The belief is that the agents like managers and directors are not led by their opportunistic behaviour and self-interest purpose.

Moreover, this concept believes that the managers and directors focus on collective practice due to the fact that they are motivated by the objectives of the organisation. The managers are motivated by the interests of the owners rather than being individualistic; hence, they generate more profit and share more dividend to the owners of the business; and it is more obvious that the share price gets increased (Katmon & Farooque, 2017).

### **2.4. Stakeholder Theory**

The concept of the stakeholder theory was developed around 1940s and re-emerged in 1980s which defines stakeholder as the party who can influence and gets influenced by the organisations' objectives. Hence, stakeholder incorporates many different parties who have interest on the organisation. There are

some stakeholders like employees, investors, customers who are considered as directors. Government can be considered as indirect stakeholders who indirectly influence the organisation (Hasan & Ahmed, 2012).

This theory admits the multilateral agreement between the organisation and all stakeholders. The company and the internal stakeholders are associated by formal and informal regulations. As these stakeholders are directly related, the history they have created can basically form the norm. On the other hand, the external stakeholders like shareholders provide the financial support to the organisation. Similarly, customers, suppliers and community are other external stakeholders who also have interest in the organisation and are restricted by the formal and informal rules and regulations of the organisation (Hasim and Devi, 2008).

Moreover, the theory claims that the organisations and communities are dependent to each other, hence, the organisation requires to show their responsibilities to the society than only considering the interest of the shareholders. The researchers Greene (2014), Gaston (2017) has considered the presence of stakeholders in governance structure. The presence of managers, bankers, employees, customers and other members of the community should have space in the governance structure.

## 2.5. Institutional Theory

Institutional theory believes on the organisational rules and regulations; and these rules and regulation actually govern the organisation efficiently. The access to the resources, the activities in the organisation have to be legitimately managed. However, it cannot be guaranteed that conformation of the rules and regulation actually lead the company successfully (effendi et al, 2007).

In terms of corporate governance as suggested by institutional theory, they are established to ascertain the goals and objectives of the organisation are clearly defined. Corporate governance has to ensure that the business environment, social structure, historical context is in the line with the objectives of the organisation (effendi et al, 2007).

This theory suggests that corporate governance has to ensure that the change management has been appropriately considered and the changes are integrated within the organisational process. Institutional theory further claims that the changes can be adopted or rejected as per the suitable environment of the organisation. The social, environmental and historical context of the organisation have to be appropriately analysed before adopting or rejecting changes (Ebrahim, 2007).

## 2.6. Summary

In terms of the theory discussed, agency theory has drawn the attention of the most researchers. In terms of the earnings management too, it has been argued that the managers and directors of the organisation most likely practice the manipulation of the earnings quality because of the opportunistic behaviour.

On contrary, the other theories; stewardship theory, stakeholder theory and institutional theories condemn the ethics concerns and anti-social activities in the organisation for personal benefit. Hence, it can be agreed that the adoption of these theories can reduce the practice of earnings management. The roles of corporate governance and external audit can ethically and socially be guided; hence, they can have impacts on controlling earnings management.

## 2.7. Hypothesis Development:

### 2.7.1. Board Independence

Many literatures by fama (1980), Jensen (1983), Man (2013), Raeewan and Ajward, (2019) have demonstrated in their paper as the board of directors are strong organ of the corporations. Corporate governance structure can be viewed as internal and external governance structure in which board of directors are considered as an internal corporate governance structure. In addition to this, they made an argument on the status of board of the company whose main objective is to make effective monitoring to the management actions.

As this body of corporate governance is very important, they mainly play the role of being vigilant to obtain profit maximisation as well as wealth maximisation. The involvement of non-executive directors primarily is for the purpose of making independent decisions and supporting those ones. They actually

play mediatory role in which they work for both shareholders and managers. Moreover, non-executive directors do make overview of the decisions before they are implemented from which they can make a judgement of the impact on each stakeholder (Bao and Lewellyn, 2017).

*H1: The independent boards and discretionary accruals are negatively associated.*

### 2.7.2. Board Meetings

Aligning with the principle of the best practice of corporate governance, this enriches the overall performance of the organisation. However, the issue in the research is to test whether earnings quality gets affected from corporate governance. Hence, number of board meetings are considered as one of the independent variables in this research which can have impact on earnings quality (Vafeas, 1999; Carcello, et al. 2002; Subbhasinghe and Kehelwalatenna, 2021).

Other researchers Abdel (2012) and Salch et al (2020) have argued on board meeting as one of the most important aspects in integrating earnings quality as this frequently aware management about the ethical aspects of financial preparation. On the other hand, Zuo and Guan (2014), Lopes (2018) have advised that there is issue on finding right time for every member of the board. Hence, lack of time becomes an issue to get collective work from the involvement of all members of the board. However, they have brought same ideas as Abdel (2012) and Salch et al (2020), which signifies the better earnings quality when making board meeting frequently. Shareholder's interests also get addressed due to this practice.

*H2: Board meetings and earnings management are negatively associated.*

### 2.7.3. Board Size

The research on the topic of the impacts of corporate governance on earnings management is continually done since accounting manipulation reached in its pinnacle point. Board size has been chosen as one of the variables which has impact on earnings quality. This independent variable in relation to discretionary variables has been discussed from various dimension by (Jensen, 1993; Yermack, 1996; Dalton et al., 1998; Harmalin & Weisbach, 2003; Puat and Susela, 2013; Bassiouny et al, 2016).

Board size in this study represents the number of members in a board. Hence, agency theory emphasizes on larger size of the board. They believe that larger board size can be vigilant to address agency problems. The management may have been directed for their self-interest. As the members are more in larger boards, they have better efficiency to control agency problems. Moreover, the organisation is governed by the dominance of CEO (Seng and Findley, 2013).

But chief executive officer may have been driven by some contractual obligations or self - interest issues or by both. They may intimidate the other managers and internal auditors. Larger board can be a remedial source in this kind of situation. Thus, the profit maximisation or wealth maximisation or other objectives those can be market development, market growth as per the interest of shareholders. In such cases, larger board can be positive source to make decisions and act on them according to the interest of shareholders (Abbadi et al, 2016).

*H3: The size of board and discretionary accruals are negatively associated.*

### 2.7.4. Non-executive directors' Fees

The former researchers (e.g., Bhagat and Black, 1999; Bhagat et al., 1999) have documented in their report about shared ownership. They argue that higher share ownership helps the organisation to be on the line of agency theory. The directors get monitored sufficiently in this model of the firm. Other statement on the behalf of this topic is found as "NEDs remuneration can be a useful and legitimate way of aligning the directors' interests with those of shareholders" (Hampel Report, 1997, p.10).

Other researcher Jensen (1989) has investigated the agency problem based on larger equity ownership and smaller equity ownership. The report has identified that the larger equity ownership is more favourable to reduce the agency cost and improve the cost effectiveness than the smaller equity ownership. In addition to this, Chtourou et al. (2001) also recognises the positive relationship between reducing discretionary accruals and non-executives' ownership.

In regard to this research, it is assumed that the non-executive directors are paid appropriate fees. This is also assumed that the time utilised, commitment and devotion of the non-executive directors are

valued reasonably. This statement has been reinforced by Mallin (2007) in her research as the fees paid for the directors determines the meeting involvement and its effectiveness of the board activity. The firm gets benefitted by getting appropriate advice, long term goals, shareholders' interest.

H4: *The relationship between non-executive director's fees and earnings management is negatively associated.*

### 2.7.5. Block holders' Leadership

As discussed by (Jensen and Meckling, 1976; Shleifer and Vishny, 1997), block holders have more influences in company decision making opportunity than small shareholder those are acting externally. These researchers actually started identifying if block holders affect in managing accounting manipulation. Jensen and Meckling (1976) were those ones who studied on block holders to examine whether they can have impact on agency cost and identified that block holders make very positive impact on reducing agency cost. The reason is that the block holders can effectively control the behaviour of the manager and can monitor in the discretionary rights of the managers (Shleifer and Vishny, 1997; Barclay and Holderness, 1991).

From the research on this part as well, as found in institutional ownership and managerial ownership, block holders made positive impact on the governance oversight. This concept basically was reviewed and supported to the view that this monitors the activities of executive directors. Apart from this, in the empirical test by Cronqvist et al. (2008); Persons, (2006), this has been approved as being supported to the idea that the block holders monitor the functions of executive directors. They control the discretionary rights of the managing directors. Hence, this has impact on earnings quality. There are various accounting practices those can support manipulation; however, aggressive accounting can be controlled and block holder's presence in firm monitor the internal control. So, this is argued as positive relationship in reducing earnings management practices in presence of block holders.

The data collection is being considered from the company's annual report to collect block holder's ownership. In this research, the data is considered from UK firms, hence this variable to identify is feasible because the listed companies have to disclose the report if an entity has more than 3% shares in accordance with sections 198 to 208 of the Company Act 2006. Therefore, the hypothesis is created as following:

H5: *A block holding of 10% or more; and earnings management are negatively associated.*

## 3. Data and Methods:

### 3.1. Data

The data collection was made based on the FTSE350 companies of the UK. The reporting period initially for 10 years was targeted, from 2010 - 2020. The data has been collected from FAME (Financial Analysis Made Easy). The data are not available for all the variables in; hence, this research incorporates the data of 6 years from 2014 - 2019. This study has considered the UK Corporate Governance Code based on which the data has been collected. As the UK Corporate Governance Code keeps on changing, its effect on the financial reporting may effective differently. Hence, to measure the current situation of the earnings management, and the impact on this by corporate governance is very essential. This helps to identify the situations of earnings management and the effectiveness of corporate governance in current business context.

The firms listed in FTSE350 index are highly monitored by corporate governance law, hence, the data in relation to this index is quite relevant to measure the effect of both of them on earnings management. The corporations used in this study are listed companies, hence, the data are publicly available.

On the other hand, there are various regulations and compliances the publicly listed companies have to abide; hence, this study has chosen these corporations to identify the impact of corporate governance on earnings management. The regulations set by corporate governance are strongly adopted in these organisations. Hence, these, public listed companies are chosen in this research as the factors of corporate governance can have impact on shaping earnings quality in such corporations.

Further, since the data of all the variables and all the years have not been available via FAME, this study has used other sources for data collection. This study has collected the data those are freely

available from MSN, National statistics, Gurufocus, and Nasdaq as per the need to conduct this empirical research.

### 3.2. Variables and Measures

Moreover, there are 6 independent variables and 4 control variables based on corporate governance which has been used to form first regression model. The independent variables used in the study are Board Independence, Board Meetings, Board Size, Non-executive directors’ Fees, Block holders’ Leadership whereas the dependent variable is earnings management.

The summary of the variables is presented in the table below:

**Table 1: Summary of the variables**

| Symbol                       | Variable                            | Operationalisation  |
|------------------------------|-------------------------------------|---|
| <b>Dependent Variable</b>    |                                     |   |
| EM                           | Earnings management                 | Discretionary Accruals in its absolute value based on performance measured discretionary accruals Model.                            |
| <b>Independent Variables</b> |                                     |   |
| BoardSize                    | Board Size                          | The total number of directors in the board committee.   |
| BoardInd                     | Board Independence                  | The independence of the board measured dividing total board members by independent non-executive members.                           |
| BrdMeet                      | Board Meetings                      | The number of meetings held in an accounting period by the board members.   |
| FemaleBoard                  | Gender diversity                    | The percentage of female presence in the board.   |
| NEDFee                       | Non-executive directors’ fees       | The total amount in a year paid to each non-executive director.   |
| Blockholder                  | Block holders’ ownership            | This is regarded as a dummy variable. The value one is considered when the external stockholder owned 10% and more; zero otherwise. |
| <b>Control Variables</b>     |                                     |   |
| Leverage                     | Leverage                            | This is ratio between the long-term debt and total asset.   |
| CFO/TA                       | Cash Flow from Operating Activities | This is calculated dividing cash flow from operating activities by value of total asset of the beginning of the accounting year.    |
| ROA                          | Return on Asset                     | The percentage of return on Asset.  |
| Size                         | Size                                | This is log value of total assets at the end of the accounting period.  |

#### 3.2.1. Earnings management Variables:

In this empirical research, two main factors have been included to examine the impact of corporate governance on earnings management. Firstly, earnings management has been estimated by using performance matched discretionary accruals which considers different variables as below:

$$TAC_{i,t} = \alpha \left( \frac{1}{TA_{i,(t-1)}} \right) + \beta_1 \left( \frac{\Delta Rev_{i,t} - \Delta Rec_{i,t}}{TA_{i,(t-1)}} \right) + \beta_2 \left( \frac{PPE_{i,t}}{TA_{i,(t-1)}} \right) + \beta_3 (ROA_{i,(t-1)}) + \epsilon_{i,t} \dots \dots \dots (i)$$

Healy (1985) and Jones (1991) have used balance sheet approach, as mentioned in equation (v), to calculate total accruals in which following formula has been used. This can be mentioned as below:

$$TA_t = (\Delta CA_t - \Delta Cash_t - \Delta CL_t + \Delta STDEBT_t - Dep_t) \dots \dots \dots (ii)$$

Were,

$\Delta CA_t$  = Change in current assets in year t.

$\Delta Cash_t$  = Change in cash in year t.

$\Delta CL_t$  = Change in current liability in year t.

$\Delta STDEBT_t$  = Change in current maturities of long-term debt and other short-term debt included in current liabilities between current year t and previous year t-1.

$Dep_t$  = Depreciation and amortisation expense in year t.

Further, the first stage uses balance sheet approach to calculate total accruals as mentioned above while the second stage is used to compute non-discretionary accruals as below:

Estimates of the firm specific parameters  $\beta_1, \beta_2, \beta_3$  are generated using the following model in the estimation period.

$$NDA_{i,t} = \alpha \left( \frac{1}{TA_{i,(t-1)}} \right) + \beta_1 \left( \frac{\Delta Rev_{i,t} - \Delta Rec_{i,t}}{TA_{i,(t-1)}} \right) + \beta_2 \left( \frac{PPE_{i,t}}{TA_{i,(t-1)}} \right) + \beta_3 (ROA_{i,(t-1)}) \dots\dots\dots (iii)$$

The heteroscedasticity in this model could be the problem because of the variables involved in the regression analysis due to which the original variables are deflated by total asset at (t-1) as many researchers (Chen & Zhang, 2012; Greene, 2014) admit that variables used in performance matched discretionary accruals models are deflated by average total assets to lessen heteroscedasticity.

Thirdly, discretionary accruals are computed by  $DA_{i,t} = TA_{i,t} - NDA_{i,t} \dots\dots\dots (iv)$

While calculating the value of discretionary accruals, this research has not paid attention on the particular event and concentrate on the values of the earnings management. It does not consider the signs while making regression analysis. Hence, the absolute value of the discretionary accruals has been created for the analysis; the reason behind this is because the manipulation can be done in both positive and negative ways to meet the contractual obligations (Warfield et al, 1995; Klein; 2012).

### 3.2.2. Corporate Governance Variables:

This research has considered corporate governance as a monitoring device of earnings management. Hence, independent variables are the attributes of corporate governance like board size, board independence, board meetings, presence of female in the board, non-executive directors' fees, and block holder those have been considered in this research.

Much research in the past has relied on the performance matched discretionary accruals while estimating the value of earnings management. Performance matched discretionary accruals is basically developed from a cross-sectional regression of the modified Jones Model (1991). While comparing the models, the cross-sectional model by Kothari et al (2005) has been found as more effective than the time series model developed by Peasnell et al (2005).

### 3.2.3. Control Variables:

As per the nature of corporate governance and earnings management, the number of exogenous variables is to be controlled. The reason for that is because the estimation of earnings management gets affected by these exogenous variables.

The firm size is considered as a control variable which is calculated by the log of total asset of the firm. Firm size is considered as an exogenous variable because the larger firms can be more opportunistic to manipulate earnings. Managing earnings downward becomes their prime importance to avoid the political costs (Watts and Zimmerman, 1978). Further, according to Zalata & Roberts (2006), they identified that the user of the financial statement finds really difficult to detect overstatement of assets, liabilities and other components of financial statements because of the larger firm size and the nature of the complexity. In contrast, there is other evidence (Atik, 2009) which argued that the larger firms have less opportunity to manipulate earnings quality as the governance of the internal processes and external processes are strongly monitored.

The other exogenous variable is considered as the profitability of the firm which is measured by return on asset (ROA). As per the findings by Jaggi et al. (2009), ROA has negative relationship with earnings management while other researcher Kasznik (1999) has identified positive relationship between return on asset and earnings management. However, in this research, both firm size and return on asset are considered as non-directional prediction because of the different types of impact on earnings management.

Further, the other exogenous variable is considered as Leverage (LEV) as Bekiris & Doukakis (2011) identified that earnings management can be negatively impacted by firm capital structure. On the contrary, the other researchers Othman & Zeghal (2006) has identified that firm capital structure is positively associated with earnings management; hence, the sign of the coefficient has been ignored in this research (Dimitropoulos & Asteriou, 2010).

### 3.3. Model Specification

This papers basically deals with testing hypothesis by considering OLS (ordinary least square) analysis (e.g., Elghuweel et al., 2017; Zona et al., 2018) to identify the impact of corporate governance on earnings quality.

Hence, the empirical model is formed as below:

$$DAC_{i,t} = Boardsize_{i,t} + Boardind_{i,t} + Brdmeet_{i,t} + Femaleboard_{i,t} + NEDFee_{i,t} + Blockholder_{i,t} + Leverage_{i,t} + CFO_{i,t} + ROA_{i,t} + Size_{i,t} \dots\dots\dots (v)$$

$DAC_{i,t}$  = Discretionary Accruals (for firm i during the time t) in its absolute value based on performance matched discretionary accruals Model, where discretionary accruals have been considered as a proxy of earnings management. Further, this paper presents the empirical analyses, comprising the descriptive statistics, bivariate correlations & multivariate regression.

## 4. Empirical Analysis

### 4.1. Descriptive statistics and Analysis

Table 2: Descriptive statistics

| Descriptive Statistics                                      |           |           |           |           |                |             |           |            |           |            |
|---|-----------|-----------|-----------|-----------|----------------|-------------|-----------|------------|-----------|------------|
|   | N         | Minimum   | Maximum   | Mean      | Std. Deviation | Variance    | Skewness  |            | Kurtosis  |            |
|   | Statistic | Statistic | Statistic | Statistic | Statistic      | Statistic   | Statistic | Std. Error | Statistic | Std. Error |
| <b>Panel A: Dependent Variable; Earnings management</b>     |           |           |           |           |                |             |           |            |           |            |
| DAC   | 1520      | 0.0002    | 1.3384    | 0.4882    | 0.3139         | 0.0985      | 0.125     | 0.063      | -1.050    | 0.125      |
| <b>Panel B: Independent Variables; Corporate Governance</b> |           |           |           |           |                |             |           |            |           |            |
| BoardSize   | 1520      | 3.0000    | 16.0000   | 9.8289    | 2.4524         | 6.0142      | 0.104     | 0.063      | 0.089     | 0.125      |
| BoardInd  | 1520      | 30.0000   | 70.0000   | 48.7529   | 8.0342         | 64.5476     | 0.210     | 0.063      | -0.376    | 0.125      |
| BrdMeet   | 1520      | 4.0000    | 8.0000    | 4.7533    | 0.9153         | 0.8377      | 1.229     | 0.063      | 0.974     | 0.125      |
| FemaleBoard   | 1520      | 13.3333   | 100.000   | 46.9460   | 14.0105        | 196.2955    | 0.391     | 0.063      | 0.065     | 0.125      |
| NEDMeet   | 1520      | 0.0000    | 1.0000    | 0.7368    | 0.4405         | 0.1940      | -1.077    | 0.063      | -0.842    | 0.125      |
| NEDFee  | 1520      | 26341.7   | 98135.8   | 51963.9   | 15177.4        | 230352111.3 | 0.544     | 0.063      | -0.577    | 0.125      |
| Blockholder   | 1520      | 0.0000    | 1.0000    | 0.7007    | 0.4581         | 0.2099      | -0.877    | 0.063      | -1.232    | 0.125      |
| <b>Panel C: Control Variables</b>                           |           |           |           |           |                |             |           |            |           |            |
| Size effect   | 1520      | 0.0000    | 1.0000    | 0.2493    | 0.4328         | 0.1873      | 1.160     | 0.063      | -0.655    | 0.125      |
| ROA   | 1520      | -63.2525  | 311.173   | 8.3777    | 18.5684        | 344.7854    | 9.581     | 0.063      | 129.379   | 0.125      |
| CFO/TA  | 1520      | -6.2717   | 0.9915    | 0.0231    | 0.4065         | 0.1653      | -3.821    | 0.063      | 47.596    | 0.125      |

|                    |      |           |         |         |         |           |        |       |         |       |
|--------------------|------|-----------|---------|---------|---------|-----------|--------|-------|---------|-------|
| Growth             | 1520 | 0.1330    | 850.713 | 29.1752 | 49.1624 | 2416.9384 | 8.803  | 0.063 | 107.791 | 0.125 |
| Leverage           | 1520 | -211.8571 | 330.92  | 0.6223  | 16.3619 | 267.7121  | 13.255 | 0.063 | 301.635 | 0.125 |
| Valid N (listwise) | 1520 |           |         |         |         |           |        |       |         |       |

The concern on earnings management has been immensely an important topic of discussion since 2000 and after. Currently, the discussion on this topic has not prioritised, hence, this research has been done to re-open the discussion on earnings manipulation. From above table, the absolute minimum value of earnings management is 0.001 which is similar value to the previous research done by Klein (2002) based on the US firms. However, the absolute minimum value is quite far away from the absolute mean value (0.49) which is different from the researchers of the past researchers (Habbash, 2009). The difference between minimum value and mean value was quite closer in the research done in the past literatures as the minimum value is 0.0001 and the mean value is 0.05. Hence, it can be said that the practice of earnings management in recent days are widely made. Similarly, the absolute mean based on Canadian firms are found as 0.06 and 0.03 based on the French firms by Zeghal (2006). Moreover, it can be argued that the various values of discretionary accrual between firms signifies that the different managers have different level of opportunistic behaviours and different level of discretionary rights.

#### 4.2. Correlation Coefficient

Table 3: Correlation Test

| Correlations |        |           |          |         |             |        |             |             |     |        |          |
|--------------|--------|-----------|----------|---------|-------------|--------|-------------|-------------|-----|--------|----------|
|              | DAC    | BoardSize | BoardInd | BrdMeet | FemaleBoard | NEDFee | Blockholder | Size effect | ROA | CFO/TA | Leverage |
| DAC          | 1.0    |           |          |         |             |        |             |             |     |        |          |
| BoardSize    | 0.0    | 1.0       |          |         |             |        |             |             |     |        |          |
| BoardInd     | 0.0    | .115**    | 1.0      |         |             |        |             |             |     |        |          |
| BrdMeet      | 0.0    | -.157**   | -.065*   | 1.0     |             |        |             |             |     |        |          |
| FemaleBoard  | 0.0    | -.567**   | 0.0      | .146**  | 1.0         |        |             |             |     |        |          |
| NEDFee       | .092** | .116**    | -.066*   | 0.0     | 0.0         | 1.0    |             |             |     |        |          |
| Blockholder  | 0.0    | 0.0       | .382**   | -.051*  | 0.0         | -.058* | 1.0         |             |     |        |          |
| Size effect  | .132** | 0.0       | -.072**  | 0.0     | 0.0         | 0.0    | 0.0         | 1.0         |     |        |          |
| ROA          | 0.0    | 0.0       | .104**   | -.057*  | 0.0         | .084** | 0.0         | -.06*       | 1.0 |        |          |
| CFO/TA       | 0.0    | 0.0       | 0.0      | 0.0     | 0.0         | 0.0    | 0.0         | -.07**      | 0.0 | 1.0    |          |
| Leverage     | 0.0    | 0.0       | 0.0      | 0.0     | 0.0         | 0.0    | 0.0         | 0.0         | 0.0 | 0.0    | 1.0      |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

There is no concern on the collinearity matter in this model; hence, other independent variables have not any type of threat. While making close observation on the value of Pearson correlation, it has been identified that the highest correlation which is about -0.567; between board independence and presence of female members in the board but this value is considered as adoptable and advised as no harm for the model. While analysing the research paper by Abdul Rahman and Ali et al (2006), it has been found that they have considered 77% of the Pearson correlation value and reported that there is no harm in this matter. This concerns have been importantly dealt and identified that many prior researchers have similar type of concerns. Gujarati, (2003) has recommended that the threat of the multi-collinearity threshold is 0.80. Some Other Researchers Yang (2010), Trisnawati et al (2015), Soyemi et al (2017) have claimed that the threshold of the multi-collinearity concerns between the independent variables can be up to 0.9.

Hence, the Pearson Correlation in the above table signifies that there are no issues in between independent variables.

### 4.3. Hypothesis Testing

Table 4: Multivariate Analysis

| Coefficients <sup>a</sup> |             |                             |            |        |       |
|---------------------------|-------------|-----------------------------|------------|--------|-------|
| Model                     |             | Unstandardized coefficients |            | T      | Sig.  |
|                           |             | B                           | Std. Error |        |       |
| 1                         | (Constant)  | 0.412                       | 0.093      | 4.439  | 0     |
|                           | BoardSize   | 0.001                       | 0.004      | 0.133  | 0.894 |
|                           | BoardInd    | -0.002                      | 0.001      | -1.431 | 0.015 |
|                           | BrdMeet     | 0.006                       | 0.009      | 0.669  | 0.503 |
|                           | FemaleBoard | -0.001                      | 0.001      | -0.82  | 0.413 |
|                           | NEDFee      | 0.000002                    | 0          | 3.28   | 0.001 |
|                           | Blockholder | 0.041                       | 0.019      | 2.168  | 0.03  |
|                           | Size effect | 0.094                       | 0.019      | 5.045  | 0     |
|                           | Leverage    | 0                           | 0          | 0.796  | 0.426 |
|                           | CFO/TA      | 0.004                       | 0.02       | 0.188  | 0.851 |
|                           | ROA         | 0                           | 0          | 0.639  | 0.523 |

The table 4 incorporates the variables of corporate governance. These variables are included in the first model to identify the impact of the variables of the corporate governance on the earnings management. The estimation of the discretionary accruals has been identified; therefore, the proxy of earnings management has been considered as discretionary accruals.

In the table the positive and negative sign represents the relationship of the independent variables with the dependent variable. This study has adopted earnings management as an independent variable. The table also presents the P-value. This p-value actually represents the significance of the relationship between an independent variable and dependent variables.

As this table presents the  $\beta$ -value and P-value, the hypotheses test has been made clearer and easy to make interpretation. This clearly shows the type of relationship; whether positive or negative, between dependent and independent variables. The hypotheses created based on each independent variable has been individually dealt as the following.

#### 4.3.1. Board Independence

*H1: The relationship between independent boards and discretionary accruals is negatively associated.*

As mentioned in the hypothesis testing, the proportion of the board independence and the earnings management have negative relationship with each other. As per the result found in the table, coefficient  $\beta = -0.002$ , and P value is less than 0.05). This study finds that board independence has significantly negative relationship with earnings management. This finding is similar to the findings based on Anglo-American countries.

Further, the result found in this research is similar to the previous research based on UK data by Peasnell et al. (2005). In the finding they have identified that the independence of the board directors is negatively related to managerial discretionary rights, especially while performing income-increasing earnings management; hence, they perform the task to eliminate reporting losses and earnings reductions.

These results contradict with findings of some Asian countries like Malaysia (Atik, 2009), Indonesia (Siregar & Utama, 2008) and Hong Kong (Jaggi et al, 2009), Kumar (2017). The results based on those countries have been found as no significant relationship between outside directors and earnings management.

#### 4.3.2. Board Meetings

*H2: The relationship between Board meetings and earnings management is negatively associated.*

As per the expectations, the result is not consistent with hypothesis. It is positive coefficients, and p-value is greater than 0.05 which represents that there is no significant relationship between reducing earnings management and increasing number of board meetings.

There are various opinions on this variable of the corporate governance. The meeting held by the board is not to control the practice of abnormal accrual, it is rather to focus on the urgent manner of the business planning and decision making. This was interpreted and alluded in research by Wu (1973) and Lorsch & MacIver (1989). As per their papers, it has been explained that the meeting is held in urgent matter, hence, there is increment in the numbers of meeting if the business complexities grow. Hence, it cannot be concluded that the number of meetings causes the improvement in the earnings quality.

While making observation on the result of the impact of board size on earnings management, it can be argued that the number of members in the board have negative impact on earnings management, on the other hand, the number of meetings of the board have no significant relationship in earnings quality. Hence, the conclusion can be as the larger numbers of the directors, it is difficult to come to the conclusive decision, hence, the frequency of meetings can be higher since the constructive and potential decision out of the meeting have not been achieved. Therefore, the fruitful decision can be occurred with a smaller number of members in the board. Considering board size in this study, generally, the board size in FTSE350 companies have been larger, the board meetings have not been effective.

Despite of the above interpretation, it cannot be in explained that activities of managers are less effective in terms of delegating meetings to constrain the abnormal accruals. The regressors used in this study cannot ensure that this is the perfect outcome as quantitative research methods cannot measure capture other many measures of the board diligence (Carcello et al, 2002; Bepari et al, 2013).

#### 4.3.3. Board Size

*H3: The relationship between board size and discretionary accruals is negatively associated.*

The hypothesis, in terms of the relationship between board size and abnormal accrual has not been rejected; hence, it is argued that the there is no significant relationship between board size and earnings management. This study is in the line with the research evidence from Taiwanese and Malaysian firms by Kao & Chen (2004) and Abdul and Ali (2006) respectively. Bhattacharya et al (2015) have also commented that the board size is significantly related to the manipulation of earnings quality and the recommended that the are negatively associated.

However, this finding is different from Defond and Jiambalvo (1994), John and Senbet (2012), Cimini et al (2015) who have identified that the board size constrains the practice of earnings management, hence, have negative relationship to each other. The argument is that the larger board comprises expertise from accounting and finance background, experienced people. They also argued that the inclusion of more members attracts the opportunity to involve the independent directors.

Despite of the hypothesis being rejected in this study; it cannot be argued that the smaller sizes of the board are less effective. If the comparison is made from the relationship of abnormal accruals to board meetings and board size; the similar kind of effect have been found. The number of meetings in this study have not been found as effective corporate governance variables to constrain earnings management and so the board size do. There are compatibilities in board size and board meetings in relation to controlling

earnings management, which concludes that there is no significant relationship between abnormal accruals and board size.

#### 4.3.4. Board Gender diversity

H4: *The relationship between number of women in the board and earnings management is negatively associated.*

The hypothesis overlooks the view of the negative relationship between the presence of female members in the board. This study finds that there is no significant relationship between the female presence and earnings quality. Therefore, the findings in this study does not support the view that the gender diversity can restrain the earnings management.

Some research based on past papers have identified that there is positive impact on earnings quality by the presence of female members in the board. Huse & Solberg, (2016) argue that the nature of women is risk averse; and concludes that gender is the factor which is effective in ethical aspects of the business activities.

Further, it has not been identified, so far, in the research based on UK corporations, that the presence of women in the board has impact earnings quality. This may be because the presence of female members in the board is not still sufficient so that they can make significant impact in this matter.

However, the presence of women has been increased in recent days which is supported by this study too. In the descriptive study, the average value of the presence of female in the board is 46.7% which was only 33% as per the research conducted by Maurya, (2015). Hence, this study advises that to make significant impact on earnings quality, the presence of women and their activities still need to be increased in the board.

#### 4.3.5. Non-executive Director's Fees

H5: *The relationship between non-executive director's fees and earnings management is negatively associated.*

This study based on FTSE350 companies of the UK, has identified that non-executive director's fees are positively associated to earnings management and this is in significant level where Coefficient = - 0.000002 and P-value = 0.001. This finding is consistent with the notion that committed independent outside directors are effective monitors of accrual management and that firms with highly paid outside directors tend to be less involved in accrual management.

The finding of this study suggests that the contribution of the non-executive directors is measured as per the fees paid to them. They have to spend a lot of time and energy to play the role in the board meetings and various business agendas. Hence, these results, in fact, supports that UK regularity 231 recommendations on Greenbury's guidance that there should be payment to non-executive directors for their time and effort.

This result provides modest support for the findings of Adams and Ferreira (2008) who use a large panel data set on directors' attendance at board meetings in publicly listed firms for the period from 2005 to 2012. They provide robust evidence that directors are less likely to have attendance problems at board meetings when board meeting fees are higher. They suggest that directors appear to perform their monitoring roles for even very small financial rewards.

#### 4.3.6. Block holder's Ownership

H6: *The relationship between a block holding of 10% or more; and earnings management is negatively associated.*

While analysing data, in the table above, it has been identified that block holder's ownership is positively related to the value of discretionary accruals, and they are highly significant. The coefficient is 0.041 and p-value is 0.030. This finding is not on the line with hypothesis as the hypothesis is created as they have negative relations. This finding contradicts while the hypothesis presents the negative relationship with reducing earnings management.

As recommended by Jensen and Meckling (1976), Zang (2011), Park (2017) the shareholders who owns higher level of stock in the organisation exerts pressure to the management in terms of lowering the opportunistic behaviour of the managers. This actually reduces the agency problem, but this study argued

that there is positive relationship between the manipulation of the earnings quality and block-holder's ownership. This approves that the block holders are not effective attribute as suggest by agency theorists in terms of reducing the agency problem and controlling the earnings management practices.

In terms of the relationship between earnings management and block holders' ownership, the prior researchers have not contributed much in this context. However, Abdul and Haniffa (2005), Pratiwi and Siregar (2019) have made empirical study to investigate the impact of block holder's ownership on the quality of earnings, but their study also has not found the controlling impact on the discretionary accruals. Further, in context of the UK organisation, Goergen et al, (2005), Persakes and Latridis (2018) have developed the opinion that the corporate governance system who has practised the institutional ownership, managerial ownership and block holder's ownership, they create their specific type of agency cost and problems.

The findings of the research have been supported by Zhong et al, (2007) who has identified that the block holders' want to control the earnings management if their control on the management is higher than the shareholders; at the same time, these block holders may be influenced by obtaining higher return, hence, they may exert pressure to the management for earnings manipulation. He has studied about this topic based on US firms; 1994 to 2003. They have concluded that the block holders do not have power to control the earnings management when they have small portion of the shares; hence, cannot have influence on earnings quality. However, when they obtain significant number of shares, they actually put pressure on the management to obtain the higher return, hence, higher manipulation.

## 5. Conclusion and Areas for Future Research

There are substantial numbers of research being carried out under the effects of corporate governance on the discretionary accruals. The findings in most of the research are mixed. The outcome in this study too is mixed. Board size and female board have insignificant relations with earnings management whereas board independence, board meetings and non-executive directors' fees have negative significant relationship with discretionary accruals.

The research has considered the performance matched discretionary accruals model to estimate the value of earnings management. This study presents the importance of board independence in terms of reducing the practice of earnings management. The relationship is highly significance at 5% confidence level.

The research provides some major contributions to the existing discourse of this topic area. First, the data is collected from FTSE350 companies who are abided to follow the UK corporate governance code which actually helps to measure the impacts of corporate governance on earnings management realistically. This provides specific insights under the topic area.

Secondly, this research mainly considers the corporate governance variables rather than other factors like another institutional environment and structural. This study also highlights the importance of internal corporate governance in terms of controlling the values of earnings management. Further, the institutional environment and the discretionary rights of the managers can influence in controlling earnings quality.

This research has made several contributions in the field of earnings management and corporate governance. Firstly, this research has embraced the independence of the board directors as one of the variables. Maintaining independent board becomes tougher part for the board. Hence, this research has investigated the influence of board independence on earnings management in FTSE350 companies. Secondly, this study creates the awareness by which users of financial statement can go through additional scrutiny while making financial and non-financial decisions. Thirdly, the reliance on financial statement is very crucial for the users of financial statement. This research actually alerts the stakeholders and other users of the financial statements and also provide the credibility on the financial information of the company. Fourthly, these outcomes also alarm the regulators and policy makers to bring changes in adopting the rules and regulations of the accounting principles and corporate governance principles while preparing financial statements.

This research is entirely based on the data of the UK, FTSE350. In the future, the research can consider other countries and make comparative analysis to identify what sort of corporate governance can effectively monitor the earnings manipulations. The real earnings management has not been under the

consideration in this research which could be further investigated and find the impacts of corporate governance on real earnings management.

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