AUDITOR REPORT AND EARNINGS MANAGEMENT: EVIDENCE FROM FTSE 350 COMPANIES IN THE UK

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Abstract

This paper examines the relationship between audit report and real-based and accrual-based earnings management based on a UK sample. Prior research has mostly focused on US data and examined the relationship between auditor report (qualified vs. non-qualified) and earnings management (proxied by discretionary accruals), and found evidence that qualified audit report is positively associated with the level of discretionary accruals. Despite the importance of the role of audit firms to constrain the use of earnings management, there is no research to date has examined the relationship between auditor reports and real earnings management activities based on UK sample. This paper therefore fills this gap in the literature by providing the first evidence for UK FTSE 350 companies that auditor report is positively associated with real and accrual earnings management. The paper also provide evidence that firms received qualified audit report share different characteristics as compared to firms received un-qualified audit report.

Keywords: Auditor Report, Real Earnings Management, Accrual Earnings Management, UK FTSE 350

1. INTRODUCTION

Prior research has shown evidence that the presence of high quality audit firms (Big N audit firms) is associated with a lower level of real and accrual earnings management (e.g., Becker et al., 1998; Balsam et al., 2003), suggesting that high quality audit firms constrain the use of earnings management to protect their reputation and avoid any potential litigation risk (e.g., DeAngelo, 1981; Francis and Krishnan, 1999). Given the importance of audit firms to ensure the integrity of financial reporting quality, prior research has examined several proxy of audit quality such as auditor report and found evidence that the issuance of qualified audit report is positively associated with the level of accrual earnings management (the level of discretionary accruals) e.g., Francis and Krishnan, 1999; Bartov et al., 2000; Bradshaw et al., 2001; Johl et al., 2007. This research has argued that firms with high levels of accrual earnings management and audited by high quality audit firms (Big N audit firms) are likely to receive qualified audit opinion, notably these reputable audit firms are more concerned about their reputation and therefore they lower their threshold to issue a qualified audit report.

However, prior research has mainly focused on examining US data and used discretionary accruals as a proxy of earnings management when the relationship between audit report and earnings management is analyzed. Recent research has presented new evidence that managers use real earnings management activities as well to manipulate reported earnings upwards (Roychowdhury, 2006; Cohen and Zarowin, 2010; Alhadab et al., 2015). For example, managers can manage earnings through the use of sales-based manipulation (abnormal cash flows from operations) which can be conducted by offering more price discount and/or relaxing the credit terms. While other activities of real earning management can be conducted via production cost manipulation (abnormal production cost) which aims to reduce the cost of goods sold by producing more units (see Roychowdhury, 2006 for more details on this). Further, recent research also has shown that audit quality is associated with the use of real earnings management activities (e.g., Cohen and Zarowin, 2010), suggesting that any future research on audit quality and earnings management should consider real activities in the analysis.

Thus, the current paper aims to explore further the relationship between audit report and the level of earnings manipulation through using real earnings management activities as a proxy of earnings manipulation and examining UK data. Using a non-financial UK sample that consists of FTSE 350 firms (1,865 firm-year observations) over the period 2010-2015, this paper fills an important gap in the literature by providing the following evidence.

First, this paper provides the first evidence based on UK data for the post-credit crisis period that audit report is associated with both accrual and real earnings management activities. Particularly, the results show that receiving qualified audit opinion is positively associated with the levels of discretionary accruals and abnormal cash flows from operations (sales-based manipulation). Second, this paper provides new evidence that UK firms which received qualified audit opinion share different characteristics as compared to UK firms that received un-qualified audit report. Third, this paper provides new evidence to the literature that audit report is associated with real earnings

management activities, not with just accrual earnings management. Prior research just focuses on accrual earnings management. This evidence indeed provides new avenue for future research that real earnings management activities should be taken into account. Finally, this paper has examined the UK FTSE 350 which consists of the largest 350 firms that listed on the London Stock Exchange – one of the most attractive capital markets in the world.

This paper is organized as follows. Section 2 provides literature review and hypothesis development. Section 3 presents research methodology. Section 4 discusses the results. Section 5 provides the conclusions.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Auditor Report and Earnings Management

The primary objective of this paper is to examine the association between audit report (qualified vs. non-qualified) and the use of accrual and real earnings management. Prior research finds evidence that managers use real and accrual earnings management to manage reported earnings either upwards or downwards to meet different incentives e.g., to meet the targeted performance for executives' compensations (Bergstresser and Philippon, 2006), avoid violating the debt agreement (DeFond and Jiambalvo, 1994), around equity offerings to increase the offer proceeds or share prices (Rangan, 1998; Teoh et al., 1998), meeting earnings benchmarks such as prior year earnings or analysts' forecasts (Osma, 2008, Burgstahler and Dichev, 1997; Dechow and Dichev, 2002), etc.

Thus, and given the fact that earnings management practices are widely used by managers to manipulate reporting income, a new strand of research has emerged focusing on factors that help to prevent the use of earnings management such as the role of corporate governance (Klein, 2002), the role of institutional investors (Bushee, 1998), the role of regulators and accounting standards setters (Ewert and Wagenhofer, 2005; Alhadab et al.2016). Further, one of the most important mitigating roles to constrain the use of accrual and real earnings management is found to be played by high quality audit firms. Thus, prior research has intensively examined the role of audit firms and mainly focused on the use of audit firms' size as a proxy of audit quality (Big 4 audit firms vs. non-Big 4 audit firms) (e.g., Becker et al., 1998; Balsam et al., 2003). Despite the extensive line of research, a very few studies have examined other proxies of audit quality such as audit firm industry specialisation (Krishnan, 2003), the total hours of auditing the client firm (Caramanis and Lennox, 2008), audit report (Francis and Krishnan, 1999), audit and non-audit services fees (Frankel et al., 2002; Alhadab 2015).

This paper therefore attempts to contribute to this strand of research by examining the relationship between audit quality and earnings management, but by using a new proxy of audit quality (audit report) and a new proxy of earnings management (real earnings management activities) that both have received very limited attention in prior literature

Francis and Krishnan (1999) for example have examined the association between auditor report (through the issuance of modified audit report) and the level of accrual earnings management (proxied by the level of discretionary accruals). Their argument was that audit firms in the US will try to avoid the risk exposure by lowering their threshold to issue the modified audit report when their clients exhibit a higher level of accrual earnings management. Francis and Krishnan (1999) have found evidence consistent with their hypothesis that Big N audit firms are likely to issue a modified audit report when their clients engage in a higher level of income-increasing accrual earnings management.

Further, Bartov et al. (2000) has also examined the relationship between issuing modified audit report and the level of discretionary accruals using US data and found similar evidence to Francis and Krishnan (1999). They find US firms with high levels of discretionary accruals are likely to receive modified audit report. Bradshaw et al. (2001) meanwhile has examined US sample and found no evidence that the issuance of modified audit report is associated with the level of discretionary accruals. The findings of Bradshaw et al. (2001) are in contrast with the findings of Francis and Krishnan (1999) and Bartov et al. (2000), indicating that the results of prior research based on US data are mixed.

While prior research has mainly focused on examining US data, Johl et al. (2007) have investigated the relationship between audit report and accrual earnings management using Malaysian data. Johl et al. (2007) have presented evidence that Big 5 audit firms in Malaysia issue more qualified audit opinion when their clients exhibit a higher level of discretionary accruals. However, when they examine this relationship for audit firm industry specialists they find no evidence that audit report is associated with accrual earnings management. They have examined a Malaysian sample consists of 1,512 firm-year observations over the period 1994-1999.

Despite the fact that prior research has mainly focused on US data and a very few studies have examined other context such as the Malaysian context, there is no research to date has explored this relationship based on UK data. Further, whole most of prior research has examined discretionary accrual as a proxy of earnings manipulation, managers may use real earnings management activities to manipulate earnings. Thus, this paper aims to fill this gab in the literature by examining the association between audit report and earnings management practices that take place via the use of both discretionary accruals and real activities, and by using a different context that prior research – UK sample. The main hypothesis of this study therefore is as follows:

H1: Receiving qualified audit report is positively associated with level of accrual and/or real earnings management, ceteris paribus.

3. RESEARCH METHODOLOGY

3.1 Sample construction

The sample of this study consists of UK FTSE 350 over the period from 2010 to 2015. All financial and insurance firms have been excluded from the

sample due to the differences in financial reporting process as compared to other regulated firms (e.g., Roychowdhury, 2006; Athanasakou et al., 2009). The sample period covers the post credit crisis period to avoid its effect on the analysis. For this purpose, the credit crisis period is defined as the period from 2007 to 2009 (see e.g., Alhadab and Tahat 2016). All data concerning the financial variables to estimate earnings management and auditors' opinion are collected from DataStream. This process has led to a final sample consists 1,865 firm-year observations over the sample period 2010-2015.

3.2. Empirical models

3.2.1. Accrual earnings management

To estimate discretionary accrual I follow Ball and Shivakumar (2008) and use the piecewise linear variant of the Jones (1991) model by running a cross sectional regression for each year and 2-digit SIC industry category, with at least 6 observations (e.g., Athanasakou et al., 2009), and as follows:

$$TA_{it} = \alpha_0 + \beta_1 \Delta SALES_{it} + \beta_2 PPE_{it} + \beta_3 CFO_{it} + \beta_4 DCFO_{it} + \beta_5 CFO_{it} * DCFO_{it} + \varepsilon_{it} \qquad (1)$$

Where $TA_{i,t}$ represents total accruals defined as earnings before extraordinary items minus cash flows from operations; $\Delta SALES_{i,t}$ represents changes in sales during a year; $PPE_{i,t}$ represents the gross value of property, plant and equipment; $CFO_{i,t}$ represents cash flows from operations; $DCFO_{i,t}$ represents a dummy variable that equals 1 if a firm report negative CFO and zero otherwise. To avoid issues related to heteroscedasticity all variable are scaled by lagged total assets. The residual (ε_{it}) from the above regression is the measure represents discretionary accruals.

For robustness I also use the modified Jones model of Dechow et al. (1995) to estimate discretionary accruals for each industry-year group with at least 6 observations, and as follows:

$$TA_{it} = \alpha_0 + \beta_1 \ 1/ASSETS_{it-1} + \beta_2 \Delta SALES_{it} + \beta_3 PPE_{it} + \varepsilon_{it} \qquad (2)$$

Where $ASSETS_{i,t-1}$ represents total assets at the end of last year, and all variable are scaled by lagged total assets. As similar to the previous model, the residual (ε_{it}) from the above regression represents discretionary accruals (*DisAcc*).

3.2.2 Real earnings management

3.2.2.1 Sales-based estimation

Due to data limitation, just two of real earnings management activities are examined by this paper, namely sales-based manipulation (proxied by abnormal cash flows from operations) and production cost-based manipulation (proxied by abnormal production cost). To estimate the abnormal level of cash flows from operation I follow Roychowdhury (2006) and run the following cross sectional regression for each industry-year group with at least 6 observations:

$$CFO_{it} = \alpha_0 + \beta_1 \ 1/ASSETS_{it-1} + \beta_2 SALES_{it} + \beta_3 \Delta SALES_{it} + \varepsilon_{it} \qquad (3)$$

Where $SALES_{i,t}$ represents sales at the end of the year, and all variable are scaled by lagged total assets. The residual (ε_{it}) from the above regression represents abnormal cash flows from operation (*AbnCfo*). Abnormal cash flows from operations (sales-based manipulation) are multiplied by -1, so

the proxy of accrual-based and real activities-based have the same interpretation.

3.2.2.2. Production costs estimation

To estimate the abnormal level of production cost I follow Roychowdhury (2006) and run the following cross sectional regression for each industry-year group with at least 6 observations:

$$PRODCST_{it} = \alpha_0 + \beta_1 \ 1/ASSETS_{it-1} + \beta_2 SALES_{it} + \beta_3 \Delta SALES_{it} + \beta_4 \Delta SALES_{it-1} + \varepsilon_{it} \qquad (4)$$

Where $PRODCST_{i,t}$ represents the sum of cost of goods sold and change in inventories for firm i at year, $\Delta SALES_{i,t-1}$ represents changes in sales during the last year, and all variable are scaled by lagged total assets. The residual (ε_{it}) from the above regression represents abnormal production cost (*AbnProd*).

Following prior research (e.g., Cohen et al., 2008; Zang, 2012) I constrcut an aggregated measure of real earnings management (*RemTotal*) by comining the abnormal cash flows from operation (*AbnCfo* and *AbnProd*). This is to examine the total effect of real earnings management and its association with auditors' pinion.

Another activity of real earnings management can be conducted by cutting Research and Development (R&D) expense and Selling, General and Administrative (SG&A) expense to increase reported earnings. However, data concerning R&D expenses are available just for less %50 of the total sample. Therefore, to avoid any bias on the analysis this study does not examine real activities manipulation that occurs via reducing discretionary expenses.

3.2.3. Logit regression- auditor report and real and accrual earnings management

To examine whether audit opinion is associated with real and accrual earnings management, the following logit models have been estimated where the dependent variable (*AudOpin*) is a dummy variable that equals 1 if the firms received qualified audit opinion, and zero otherwise, while the main dependent variables of interest are proxies of accrual and real earnings management (*DisAcc, AbnCfo, AbnProd,* and *RemTotal*). Following prior research (e.g., Francis and Krishnan, 1999; Bartov et al., 2000; Bradshaw et al., 2001) a number of control variables are added into the models. The models control for the size effect by adding natural logarithm of market capitalisation (*LnMK*), while growth opportunities are controlled by adding book to market ratio (*BM*) and profitability is controlled by adding loss dummy (*Loss*) and return on assets (*ROA*). Further, to be consistent with prior research (e.g., Johl et al., 2007) the models control for the firms' risk profile by adding (*Lev*), prior year report (*QualLag*) which is a dummy variable that equals 1 if firms received qualified audit report in the prior year and zero otherwise, natural logarithm of total

assets (*LnAssets*), the level of total inventory to total assets (*InvAssets*), and the level of receivable to totals assets (*ReceiAssets*). Finaly, industry (*IND*) and year (*Year*) dummeis are added to control for indsustry and time effects

It worth noting that prior research (e.g., Francis and Krishnan, 1999; Bartov et al., 2000; Bradshaw et al., 2001; Johl et al., 2007) controls for the quality of audit firms (Big N vs. non-Big N). Unfortunately, data concerning the name of audit firms are not available from DataStream. Specifically, DataStream provides the data for this variable (Big N) just for the current year, but not for the prior years. However, as robustness test the analysis is repeated by adding audit fees as control variable into the models and the results are qualitatively similar. Prior research has indicated that audit fees can be used as proxy of audit quality (e.g., Frankel et al., 2002; Antle et al., 2006), notably that Big N audit firms charge their clients higher audit fees as compared to non-Big N audit firms.

The logit models are therefore as follows:

$$AudOpin_{it} = \alpha_0 + \beta_1 DisAcc_{it} + \beta_2 LnMK_{it} + \beta_3 BM_{it} + \beta_4 Loss_{it} + \beta_5 ROA_{it} + \beta_6 Lev_{it} + \beta_7 QualLag_{it}$$
$$+ \beta_8 LnAssets_{it} + \beta_9 InvAssets_{it} + \beta_{10} ReceiAssets_{it} + IND_{it} + Year_{it} + \varepsilon_{it} \qquad (5)$$

$$AudOpin_{it} = \alpha_0 + \beta_1 AbnCfo_{it} + \beta_2 LnMK_{it} + \beta_3 BM_{it} + \beta_4 Loss_{it} + \beta_5 ROA_{it} + \beta_6 Lev_{it} + \beta_7 QualLag_{it}$$
$$+ \beta_8 LnAssets_{it} + \beta_9 InvAssets_{it} + \beta_{10} ReceiAssets_{it} + IND_{it} + Year_{it} + \varepsilon_{it} \qquad (6)$$

$$AudOpin_{it} = \alpha_0 + \beta_1 AbnProd_{it} + \beta_2 LnMK_{it} + \beta_3 BM_{it} + \beta_4 Loss_{it} + \beta_5 ROA_{it} + \beta_6 Lev_{it} + \beta_7 QualLag_{it}$$
$$+ \beta_8 LnAssets_{it} + \beta_9 InvAssets_{it} + \beta_{10} ReceiAssets_{it} + IND_{it} + Year_{it} + \varepsilon_{it} \qquad (7)$$

$$AudOpin_{it} = \alpha_0 + \beta_1 RemTotal_{it} + \beta_2 LnMK_{it} + \beta_3 BM_{it} + \beta_4 Loss_{it} + \beta_5 ROA_{it} + \beta_6 Lev_{it} + \beta_7 QualLag_{it}$$
$$+ \beta_8 LnAssets_{it} + \beta_9 InvAssets_{it} + \beta_{10} ReceiAssets_{it} + IND_{it} + Year_{it} + \varepsilon_{it} \qquad (8)$$

Where
$AudOpin_{i,t}$ = is a dummy variable that equals 1 if the firms received qualified audit opinion, and zero otherwise, at the end of year t for firm i,
$DisAcc_{i,t}$ = discretionary accruals at the end of year t for firm i,
$AbnCfo_{i,t}$ = abnormal cash flows from operation at the end of year t for firm i, multiplies by minuses one,
$AbnProd_{i,t}$ = abnormal production cost at the end of year t for firm i,
$RemTotal_{i,t}$ = the aggregate measure of real earnings management (*AbnCfo +AbnProd*) at the end of year t for firm i,
$LnMK_{i,t}$ = natural logarithm of market capitalisation at the end of year t for firm i,
$BM_{i,t}$ = book to market ratio that is calculated by dividing book value of equity by market value of equity at the end of year t for firm i,
$Loss_{i,t}$ = a dummy variable that equals 1 if firms reported losses, and zero otherwise, at the end of year t for firm i,
$ROA_{i,t}$ = return on assets at the end of year t for firm i,
Lev = total debt divided by total assets at the end of year t for firm i,
$QualLag_{i,t}$ = is a dummy variable that equals 1 if the firms received qualified audit opinion in the

prior year, and zero otherwise, at the end of year t for firm i,
$LnAssets_{i,t}$ = natural logarithm of total assets at the end of year t for firm i,
$InvAssets_{i,t}$ = total inventories divided by total assets at the end of year t for firm i,
$ReceiAssets_{i,t}$ = net trade receivable divided by total assets at the end of year t for firm i,
IND = industry dummies,
Year = time dummies,

ε_{it} = a random error term.

5. THE RESULTS

5.1. Descriptive and Correlation Statistics

Table 1 provides descriptive statistics for all variables that are used in the analysis and shows that the mean (median) values of discretionary accruals (*DisAcc*), abnormal cash flows from operations (*AbnCfo*), abnormal production cost (*AbnProd*), and the aggregated measure of real earnings management (*RemTotal*) are 0.000 (0.001), 0.000 (0.005), 0.000 (0.007), and 0.001 (0.013), respectively. This preliminary evidence suggests that the level of accrual and real earnings management that are used by FTSE350 firms to

manipulate earnings are almost zero. In other words, these FTSE firms are effectively monitored and followed by very large sophisticated investors, high quality audit firms, and professional analysts which overall makes manipulating earnings is very hard task to be achieved. Table 1 also shows that the mean of *AudOpin* is approximately %1, suggesting that a very few firms have received qualified audit opinion over the study period from 2010 to 2015. This evidence confirms the view that FTSE 350 firms provide a very high quality financial reporting to meet the needs of information users, and confirms the previous evidence that these FTSE firms exhibit a very low level of accrual and real earnings management.

Table 1. Descriptive statistics for the whole sample over the period 2010-2015

	N	*Mean*	*Median*	*Std. Dev.*	*Min*	*Max*
DisAcc	1955	0.000	0.001	0.059	-0.438	0.687
AbnCfo	1955	0.000	0.005	0.111	-2.295	0.941
AbnProd	2100	0.000	0.007	0.257	-2.651	2.154
RemTotal	1882	0.001	0.013	0.307	-3.947	2.931
AudOpin	2370	0.013	0.000	0.112	0.000	1.000
LnMK	2029	13.800	13.692	1.745	8.923	19.450
BM	2026	613.213	416.481	1189.667	-9962.500	26602.810
Loss	2471	0.132	0.000	0.338	0.000	1.000
ROA	2298	7.406	6.440	14.539	-58.300	269.110
Lev	2164	35.426	31.565	109.649	-2780.390	2394.020
QualLag	2334	0.016	0.000	0.125	0.000	1.000
LnAssets	2166	13.849	13.684	1.714	9.172	19.485
InvAssets	2162	0.109	0.061	0.151	0.000	0.938
ReceiAssets	2073	0.154	0.129	0.128	0.000	1.496

Table 1 provides descriptive statistics for the whole sample over the period 2010-2015. All variables are previously defined.

Table 2 provides descriptive statistics for the FTSE 350 sample based on auditor report (qualified vs. non-qualified audit report). Table 2 shows evidence that firms that received qualified audit report exhibit a higher level of abnormal cash flows from operations and aggregated measure of real earning management as compared to firms received un-qualified audit report. Specifically, for firms received qualified audit report the mean values of abnormal cash flows (*AbnCfo*) and aggregated measure of real earnings management (*RemTotal*) are 0.032 and 0.023, respectively. While for firms received un-qualified audit report the mean values of *AbnCfo* and *RemTotal* are -0.001 and 0.000, respectively. Further, Table 2 shows evidence (based on the mean values) that firms received qualified audit report are smaller in size (*LnMK*), report more losses (*Loss*), have a lower profitability ratio (*ROA*), have a higher debt/assets ratio (*Lev*), received qualified audit report more frequently in prior year (*QualLag*), and have a higher percentages of inventory/assets (*InvAssets*) and receivable/assets (*ReceiAssets*).

Overall, Tables 1 and 2 present evidence that firms received qualified audit report share different characteristics as compared to firms that received un-qualified audit report, especially the level of earnings management. This in turn suggests these characteristics should be taking into accounting in the analysis before any conclusions can be reached

Table 2. Descriptive statistics for the whole sample based on audit report over the period 2010-2015

	Firms sample received qualified audit report			Firms sample received un-qualified audit report		
	N	*Mean*	*Median*	*N*	*Mean*	*Median*
DisAcc	30	-0.008	0.000	1924	0.000	0.001
AbnCfo	30	0.032	0.033	1924	-0.001	0.005
AbnProd	27	-0.001	-0.006	2070	0.000	0.007
RemTotal	27	0.023	-0.003	1854	0.000	0.012
LnMK	29	12.230	12.276	1997	13.823	13.721
BM	29	706.847	545.209	1995	612.221	415.745
Loss	30	0.267	0.000	2340	0.135	0.000
ROA	30	3.558	4.310	2265	7.452	6.460
Lev	30	40.171	29.425	2132	35.363	31.565
QualLag	29	0.483	0.000	2293	0.010	0.000
LnAssets	30	12.915	12.586	2133	13.862	13.692
InvAssets	30	0.131	1.056	2130	0.109	0.061
ReceiAssets	29	0.174	0.121	2043	0.154	0.129

Table 2 provides descriptive statistics for the whole sample based on audit opinion (qualified vs. non-qualified). All variables are previously defined.

Table 3 reports Pearson correlation coefficients for all variables and reveals that abnormal cash flows from operations (*AbnCfo*) are positively correlated with abnormal production cost (*AbnProd*). This evidence indicates that FTSE firms uses these two activities of real earnings management simultaneously to manage earnings upwards, and also this evidence is consistent with prior research (e.g., Zang, 2012; Cohen and Zarwoin, 2010) on the complementary use of real earnings management activities. Table 3 also reveals that qualified audit opinion (*AudOpin*) is negatively associated with size (*LnMK*) and positively associated with profitability (*Loss*).

Table 3. Correlations matrix for all variables

	DisAcc	*AbnCfo*	*AbnProd*	*RemTotal*	*AudOpin*	*LnMK*	*BM*	*Loss*	*ROA*	*Lev*	*QualLag*	*LnAssets*	*InvAssets*	*ReceiAssets*
DisAcc	1													
AbnCfo	0.044	1												
AbnProd	-0.027	0.432***	1											
RemTotal	-0.007	0.684***	0.953***	1										
AudOpin	-0.020	0.028	-0.001	0.008	1									
LnMK	0.115***	-0.158***	-0.053*	-0.096***	-0.105***	1								
BM	-0.034	0.079***	0.031	0.052*	0.021	0.082***	1							
Loss	-0.342***	0.090***	0.047*	0.069**	0.064**	-0.192***	0.139***	1						
ROA	0.394***	-0.549***	-0.264***	-0.397***	-0.039	0.159***	-0.149***	-0.421***	1					
Lev	-0.032	-0.042	0.041	0.019	-0.007	-0.000	-0.084***	0.060*	-0.033	1				
QualLag	-0.072**	-0.011	-0.011	-0.012	0.407***	-0.105***	0.028	0.042	-0.020	-0.002	1			
LnAssets	0.037	-0.019	0.042	0.027	-0.073**	0.881***	0.212***	-0.051*	-0.071**	0.051*	-0.070**	1		
InvAssets	0.063**	0.054*	0.022	0.036	0.002	-0.092***	0.049*	-0.033	0.003	-0.092***	-0.006	-0.079***	1	
ReceiAssets	0.008	0.065**	0.017	0.036	0.0142	-0.180***	-0.122***	-0.049*	0.071**	-0.001	-0.006	-0.230***	-0.055*	1

Table 3 presents Pearson correlation matrix for all the variables. All variables are previously defined.
*, **, *** Denote 0.1, 0.05, and 0.01 significance levels, respectively.

5.2. The Results of Logit Regressions

Table 4 reports the results of examining the association between audit report and accrual earnings management (*DisAcc*). The results are interpreted based on the output of Model 6 where all the control variables are added into the analysis, while the results of Model 1 to Model 5 are just reported to show the impact of adding more control variables into the analysis. Table 4 (Model 6) shows a positive coefficient on *DisAcc* of 4.386, but is statistically insignificant. Thus, even though the relationship is statistically insignificant, the positive sign of the coefficient suggests that firms with qualified audit opinion exhibit a higher level of accrual earnings management. In other word, engaging in a higher level of earnings manipulation via the use of discretionary accruals was positively associated with receiving qualified audit report by the auditors. This in part is consistent with the main hypothesis that firms with high level of accrual earnings management are likely to receive qualified audit report.

Table 4. The relationship between audit report and accrual earnings management for FTSE350 sample over the period 2010-2015

	Logit Model 1	Logit Model 2	Logit Model 3	Logit Model 4	Logit Model 5	Logit Model 6
	AudOpin =1	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*
Constant	4.316***	3.929**	3.987**	2.376	1.967	1.818
	(2.587)	(2.198)	(2.211)	(1.075)	(0.822)	(0.626)
DisAcc	-0.425	0.348	0.453	3.533	3.439	4.386
	(-0.131)	(0.101)	(0.126)	(0.966)	(0.946)	(1.207)
LnMK	-0.653***	-0.628***	-0.629***	-0.541**	-0.534**	-0.636*
	(-4.845)	(-4.458)	(-4.390)	(-2.095)	(-2.016)	(-1.706)
BM		0.000	0.000	-0.000	-0.000	-0.000
		(0.314)	(0.239)	(-0.237)	(-0.200)	(-0.710)
Loss		0.269	0.220	0.377	0.445	0.371
		(0.544)	(0.389)	(0.583)	(0.678)	(0.512)
ROA			-0.003	-0.019	-0.018	-0.033
			(-0.130)	(-0.739)	(-0.705)	(-0.918)
Lev			-0.000	-0.000	-0.000	-0.001
			(-0.043)	(-0.235)	(-0.230)	(-0.253)
QualLag				4.034***	4.034***	3.690***
				(8.875)	(8.813)	(6.649)
LnAssets				-0.002	0.009	0.178
				(-0.007)	(0.035)	(0.455)
InvAssets					0.391	1.241
					(0.279)	(0.675)
ReceiAssets					0.640	1.900
					(0.389)	(1.011)
Industry and year dummies						Yes
N	1,865	1,860	1,837	1,835	1,821	972
Log-likelihood	-135.84	-135.55	-135.10	-102.42	-102.09	-82.42
Pseudo R²	0.0914	0.0929	0.0938	0.3128	0.3140	0.3680
chi²	27.35	27.78	27.95	93.25	93.45	95.97
Prob > chi²	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000

Table 4 reports the results of Logistic regressions of audit opinion and earnings management for whole sample over the period 2010-2015. The dependent variable (AudOpin) is a dummy variable equals to 1 if the firms received qualified audit report and zero otherwise. The main independent variable of interest is discretionary accruals (DisAcc). All other variables are as previously defined. Significant at: *10, **5 and ***1 percent levels

Table 5 reports the results of examining the association between audit report and real earnings management that occurs via sales-based manipulation, namely abnormal cash flows from operations (*AbnCfo*). Table 5 Model 6 presents evidence that firms with qualified audit report (*AudOpin*) exhibit a higher level of sales manipulation [abnormal cash flows from operation (*AbnCfo*)]. Specifically, I find positive coefficients on (*AbnCfo*) of 5.945 (P <0.10) in Table 5 Model 6. This evidence suggests that manipulating reported income via the use of sales-based manipulation (abnormal cash flows from operation) would lead to increase the probability of receiving qualified audit opinion. This is in turn confirms the main hypothesis that receiving qualified audit report is positively associated with the level of real earnings management.

Table 6 meanwhile reports the results of examining the association between audit report and real earnings management that occurs via production cost manipulation, namely abnormal production cost (*AbnProd*). Table 6 shows no evidence that audit report is associated with abnormal production cost. Particularly, Table 6 (Model 6) shows a negative coefficient on *AbnProd* of -0.408 and statistically insignificant, while for Model 1 over Model 5 the coefficients are still negative but are smaller in terms of their size as compared to Model 6. It seems that FTSE 350 firms do not manage earnings through the use of production cost. Further, this evidence is consistent with the reported results of Table 2 that there is no significant differences of the level of abnormal production cost (*AbnProd*) between firms received qualified audit report and firms received un-qualified audit report.

Table 5. The relationship between audit opinion and real earnings management (*AbnCfo*) for FTSE350 sample over the period 2010-2015

	Logit Model 1	Logit Model 2	Logit Model 3	Logit Model 4	Logit Model 5	Logit Model 6
	AudOpin =1	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*
Constant	4.085**	3.681**	3.746**	2.053	1.836	1.503
	(2.413)	(2.017)	(2.035)	(0.913)	(0.761)	(0.525)
AbnCfo	1.395	1.364	1.345	2.224	2.107	**5.945***
	(0.789)	(0.749)	(0.734)	(1.155)	(1.051)	**(1.813)**
LnMK	-0.637***	-0.610***	-0.615***	-0.516*	-0.512*	-0.557
	(-4.675)	(-4.260)	(-4.237)	(-1.932)	(-1.879)	(-1.433)
BM		0.000	0.000	-0.000	-0.000	-0.000
		(0.243)	(0.225)	(-0.218)	(-0.196)	(-0.630)
Loss		0.247	0.247	0.295	0.344	0.295
		(0.538)	(0.434)	(0.452)	(0.519)	(0.411)
ROA			0.001	-0.012	-0.012	-0.009
			(0.048)	(-0.423)	(-0.410)	(-0.246)
Lev			0.000	-0.000	-0.000	-0.002
			(0.017)	(-0.159)	(-0.154)	(-0.293)
QualLag				4.013***	4.004***	3.788***
				(8.863)	(8.811)	(6.594)
LnAssets				-0.008	-0.003	0.112
				(-0.031)	(-0.010)	(0.279)
InvAssets					0.353	0.854
					(0.253)	(0.451)
ReceiAssets					0.287	1.293
					(0.169)	(0.622)
Industry and year dummies						Yes
N	1,865	1,860	1,837	1,835	1,821	972
Log-likelihood	-135.56	-135.30	-134.86	-102.33	-102.07	-81.48
Pseudo R²	0.0933	0.0946	0.0953	0.3134	0.3141	0.3752
chi²	27.90	28.28	28.42	93.43	93.50	97.86
Prob > chi²	0.0000	0.0000	0.0001	0.0000	0.0000	0.0000

Table 5 reports the results of Logistic regressions of audit report and real earnings management (AbnCfo) for whole sample over the period 2010-2015. The dependent variable (AudOpin) is a dummy variable equals to 1 if the firms received qualified audit report and zero otherwise. The main independent variable of interest is abnormal cash flows from operations (AbnCfo). All other variables are as previously defined. Significant at: *10, * *5 and * * *1 percent levels

Table 7 reports the results when the aggregated measure (*RemTotal*) are used as the proxy of real earnings management. Table 6 Model 6 shows a positive coefficients on (*RemTotal*) of 0.593 but is statistically insignificant, indicating that receiving qualified audit opinion is positively associated with the total level of real earnings management. This insignificant relationship may be attributed to the fact that the aggregated measure is a combination of abnormal cash flows from operations (*AbnCfo)* and abnormal production cost (*AbnProd)*, and these two real earnings management activities have different associations with audit option (*AudOpin*). While Table 8 reports the results for examining the association between audit report and earnings management where all the proxies of accrual and real earnings management activities are added into the same model.

Table 8 Model 3 reports the results and shows similar evidence that receiving qualified audit report is positively associated with the level of iscretionary accrual and abnormal cash flows from operations. Specifically, Table 8 Model 3 shows that the coefficients on *DisAcc* and *AbnCfo* are positive even though they are statistically insignificant.

Table 6. The relationship between audit report and real earnings management (*AbnProd*) for FTSE350 sample over the period 2010-2015

	Logit Model 1	Logit Model 2	Logit Model 3	Logit Model 4	Logit Model 5	Logit Model 6
	AudOpin =1	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*
Constant	4.040**	3.280*	3.381*	1.772	1.556	2.244
	(2.295)	(1.751)	(1.786)	(0.773)	(0.624)	(0.739)
AbnProd	-0.335	-0.375	-0.364	-0.184	-0.222	-0.408
	(-0.471)	(-0.511)	(-0.489)	(-0.190)	(-0.233)	(-0.299)
LnMK	-0.634***	-0.587***	-0.593***	-0.525*	-0.528*	-0.815**
	(-4.486)	(-4.006)	(-3.971)	(-1.864)	(-1.845)	(-1.983)
BM		0.000	0.000	0.000	0.000	-0.000
		(0.774)	(0.707)	(0.096)	(0.140)	(-0.501)
Loss		0.466	0.480	0.440	0.489	0.592
		(1.006)	(0.890)	(0.665)	(0.730)	(0.805)

<div align="right">*Table 6 Continued*</div>

ROA			0.001	-0.013	-0.012	-0.011
			(0.064)	(-0.448)	(-0.410)	(-0.314)
Lev			-0.000	-0.001	-0.001	-0.003
			(-0.307)	(-0.434)	(-0.435)	(-0.623)
QualLag				3.947***	3.947***	3.551***
				(8.612)	(8.580)	(6.437)
LnAssets				0.018	0.029	0.332
				(0.066)	(0.104)	(0.818)
InvAssets					-0.275	0.972
					(-0.173)	(0.497)
ReceiAssets					0.791	1.724
					(0.471)	(0.810)
Industry and year dummies						Yes
N	1,866	1,862	1,840	1,838	1,824	947
Log-likelihood	-129.67	-128.75	-128.32	-98.29	-97.99	-79.24
Pseudo R²	0.0814	0.0876	0.0885	0.3017	0.3027	0.3539
chi²	22.99	24.71	24.92	84.92	85.10	86.83
Prob > chi²	0.0000	0.0001	0.0004	0.0000	0.0000	0.0000

Table 6 reports the results of Logistic regressions of audit opinion and real earnings management (AbnProd) for whole sample over the period 2010-2015. The dependent variable (AudOpin) is a dummy variable equals to 1 if the firms received qualified audit report and zero otherwise. The main independent variable of interest is abnormal production cost (AbnProd). All other variables are as previously defined. Significant at: *10, * *5 and * * *1 percent levels.

Overall, the reported results in Tables 4 to 8 confirms the main hypothesis of this study that the use of accrual and real earning management activities to manage the reported earnings is positively associated with the probability of receiving qualified audit report. Audit firms are more concerned about their reputation and work hard to avoid any potential litigation risk by issuing a qualified audit report for firms that exhibit higher level of accrual and real earnings management (e.g., DeAngelo, 1981; Francis and Krishnan, 1999).

Table 7. The relationship between audit report and real earnings management (*RemTotal*) for FTSE350 sample over the period 2010-2015

	Logit Model 1	Logit Model 2	Logit Model 3	Logit Model 4	Logit Model 5	Logit Model 6
	AudOpin =1	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*	*AudOpin=1*
Constant	4.006**	3.256*	3.374*	1.696	1.564	2.036
	(2.275)	(1.739)	(1.780)	(0.739)	(0.630)	(0.679)
RemTotal	-0.159	-0.206	-0.199	0.119	0.064	0.593
	(-0.254)	(-0.317)	(-0.296)	(0.142)	(0.075)	(0.465)
LnMK	-0.629***	-0.583***	-0.590***	-0.512*	-0.521*	-0.755*
	(-4.460)	(-3.986)	(-3.957)	(-1.799)	(-1.804)	(-1.840)
BM		0.000	0.000	0.000	0.000	-0.000
		(0.774)	(0.672)	(0.090)	(0.126)	(-0.484)
Loss		0.471	0.484	0.471	0.511	0.638
		(1.014)	(0.894)	(0.710)	(0.762)	(0.873)
ROA			0.001	-0.012	-0.011	-0.008
			(0.044)	(-0.413)	(-0.378)	(-0.240)
Lev			-0.001	-0.001	-0.001	-0.003
			(-0.429)	(-0.571)	(-0.577)	(-0.628)
QualLag				3.943***	3.938***	3.603***
				(8.547)	(8.525)	(6.403)
LnAssets				0.012	0.024	0.289
				(0.045)	(0.087)	(0.716)
InvAssets					-0.339	0.867
					(-0.214)	(0.435)
ReceiAssets					0.708	1.531
					(0.417)	(0.707)
Industry and year dummies						Yes
N	1,833	1,829	1,807	1,805	1,793	947

Table 7 Continued

Log-likelihood	-129.28	-128.35	-127.88	-97.99	-97.72	-79.18
Pseudo R^2	22.79	0.0872	0.0885	0.3014	0.3024	0.3545
chi^2	0.0810	24.53	24.82	84.54	84.72	86.96
Prob > chi^2	0.0000	0.0001	0.0004	0.0000	0.0000	0.0000

Table 7 reports the results of Logistic regressions of audit opinion and real earnings management (RemTotal) for whole sample over the period 2010-2015. The dependent variable (AudOpin) is a dummy variable equals to 1 if the firms received qualified audit opinion and zero otherwise. The main independent variable of interest is the aggregated measure of real earnings management (RemTotal). All other variables are as previously defined. Significant at: *10, * *5 and * * *1 percent levels.

Table 8. The relationship between audit report and accrual and real earnings management for FTSE350 sample over the period 2010-2015

	Logit Model 1 **AudOpin =1**	Logit Model 2 **AudOpin=1**	Logit Model 3 **AudOpin=1**
Constant	3.788**	3.244*	2.557
	(2.092)	(1.691)	(0.832)
DisAcc	-0.848	0.427	2.802
	(-0.255)	(0.116)	(0.699)
AbnCfo	1.282	1.063	5.751
	(0.614)	(0.468)	(1.489)
AbnProd	-0.462	-0.454	-0.921
	(-0.677)	(-0.629)	(-0.649)
LnMK	-0.614***	-0.583***	-0.849*
	(-4.256)	(-3.873)	(-1.922)
BM		0.000	-0.000
		(0.664)	(-0.733)
Loss		0.543	0.698
		(0.956)	(0.989)
ROA		0.004	-0.006
		(0.155)	(-0.165)
Lev		-0.001	-0.003
		(-0.367)	(-0.607)
QualLag			3.799***
			(6.379)
LnAssets			0.348
			(0.825)
InvAssets			0.811
			(0.408)
ReceiAssets			0.740
			(0.307)
Industry and year dummies			Yes
N	1,833	1,807	947
Log-likelihood	-129.01	-127.69	-77.17
Pseudo R^2	0.0830	0.0898	0.3708
chi^2	23.34	25.19	90.97
Prob > chi^2	0.0001	0.0014	0.0000

Table 8 reports the results of Logistic regressions of audit opinion and accrual and real earnings management for whole sample over the period 2010-2015. The dependent variable (AudOpin) is a dummy variable equals to 1 if the firms received qualified audit opinion and zero otherwise. All other variables are as previously defined. Significant at: *10, * *5 and * * *1 percent levels.

6. CONCLUSION

The main objective of this study is to explore the relationship between receiving qualified audit report and manipulating the reported income via the use of accrual and real earnings management activities. While prior research has focused on the examining the impact of audit quality (proxied by the presence of high quality audit firm [Big N]) on accrual earnings management (e.g., Becker et al., 1998; Balsam et al., 2003), and a very few research has investigated the relationship between audit report

(qualified vs. un-qualified) and accrual earnings management (e.g., Francis and Krishnan, 1999; Bartov et al., 2000; Bradshaw et al., 2001; Johl et al., 2007), there is no research to date has examined the relationship between audit report and real earnings management based on UK data.

This paper therefore contributes to the current literature by examining the relationship between audit report and real earnings management using UK sample. Indeed, the sample of this study consists for firms listed on one of the most active, attractive and largest capital markets throughout the world, the

FTSE 350. Thus, the study adds to current research by providing the following evidence.

First, this paper provides the first evidence on the relationship between audit report and real earnings management based on UK sample for the period post-credit crisis (2010-2015). It shows that firms who received qualified audit report exhibit a higher level of real earnings management (via the use of abnormal cash flows from operations, *AbnCfo*). Second, the findings of this paper show as well that the level of accrual earnings management is positively associated with receiving qualified audit report, confirming prior research. Third, this paper shows that firms with qualified audit report share different characteristics as compared to firms received un-qualified audit report. Finally, this paper examines a very recent period (2010-2015) that follows the credit crisis period (2007-2009) to make sure that global credit crisis has no impact on the analysis, and also examine a very large dataset that consist of the largest 350 firms that listed on the London Stock ExchangeIt is worth noting that the findings of this paper can be of interest to abroad audience e.g., investors, audit firms, regulators, policy makers, standards setters, etc. For example, regulators can use audit report as proxy for the financial reporting quality of auditees and, therefore, fix the regulation to constrain the use of accrual and real earnings management activities.

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