

## A quantitative study on the effectiveness of the governance attributes on 'industry-wise earnings quality' in the UK

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### Abstract

*Despite of positive impacts of the earnings management on the business purposes, many businesses have been suffered due to the audit failures as a result of aggressive earnings management. Therefore, the study on true reflection of earnings management, the controlling factors and how aggressively manipulated earnings quality can be mitigated are the areas of concern these days.*

*For the estimation of earnings management, performance matched discretionary accruals model has been implemented as this model has been identified as the best explanatory models. Thereafter, this research has accumulated the sector-wise earnings management to identify the impact of sectors on the sectorial earnings management. There are eleven different industries involved in the research while four of them have revealed that the managers from certain sectors have got involved in the aggressive earnings management.*

*Further, this research has investigated the impact of the attributes of the corporate governance on the sector-wise earnings management. the variables of corporate governance like managerial ownership, block-holders, institutional ownership and non-executive directors' fees have significant impact on sector-wise earnings management where other variables like board meeting, board size, number of female members on the board, board independence have not been identified as they have significant impact on controlling earnings management.*

*Univariate and multivariate methods are used to demonstrate the results and to establish the inferences of the outcomes of the research. The use of coefficients ( $\beta$  -value) and p-value are much prominent in this study.*

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### Introduction

The deliberate manipulation in the financial information from the financial statement may mislead the stakeholders while making financial decisions, hence, this is mostly viewed as deceitful and misleading act, on the other hand, as per the rule of the IFRS UK, the managers are allowed to manipulate the financial

information for the purpose of attaining the business objectives and to protect the investment of shareholders (Zhang et al, 2018).

Aggressive earnings management can cause hiding the true reflection of the financial statement which can mislead users of financial statements. Further, the practice of income smoothing is undertaken to organise the revenue and expenses of an organisation; like shifting income and expenses from one quarter to other quarter to smooth the financial information so that the users of the financial statement can build the trust on the financial performance (Maurya, 2009).

Even though the managers are under pressure to scrutinise the financial statements and manipulate them to meet the expectations of the public like regulators, analysts, creditors, shareholders by deploying their discretionary rights. This may cause reputational harm and can bring severely adverse results (Tang, 2017). There are debates over the views based on the ethical grounds of the earnings management practice; the conservative approach considers this as an unethical practice while others considers that the managers and directors can practice their discretionary right to enhance their reputation and smooth the financial information (Tang, 2017).

The other researchers Frankel et al (2002) and Srinidhi and Gul, (2007), Kumara (2021) argued that the practice of accounting principles for income increasing, or income decreasing is dependent on the sectors. Therefore, this study has adopted the concepts and categorised the industries as engineering & consultancy, Distribution & Supplier, Food Services, Home & Building services, Hospitality Industry, IT Company, Manufacturing Company, Oil & Gas Company, Pharmaceutical Company, Retail Industry, Support Industry, Trading & Mining Company.

While preparing the model by separating the companies as per their industry the concept of dummy variable has been used as developed by Carcello et al, (2002) and Abbott et al, (2006) where they recommended that the value 1 to be used to represent the specific industry and 0 to be used for other industries.

The main aim of the research is to investigate the effectiveness of the governance in controlling the practices of industry-wise earnings management. The objectives of this research to estimate industry-wise earnings management of the FTSE350 companies of the UK. This research also analyses the effectiveness of various factors of corporate governance in terms of controlling the industry-wise practices of earnings management (Tang, 2017).

This paper has comprised seven sections where the first part deals with introduction followed by literature review and hypothesis development at second and third parts. The fourth part is data and method which then is followed by findings/results at fifth part. References and appendix are organised at sixth and seventh part of this study.

## Literature Review

Around the last decade 20th century and first decade of the 21st century, the practice of the aggressive accounting became so much popular due to which many largest corporations of the various countries have faced the audit failures and got collapsed from the market. The consequences of the manipulated financial statement have evidenced adverse impacts which can cause deteriorating the user's confidence level on financial statements, degradation of corporate governance, bankruptcy, and reduced efficiency of financial markets and the economy (Zhang et al, 2018).

The failures of the corporations included the United States, Europe, and Asia; there are few larger companies like Xerox, Enron, WorldCom, Health South, Parmalat, Vivendi, Satyam Computer Services, Sino-Forest, etc. who have seen such market failures. These scandals often involve accounting manipulations ranging from creative accounting to fraudulent or misrepresented financial statements (Sharmila, 2020).

The purpose of the earnings manipulation is to shaping financial statements to deceive financial statement users, gain benefits or bonuses, fulfil obligations, and meet expectations of external parties like analysts, creditors, customers. Inaccurate valuation of assets and obligations can lead the balance sheets with untrue information, cause the financial information hidden, present the false value of latent reserves, and losses. The purpose of corporate governance is to mainly analyse the efficient use of resources and accountability for the stewardship of those resources, aligning the interests of individuals, corporations, and society (Lee & Chou, 2020).

The Organisation of Economic Cooperation and Development (OECD, 1999) defines corporate governance as the system that directs and controls business corporations, specifying the distribution of rights and responsibilities among various stakeholders and providing the structure through which company objectives are set and performance is monitored (Zhang & Jia, 2013).

Board of directors under the system of the corporate governance oversee the preparation of the financial statements, analyse the internal control systems within the organisation and advise the directors to liaise with the mission and vision of the organisation. There are various factors like non-executive directors, remuneration committee, board size, chairman, CEO who are responsible for administering the organisation where earnings management is one of the crucial matters for them to monitor.

Few research has been taken place in sector-wise industry management whereby Maurya (2009) has concluded that non-financial corporations are involved in average earnings management considering 2.9% of the total assets. Further, this research alludes that the construction and mining companies practices the higher level of earnings manipulation.

The Zhang et al (2017) and Kumara (2017) based on Indian market condition identified that 32% companies from telecom sector, 31.8% companies from retail sector, 8.51% companies from Biotech sector practised the manipulation of earnings quality. Therefore, there should be widespread study on earnings management practices according to the sector and the impact of corporate governance on sector wise earnings management, hence, this study has investigated and analysed the influence of governance attributes on sectorial earnings management.

### **Hypothesis Development**

this research has uniquely presented the idea of studying the interdependence between corporate governance and earnings management assuming that the practice of earnings management could be driven by the industry type the firm operates at. Recent studies by Jia & Zhang (2013), Wu et al (2018) based on the impact of governance and discretionary accruals illustrate that the inferences drawn by the research including heterogenous firms may be noisy and biased. Therefore, this study is carried out to reflect the results of the effectiveness of the corporate governance on industry-wise earnings management.

In reference to the research carried out by Frankel et al. (2002) and Srinidhi and Gul, (2007), this study continues to identify the industry-wise analysis in terms of governance factors and earnings management based on the listed firms in the UK. This study includes the eleven largest industries where more than 70% of the sample have been included. Moreover, like Carcello et al. (2002) and Abbott et al. (2006), this research embraces the dummy variable whereby the value 1 has been used for the firm those belongs to the particular industry otherwise it is considered as zero.

Since this research has investigated and analysed the impact of corporate governance variables on industry-wise earnings management, the attributes of corporate governance included in this research as independent variables are board-size, board independence, board meeting, number of female members on the board, non-executive directors' fee, managerial ownership, block-holder and institutional ownership while control variables are leverage, cash flow from operations, return on assets, firm size.

**H1: Corporate governance attributes have negative impacts on industry-wise earnings management.****Data and Method**

This section has encompassed the method of forecasting earnings management. This part also presents how different industries practices earnings management differently. Moreover, this further clarifies that how corporate governance can responsibly be involved in controlling aggressive accounting manipulation. The factors of industry-wise earnings management and the attributes of the corporate governance have been demonstrated and identified how significantly the factors of corporate governance can control the manipulation of earnings quality.

**Earnings management Variables**

This empirical study has progressed the research by adopting two major segments where in the first stage estimating the values of the earnings management which then follow the process by conducting univariate and multivariate analysis to investigate and analyse the influence the variables of corporate governance on the discretionary accruals.

The equations as mentioned below help to estimate the value of earnings management; by adopting the performance match discretionary accruals model.

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

Since the value of total accruals have to be calculated for regression analysis and estimate the value of earnings management, this research has considered the balance sheet approach, as mentioned in equation (ii) which was initially used by Healy (1985) & Jones (1991).

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

Were,

$\Delta CA_t$  = the difference between the current assets from year t and t-1.

$\Delta Cash_t$  = the difference between the cash from year t and t-1.

$\Delta CL_t$  = the difference in current liabilities from year t and t-1.

$\Delta STDEBT_t$  = 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.

Since the estimation of non-discretionary is significantly unavoidable, the following model has been used to identify the value of non-discretionary accruals which is based on the parameters calculated by using equation (i) & (ii).

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

There can be the heteroscedasticity issues in this model due to the fact that the original values of the variables; mentioned in equation (iii), are deflated by the value of total asset at (t-1). In some cases, researchers (Chen & Zhang, 2012; Greene, 2014) admitted that to avoid heteroscedasticity for the model developed by performance matched discretionary accruals; deflating the values by previous year's total assets is appropriate.

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

This study has not considered the particular events of the economies cycle while estimating the value of earnings management. On the other hand, the absolute value of earnings management has been formed

to run the regression analysis; this is because the manipulation can be done in both positive and negative ways to meet the contractual obligations (Warfield et al, 1995; Klein; 2002). Estimates of the firm specific parameters  $\beta_1, \beta_2, \beta_3$  are generated using the performance matched discretionary accruals model in the estimation period.

### Industry-wise Corporate Governance and Earnings Management

This papers basically deals with testing hypothesis by considering OLS analysis (e.g., Elamer et al., 2017; Elghuweel et al., 2017; Ghosh et al., 2010) to identify the impact of corporate governance on earnings quality.

Hence, the empirical model is formed as below:

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

*Dependent variable:*

$DAC_{i,t}$  = The absolute value of discretionary accruals for firm i during the time t

*The interpretation of independent variables are as follow:*

Boardsize: The number of members in the board of directors.

Boardind: The percentage of the presence of independent non-executive directors to total number of directors.

Brdmeet: number of times the meeting held by the board.

Femaleboard: The percentage of female presence in the board.

NEDFee: The total amount in a year paid to each non-executive director.

Manown: percentage of number of shares held by managers to the total number of shares.

Instown: The percentage of shares owned by institutional owners.

Blockholder: This is regarded as a dummy variable. The value one is considered when the external stockholder owned 10% and more; zero otherwise.

*The interpretation of control variables has been made as follow:*

Leverage: long-term debt/total asset.

CFO: cash flow from operating activities

ROA: return on asset.

### Findings/Results

This section comprises the outcome of the research which has been conducted by deploying the univariate and multivariate methods. The univariate methods have been followed by the multivariate methods where the former deals with descriptive statistics while the latter deals with hypothesis testing. As per the nature of the data, this research has not considered the ordinary least square method, instead, has considered general least square method to avoid the misinterpretations those may arise due to the consequences of not meeting the conditions for ordinary least square method.

### Descriptive Study: industry wise Analysis of Discretionary Accruals

This study has encompassed the descriptive statistics address the industry-wise value of earnings management. The investigation and analysis of sector-wise earnings management has been created using the value of mean of discretionary accruals.

While closely observing into the mean value of earnings management presented in table 5.1, it has been identified that the practice of earnings management in engineering & consultancy and distribution

center, IT Company, Oil & Gas Company are similar which is 0.50; on the other hand, food and service company, manufacturing company, trading & mining company presents 0.49. Further, the mean value of earnings management for home & building services is 0.48 which is different from the hospitality industry, pharmaceutical company and retail stores where the mean value is 0.51.

Based on the data from FTSE350 companies of the UK, the descriptive study presents that hospitality, pharmaceutical and retail stores are involved in highest level of earnings management (0.51) which is above the mean value (0.50) of generally calculated earnings management. Generally calculated earnings management simply means the value of earnings management without separating the company sector-wise.

Moreover, other sectors food and service company, manufacturing company and trading & mining company have practised the earnings management slightly lower (0.49) than hospitality, pharmaceutical and retail stores (0.51) while home and building has practised the earnings management at lowest level.

The hospitality industry is found as the most complex type of industry due to the seasonality nature of the businesses. It has been identified that this industry practised earnings management due to unevenly distributed revenue over the various months of the year. Further, pharmaceutical companies practised earnings management due to the fact that the recognition of the revenues in such industry is very complex. The continuous research and development activities in this industry cause the higher level of manipulation in earnings quality.

In general, while analysing the practice of earnings management based on the industry types, it has been identified that various industry has various level of earnings management. Hence, the practice of earnings management depends on the nature of the industry. Some industries like pharmaceutical and hospitality industries have different nature in terms of recognising revenue and expenses from other industries like retail stores, manufacturing companies and trading & mining companies, which in the end impact on the practice of earnings management as presented in the table 5.1 in appendix.

As per the studies by Frankel et al (2002) and Srinidhi and Gul, (2007); they have considered 6 different industries to identify how the earnings management can be impacted by the sector they are in. in their research they have included 65% of the companies listed in New York Stock Exchange while this studies has encompassed 70. 41% of the companies to identify the impact of corporate governance on sector-wise earnings management.

Beasley (1996) & Jayola et al (2017) argued that earnings management in various sectors are differently practised. They concluded that the manipulation on the earnings quality is practised as per the nature of the industry, hence, the study of earnings management and impacts on it have to be studied sector-wise.

#### 5.1.1. Multivariate Analysis: Industry-wise Analysis

Regarding the hypothesis testing, this study has considered the multivariate analyses where the data are separated as per the industry-type. The concept of dummy variable has been introduced to support the study of industry-wise impact on earnings management and how various attributes of the corporate governance impact on the practice of earnings management. In terms of dummy variable, the specific industry which is present in regression analysis is considered as 1 and the value of other industries are considered as 0.

Further, to conduct the parametric test according to Jones (1991), Ahmed-Zaluki (2011), Cimini (2015); the conditions required for the OLS (ordinary least square) have to be met. The inferences obtained based on the parametric test may violate the true results if the conditions of the OLS test have not been met. Therefore, due to the complex nature of the data as advised by Jones (1991), non-parametric test has been conducted in this study too. There are conditions when data may not be normally distributed and homogeneity variance conditions have not been met; in such cases, non-parametric test is the best way to run the regression analysis.



	UC			UV			UC			UC			UC			UC			UC			UC			UC								
	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.	B	t	Sig.						
(Constant)	0.42	2.17	0.03	0.42	2.20	0.03	0.42	2.20	0.03	0.47	2.45	0.02	0.42	2.20	0.03	0.44	2.26	0.02	0.43	2.24	0.03	0.41	2.14	0.03	0.43	2.23	0.03	0.39	2.05	0.04	0.42	2.19	0.03
BoardSize	0.00	0.76	0.45	0.01	0.88	0.38	0.00	0.77	0.44	0.01	1.19	0.24	0.01	0.85	0.40	0.01	0.89	0.37	0.00	0.78	0.44	0.00	0.79	0.43	0.00	-0.69	0.49	0.01	-0.84	0.40	0.00	0.51	0.61
BoardInd	0.00	1.47	0.14	0.00	1.45	0.15	0.00	1.50	0.14	0.00	1.63	0.10	0.00	1.33	0.18	0.00	1.48	0.14	0.00	1.57	0.12	0.00	1.71	0.09	0.00	1.48	0.14	0.00	-1.57	0.12	0.00	-1.38	0.17
BoardMeet	0.00	0.08	0.93	0.00	0.20	0.84	0.00	0.10	0.92	0.00	0.22	0.82	0.00	0.13	0.90	0.00	0.01	0.99	0.00	0.09	0.93	0.00	0.05	0.96	0.00	0.02	0.98	0.00	0.13	0.90	0.00	0.08	0.94
FemaleBoard	0.00	0.20	0.84	0.00	0.08	0.93	0.00	0.18	0.86	0.00	0.06	0.95	0.00	0.04	0.97	0.00	0.12	0.91	0.00	0.18	0.86	0.00	0.17	0.87	0.00	0.14	0.89	0.00	0.16	0.87	0.00	0.15	0.88
NED Fee	0.00	3.53	0.00	0.00	3.64	0.00	0.00	3.54	0.00	0.00	3.64	0.00	0.00	3.69	0.00	0.00	3.55	0.00	0.00	3.41	0.00	0.00	3.53	0.00	0.00	3.56	0.00	0.00	3.49	0.00	0.00	3.61	0.00
Blockholder	0.08	3.17	0.00	0.08	3.17	0.00	0.08	3.20	0.00	0.08	3.08	0.00	0.08	3.23	0.00	0.08	3.17	0.00	0.08	3.13	0.00	0.08	3.24	0.00	0.08	3.11	0.00	0.08	3.24	0.00	0.08	3.18	0.00
ManOwn	0.10	2.18	0.03	0.10	2.16	0.03	0.10	2.19	0.03	0.10	2.13	0.03	0.10	2.22	0.03	0.10	2.22	0.03	0.10	2.19	0.03	-0.10	2.08	0.04	0.10	2.19	0.03	0.12	-2.56	0.01	0.11	2.26	0.02
InstOwn	0.00	0.27	0.79	0.00	0.08	0.94	0.00	0.30	0.76	0.00	0.63	0.53	0.00	0.23	0.82	0.00	0.19	0.85	0.00	0.37	0.71	0.00	0.51	0.61	0.00	0.30	0.77	0.00	0.07	0.94	0.00	0.12	0.91
ROA	0.00	0.06	0.95	0.00	0.07	0.94	0.00	0.06	0.96	0.00	0.08	0.94	0.00	0.06	0.96	0.00	0.07	0.95	0.00	0.08	0.94	0.00	0.01	0.99	0.00	0.01	0.99	0.00	-0.03	0.98	0.00	0.04	0.97
CFOTA1	0.01	0.21	0.84	0.01	0.29	0.78	0.01	0.20	0.85	0.00	0.11	0.91	0.01	0.23	0.82	0.00	0.16	0.87	0.01	0.20	0.84	0.00	0.17	0.87	0.00	0.19	0.85	0.00	0.02	0.98	0.00	0.18	0.86
Growth	0.00	1.72	0.09	0.00	1.73	0.08	0.00	1.74	0.08	0.00	1.83	0.07	0.00	1.64	0.10	0.00	1.70	0.09	0.00	1.72	0.09	0.00	1.63	0.10	0.00	1.74	0.08	0.00	-1.57	0.12	0.00	1.77	0.08
Leverage	0.00	0.41	0.69	0.00	0.44	0.66	0.00	0.40	0.69	0.00	0.58	0.57	0.00	0.42	0.68	0.00	0.38	0.71	0.00	0.35	0.73	0.00	0.36	0.72	0.00	0.39	0.70	0.00	0.42	0.68	0.00	0.41	0.69
Dist & Sup	0.01	0.26	0.79																														
Eng&Con				0.07	1.91	0.05																											
Food Serv							-0.03	-0.47	0.64																								
Hom&Buil										-0.12	-2.62	0.01																					
Hot&Rest												0.13	2.98	0.01																			
ITComp																-0.03	-0.74	0.46															
Manu Com																						0.02	0.69	0.49									
Oil&Gas																						-0.07	-1.72	0.09									
Phem Com																									-0.04	-0.93	0.35						
Retail																											0.08	2.14	0.03				
Trading & Mining																														-0.06	-1.16	0.25	

UC = Unstandardised Coefficient

Table 5.1

Based on the above table at 5.1, while evaluating the impacts of sector-wise earnings management out of 11 industries, four industries have presented significant relationship with the value of earning management where p-value has appeared as less than 0.05; while 7 industries have not demonstrated the significant relationship. The industries engineering and consultancy, home & building, hotels & restaurants, and retail stores have significant relationship with the value of discretionary accruals.

In terms of significant relationship, home & building has significantly negative relationship with the value of earnings management while other three industries; engineering and consultancy, hotels & restaurants, and retail stores, have significantly positive relationship with earnings management.

The negative value of the coefficients represent that the organisations are adopting income decreasing earnings management while positive value of the coefficients represents the income increasing earnings management. The findings of this study have presented similar results with the study of Maurya (2009); where mixed results have been reported where Maurya (2009) has studied the impact of six industries on earnings management. In his research too, out of six industries, he identified that all six industries have significantly impacted the value of earnings management in which one industry; home & building, was negatively while rest of them have positive relationship with earnings management.

While observing at the outcomes of both engineering, and hotel & restaurant industries, it seems that the managers have used their discretionary rights to manipulate earnings quality. The nature of these both industries run through the contractual arrangements; hence, the recognition of the revenue in such industries are more complex. The inferences emerged based on the data in this study has similar outcomes with the result of Bhattacharya et al. (2003) and Tang (2017). The studies they carried out supports the view that the organisations manipulate the earnings quality as per own interest; hence, the result of earnings management varies as per the sector.

While making further investigation at the level of p-value < 0.1; this research presents that some industries like oil & gas company too has practised income decreasing earnings management as the coefficient has been appeared as -0.068. Conversely, industry have been found as practising income increasing approach of earnings management where the parameters are found as  $\beta = 0.083$  and P-value = 0.033. The arguments are as advised by Beasley (2000) is that retail sectors operate numerous transactions in daily basis including both cash and card transactions. Due to the nature of the business, in such industry, the performance of the corporate governance has to be acutely serious to control the frauds.

Moreover, while observing the impact of the variables of the corporate governance on the value of earnings management on various sectors, this study reveals the mixed results. There are various significant and insignificant results identified in the statistical calculations. However, in terms of the impact of the corporate governance attributes, it has been identified that they are less significant in controlling earnings management while closely observing the sector-wise data.

Mostly, institutional ownership in case of 3 industries based on the companies of FTSE350 index; retail industry, pharmaceutical industry, engineering & consultancy, have impacted significantly to the sector-wise earnings management. They have practised income increasing approaches of earnings management. In terms of the Indian economy in the research by Wu et al (2018) have identified different outcomes. In their study it has been investigated that institutional ownership in pharmaceutical companies and retail industry have significantly negative impacts due to the complex nature of the business. These both industries are fast selling companies where numerous cash transactions take place whereby the corporate governance face real challenge to control the day-to-day business as a result managers may have better opportunity to manipulate earnings by using their discretionary rights.

Furthermore, the governance attributes non-executive directors' meeting, non-executive directors' fees, block holder, managerial ownership have significant relationship on controlling the earnings manipulation. This study presents similar results to the research conducted by Ware (2015) and Abbot & Peters (2014)



Where they have argued that the independent members of the board have contributed in controlling earnings management. In this study too, while observing the parameters the coefficients ( $\beta$ -value) is far less which is almost null; hence, these variables have contributed in controlling earnings management. Block holders and non-executive directors' fees have significantly positive relationship with earnings management while managerial ownership has significantly negative relationship with earnings management. As per the previous studies by Wu et al (2018) & Tang (2017) Block holders and non-executive directors have negative relationship with earnings management due to the reason that block holders have significantly higher number of shares while non-executive directors are independent members of the board. However, this study presents that these to variables; block holders and non-executive directors, have significant relationship but the coefficients shows that there is not much impact.

### **Discussions and Conclusions**

This study embodied mainly three major concepts: the estimation of the value of discretionary accruals, separation of value earnings management as per the sector and impact of corporate governance variables on earnings management. deploying the univariate and multivariate approaches, the research has presented the sector-wise impacts on the practice of discretionary accruals. Moreover, it has been identified that corporate governance attributes have impacts on sector-wise earnings management.

Further, the sectors oil & gas company and home & building companies have implemented the accounting principles to decrease income while other sectors engineering & consulting, hotel & restaurants and retail industries have considered the accounting principles in a way that increase the profit.

This research is an empirical study on the influence of corporate governance and on controlling manipulation of the earnings quality industry-wise. Various attributes of the corporate governance monitoring tools have been deployed and identified the controlling measures of them in terms of earnings management as per the category of the industry the firm lies.

In terms of hypothesis testing the attributes of corporate governance; board size, board independence, board meeting has no significant impacts on controlling earnings management while presence of female has negative significant relationship with the practice of earnings management at hotel and restaurant industry; hence this rejected the null hypothesis. In addition, there is no significant relationship between female presence in the board with earnings management practised in other industries.

Moreover, managerial ownership has rejected the null hypothesis while non-executive director's fees, block holder and institutional ownership has supported the null hypothesis with having significant relationship.

### **Limitations and direction for future research**

There is higher chance to occur inherent bias while the inferences drawn from the type of data used in this research because this study has examined non-random sample of firms which are based on the predetermined criteria. Despite inherent bias, the researchers have to consider such data because most of the firms are quite reluctant to disclose corporate governance matters. Random selection of the firms in the UK context; mainly in corporate governance matters, is quite difficult.

The other limitation in sampling matter is sample size as sample size can have impact of the validity of the statistical inferences and probability matters while investigating the relationship of the variables. This study has limited the sample size in FTSE350 companies, therefore, introducing a size bias. Nonetheless, the going on concern of the firm could be the challenge while relying on the random samples, therefore, the research to rely on larger firms are justifiable in another note.

The research is conducted based on the UK data, hence, generalizing the outcomes and contextualizing these results to other stock market cannot be advised as regulations, accounting practices, economic conditions can impact the practices of discretionary accruals; hence, generalizability can be an issue.

### Appendices

**Table 5.1 Industry-wise Descriptive Statistics**

	Engineering and Consultancy			Distributor and Supplier		
	Mean	Median	St Dev	Mean	Median	St Dev
<b>DAC</b>	0.50	0.53	0.29	0.50	0.54	0.29
<b>Growth</b>	24.89	18.20	33.06	25.18	17.89	33.53
<b>BoardSize</b>	10.29	10.00	1.95	10.08	10.00	1.97
<b>BoardInd</b>	48.90	48.13	7.70	48.53	47.91	7.69
<b>BoardMeet</b>	4.63	4.00	0.84	4.69	4.00	0.86
<b>ChairmanInd</b>	1.00	1.00	0.00	1.00	1.00	0.00
<b>RemComInd</b>	0.78	1.00	0.41	0.76	1.00	0.43
<b>NomCommInd</b>	59.58	62.00	4.37	59.65	62.00	4.31
<b>FemaleBoard</b>	44.72	45.45	11.81	46.09	45.45	13.30
<b>NEDMeet</b>	0.78	1.00	0.41	0.76	1.00	0.43
<b>NEDFee</b>	48996.00	46294.77	13202.85	49507.41	46666.43	13260.29
<b>Blockholder</b>	0.78	1.00	0.41	0.79	1.00	0.41
<b>ManOwn</b>	0.12	0.11	0.07	0.13	0.11	0.08
<b>InstOwn</b>	42.85	48.66	28.03	42.16	47.38	27.82

	Food Services Company			Home and Building Services		
	Mean	Median	St Dev	Mean	Median	St Dev
<b>DAC</b>	0.49	0.53	0.29	0.48	0.51	0.29
<b>Growth</b>	24.16	17.40	32.65	24.04	18.17	30.55
<b>BoardSize</b>	10.70	11.00	1.92	10.19	10.00	2.03
<b>BoardInd</b>	48.78	48.13	8.03	48.89	48.35	7.43
<b>BoardMeet</b>	4.59	4.00	0.84	4.65	4.00	0.84
<b>ChairmanInd</b>	1.00	1.00	0.00	1.00	1.00	0.00
<b>RemComInd</b>	0.75	1.00	0.43	0.78	1.00	0.41
<b>NomCommInd</b>	59.57	62.00	4.45	59.23	62.00	4.51
<b>FemaleBoard</b>	43.45	44.44	11.69	44.31	44.44	12.08
<b>NEDMeet</b>	0.75	1.00	0.43	0.78	1.00	0.41
<b>NEDFee</b>	45524.32	43049.10	11700.42	46917.89	44743.94	11293.88

<b>Blockholder</b>	0.77	1.00	0.42	0.80	1.00	0.40
<b>ManOwn</b>	0.12	0.10	0.07	0.13	0.11	0.07
<b>InstOwn</b>	41.67	47.75	28.76	44.47	50.32	29.15

	<b>Hospitality Industry</b>			<b>IT Company</b>		
	Mean	Median	St Dev	Mean	Median	St Dev
<b>DAC</b>	0.51	0.54	0.30	0.50	0.53	0.30
<b>Growth</b>	24.98	18.51	31.83	29.55	18.76	45.77
<b>BoardSize</b>	9.58	10.00	2.05	9.81	10.00	1.96
<b>BoardInd</b>	48.84	48.13	7.80	48.93	48.57	7.89
<b>BoardMeet</b>	4.67	4.00	0.87	4.72	4.00	0.89
<b>ChairmanInd</b>	1.00	1.00	0.00	1.00	1.00	0.00
<b>RemComInd</b>	0.76	1.00	0.43	0.76	1.00	0.43
<b>NomCommInd</b>	59.70	62.00	4.27	59.70	62.00	4.22
<b>FemaleBoard</b>	48.02	45.45	14.28	46.47	45.45	13.34
<b>NEDMeet</b>	0.76	1.00	0.43	0.76	1.00	0.43
<b>NEDFee</b>	50239.78	48033.07	13987.61	49684.92	46394.75	14395.42
<b>Blockholder</b>	0.73	1.00	0.44	0.75	1.00	0.43
<b>ManOwn</b>	0.13	0.11	0.08	0.13	0.11	0.08
<b>InstOwn</b>	41.68	47.22	28.02	41.28	47.22	28.08

	<b>Manufacturing Company</b>			<b>Oil &amp; Gas Company</b>		
	Mean	Median	St Dev	Mean	Median	St Dev
<b>DAC</b>	0.49	0.54	0.29	0.50	0.53	0.30
<b>Growth</b>	29.51	17.84	41.68	27.45	17.71	47.53
<b>BoardSize</b>	9.84	10.00	2.07	10.19	10.00	2.17
<b>BoardInd</b>	48.77	47.33	7.83	48.16	47.27	7.79
<b>BoardMeet</b>	4.71	4.00	0.86	4.65	4.00	0.86
<b>ChairmanInd</b>	1.00	1.00	0.00	1.00	1.00	0.00
<b>RemComInd</b>	0.74	1.00	0.44	0.73	1.00	0.45
<b>NomCommInd</b>	59.83	62.00	4.12	59.84	62.00	4.08
<b>FemaleBoard</b>	46.73	44.44	13.23	45.37	44.44	13.27
<b>NEDMeet</b>	0.74	1.00	0.44	0.73	1.00	0.44
<b>NEDFee</b>	51608.90	47199.30	15269.75	51676.46	47371.35	15356.40
<b>Blockholder</b>	0.72	1.00	0.45	0.72	1.00	0.45

<b>ManOwn</b>	0.13	0.11	0.08	0.15	0.11	0.21
<b>InstOwn</b>	39.88	45.89	28.34	40.15	44.98	28.42

	Pharmaceutical Industry			Retail Stores			Trading and Mining Company		
	mean	Median	St Dev	Mean	Median	St Dev	Mean	Median	St Dev
<b>DAC</b>	0.51	0.54	0.29	0.51	0.54	0.29	0.49	0.53	0.29
<b>Growth</b>	24.20	17.46	31.44	24.49	17.16	32.02	24.62	17.34	33.03
<b>BoardSize</b>	10.21	10.00	2.00	10.28	10.00	2.04	10.93	11.00	2.01
<b>BoardInd</b>	48.22	47.27	7.74	48.18	47.27	7.75	47.97	47.03	8.14
<b>BoardMeet</b>	4.66	4.00	0.84	4.64	4.00	0.83	4.56	4.00	0.81
<b>ChairmanInd</b>	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
<b>RemComInd</b>	0.74	1.00	0.44	0.73	1.00	0.45	0.69	1.00	0.46
<b>NomCommInd</b>	59.80	62.00	4.16	59.84	62.00	4.11	59.77	62.00	4.28
<b>FemaleBoard</b>	45.27	44.95	13.12	45.30	44.44	13.03	42.72	42.26	11.43
<b>NEDMeet</b>	0.74	1.00	0.44	0.73	1.00	0.45	0.69	1.00	0.46
<b>NEDFee</b>	51460.43	47676.56	14353.98	51587.99	47676.56	14638.64	48763.42	43997.44	14508.38
<b>Blockholder</b>	0.75	1.00	0.44	0.73	1.00	0.44	0.71	1.00	0.45
<b>ManOwn</b>	0.12	0.11	0.07	0.14	0.11	0.18	0.14	0.10	0.21
<b>InstOwn</b>	40.59	44.98	28.08	40.43	45.36	28.07	40.76	47.03	28.92

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