

# EARNINGS MANAGEMENT, AUDIT COMMITTEE EFFECTIVENESS AND THE ROLE OF BLOCKHOLDERS OWNERSHIP: EVIDENCE FROM UK LARGE FIRMS

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## Abstract

The existing literature documents that the quality of financial reporting is higher when firms have effective audit committees. However, recent studies find that audit committees are not effective in family firms where agency conflicts arise between controlling and non-controlling shareholders. This study extends the previous findings by investigating the effectiveness of audit committees in firms with similar agency conflicts when one owner obtains effective control of the firm. Compared to firms with a low level of block ownership, high-blockholder firms face less agency problems due to the separation of ownership and management, but more severe agency problems between controlling (blockholders) and non-controlling shareholders (minority shareholders). Using a unique hand-collected sample, this study tests the largest 350 UK firms for three years from 2005 to 2007, and shows that firms with effective audit committees have less earnings management. This study also documents that the monitoring effectiveness of audit committees is moderated in firms with high blockholder ownership. The results are not sensitive to the endogeneity test and hold for alternative specifications of both dependent and independent variables. Overall, these findings suggest that audit committees are ineffective in mitigating the majority-minority conflict compared to their effectiveness in reducing owners-managers conflicts. These conclusions, along with some recent similar evidence (e.g., Rose, 2009 and Guthrie and Sokolowsky, 2010), may raise doubts about the monitoring role of blockholders asserted by agency theorists and widely accepted in corporate governance literature.

**Keywords:** Corporate Governance, Blockholder Ownership, Audit Committee Effectiveness, Earnings Management and Agency Theory

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## 1. Introduction

The prior literature on corporate governance generally assumes a diffused ownership. Thus, its focus is on bridging the managers-shareholders conflict. However, a recent stream of research has started to question this assumption and to suggest that most economies, including the U.S., have a concentrated pattern of ownership. For example, La Porta, Lopez-De-Silanes and Shleifer (1998) study non-financial firms in 49 countries and find that, on average, the largest three shareholders own almost 50% of their company. Another study by La Porta, Lopez-De-Silanes and Shleifer (1999) finds that

ownership concentration in the form of family ownership is the dominant ownership type for large corporations in their sample of 27 countries that includes developed economies. Claessens, Djankov and Lang (2000) find similar results when they tested nine East Asian countries.

Ownership concentration in firms with blockholders shifts the agency problem from the owner-manager conflict to the majority-minority shareholders conflict (e.g., Claessens and Fan, 2002). In the UK context, Goergen et al. (2005) study the corporate governance system and assert that the way in which the ownership of listed companies is concentrated in the hands of corporate directors and

passive institutional investors creates its own type of agency problems. In blockholder controlled firms, there is a great potential for manager-owners to expropriate the interests of minority shareholders (e.g., Claessens and Fan, 2002).

The literature on audit committees documents that their effectiveness is a vital corporate governance mechanism that improves the quality of reported accounting earnings (see e.g., Klein, 2002; Benkel, Mather and Ramsay 2006; Chang and Sun, 2009). However, in firms where the agency conflict is between majority and minority shareholders, rather than between owners and managers, such as in family firms, audit committees do not play their intended monitoring role (see e.g., Siregar and Utama, 2008 and Abdul Rahman and Ali, 2006).

On the other hand, Jaggi and Leung (2007) and Jaggi Leung, and Gul (2009) criticise the previous findings on family-controlled economies and show that ownership concentration moderates the monitoring effectiveness of audit committees and corporate boards on constraining earnings management in family-controlled firms.

Another recent strand of research has investigated the moderating effect of blockholder ownership in various contexts. For instance, Rose (2009) empirically finds that outside ownership concentration moderates the relationship between staggered boards and a firm's value. Guthrie and Sokolowsky (2010) present empirical evidence that blockholders moderate the relationship between earnings management and seasoned equity offerings. This study extends both strands of the literature by investigating the moderating effect of blockholders on the relationship between audit committee effectiveness and earnings management.

Based on the arguments and findings of previous researchers, this study argues that the effectiveness of audit committees in constraining managerial opportunistic behaviour of earnings management is significantly reduced in firms with a high blockholder presence. In other words, audit committees are effective in constraining earnings management when the agency conflict is between the owner and manager (Type I agency cost) but not when the conflict is between the majority and minority shareholders (Type II agency cost). Thus, this study extends the existing research by investigating whether the monitoring effectiveness of audit committees in constraining earnings management is affected by blockholder ownership. Our results could have important policy implications for the effectiveness of ownership structures as a fundamental part of the corporate governance system, especially in UK companies.

This study will first examine whether the negative association between audit committee effectiveness and earnings management that has been documented, mainly in the US and Australia, (see Dechow and Dichev, 2002; Klein, 2002; Benkel, et

al. 2006; Chang and Sun, 2009) also holds for UK firms. Secondly, it evaluates whether blockholder ownership moderates the monitoring effectiveness of audit committees.

The results indicate that the effectiveness of an audit committee in constraining earnings management is weakened when the corporate ownership structure includes large shareholders. Thus, the findings of this research suggest that, though firms with blockholders comply with the Code's requirements for audit committees, these committees have little effect on minimizing earnings management and reducing the majority-minority conflict.

Sensitivity tests performed on different measures of earnings management and various cut-off points for blockholder ownership concentration produce similar results. Overall, the findings indicate that audit committees tend to be effective in constraining earnings management only in non-blockholder controlled firms. A possible alternative explanation for these findings could be that effective audit committees and blockholders are monitoring substitutes for constraining earnings management.

This paper makes two significant contributions to the literature on audit committees. First, it supports the view that a fully independent, sizeable, active and financially literate audit committee plays an important role in constraining managerial opportunistic behaviour in UK firms and that this is likely to improve the quality and credibility of reported accounting information. This result supports the recent audit committee related recommendations of the UK (2003) Corporate Governance Code (hereafter the UK Code) and is considered as the first study to empirically test the UK Code recommendations. Secondly, the monitoring effectiveness of an audit committee is significantly reduced if the corporate ownership structure includes large shareholders, which may be due to the collusion of audit committee members with the blockholder(s) who influenced their appointment. It might be due also to possible collusion between blockholders and management, which makes it hard for the audit committee to discharge its duties and thus constrain earnings management.

The remainder of this paper is organized as follows. Section 2 discusses the theoretical background of this study. Section 3 reviews the literature and develops hypotheses. Section 4 discusses research design, methods and data collection. Section 5 presents the descriptive statistics and empirical results. Further analysis and sensitivity checks are presented in Section 6. Finally, Section 7 contains a summary and conclusions.

## **2. Blockholders ownership and agency problems**

The relation between the audit committee, earnings quality and blockholder ownership potentially fits in the realm of agency theory. There are two main types of agency problems in modern corporations. The first type arises from the separation of ownership and control, which creates the potential for conflicts of interest between owners and their agents who manage the day-to-day operation of the company. Jensen and Meckling (1976) argue that managers (the agent) act on behalf of the shareholders (the principal), who are the actual owners of the firm. This relationship empowers the managers' position and leaves the firm's shareholders with no control over the decision-making processes. This is known as a Type I agency cost.

The second type of agency problem arises from conflicts between controlling and non-controlling shareholders. Controlling shareholders may pursue their own benefits at the expense of non-controlling shareholders. Shleifer and Vishny (1997) argue that large shareholders have incentives to maximize their own benefits at the cost of other shareholders. This is known as a Type II agency problem.

In firms with a high ownership concentration, blockholders enjoy substantial control as a result of their equity holdings, their voting rights, their cash flow rights and their strong influence on nominations for the board of directors. This control gives the blockholders power to seek private benefits at the expense of minority shareholders. Controlling shareholders can seek such private benefits by freezing out minority shareholders or by engaging in related-party transactions (Gilson and Gordon, 2003). The controlling shareholders may also use other means to expropriate minority shareholders, such as selling assets, goods or services to other companies under their control or by influencing the pricing of seasoned equity offerings (Guthrie and Sokolowsky, 2010).

In addition, prior studies on the relation between earnings quality and various features of ownership structure show that earnings management is greater in firms with more concentrated ownership in the form of family ownership, blockholder ownership or managerial ownership, as documented by Fan and Wong (2002) using Asian countries, Zhong et al. (2007) using US firms, and Teshima and Shuto (2008) using Japanese firms, respectively. Additionally, Francis, Schipper and Vincent (2005) document lower earnings response coefficients for firms with ownership structures that have unequal voting rights.

Hence it is argued by Fama and Jensen (1983b) that, in order to limit agency costs, firms need a system that can separate decision management from decision control. Corporate governance can provide this desirable system, or at least part of it. This claim

is also supported by corporate governance regulators. The Sarbanes-Oxley Act (2002) suggests that corporate governance should impact on shareholders' perception of the information content of accounting earnings. The UK Code emphasises the impact of these mechanisms in enhancing the quality of accounting information. This Code states that the "audit committee's role is to monitor the integrity of the financial statements of the company, and any formal announcements relating to the company's financial performance, reviewing significant financial reporting judgments" (p.16).

Corporate governance attributes limit the power of management to disregard the interests of shareholders, thereby decreasing agency costs. However, this argument is valid under the assumption that ownership is diffused and the conflict is between managers and owners (Type I agency problems).

In view of this argument, we propose a research question to investigate the effectiveness of audit committees in firms that may suffer agency conflict problems between majority and minority shareholders in the form of blockholders and non-blockholders. That question is, do blockholders have a moderating effect on the monitoring effectiveness of audit committees? The answer to this question will be of special interest to investors and regulators in enabling them to evaluate whether the audit committee in these firms is effective in monitoring managerial opportunistic behaviour and to evaluate the possible effect of blockholders in undermining the audit committee's effectiveness.

## **3. Literature review and hypotheses development**

### ***3.1 Audit Committee Effectiveness and Earnings Management***

The findings of prior studies on the effect of the audit committee on earnings management are mixed and inconclusive. For example, Xie, Davidson and DaDalt (2003) use a sample of 282 US firms for the years 1992, 1994 and 1996 and Bedard, Chtourou and Courteau (2004) use a sample of 300 US firms in the year 1996. They apply different methods to capture earnings management incidence, and control for different factors, but both find that there is no significant association between audit committee size and aggressive earnings management. Baxter and Cotter (2009) and Abdul Rahman and Ali (2006) find similar evidence for samples of Australian and Malaysian listed companies respectively.

In terms of audit committee independence, Klein (2002) finds that the extent of discretionary accruals is more pronounced for firms whose audit committee has a minority of independent directors. In Australia, Benkel et al. (2006) find that higher levels of audit committee independence are associated with reduced levels of earnings management. In the same

institutional context, Davidson et al. (2005) find similar results. In France, Piot and Janin (2007) examine the SBF 120 Index of French companies between 1999 and 2001 and find that audit committee independence mitigates earnings management. Additionally, Chang and Sun (2009), using a better specified earnings management measure based on Kothari, Lcone and Wasley (2005), reveal a negative association between earnings management and audit-committee independence in the post-SOX period.

Motivated by the SEC Panel Report's conclusion that audit committee members need financial sophistication, Xie et al. (2003) examine the role of the audit committee in preventing earnings management. They classify audit committee members into six groups and find that board and audit committees that include members with corporate or financial backgrounds are associated with lower earnings management.

Bedard et al. (2004) demonstrate empirically that the presence of at least one member with financial expertise on the audit committee is negatively related to the level of earnings management. Yang and Krishnan (2005) find that the presence of a financial expert on the audit committee is associated with quarterly earnings management.

Lo, Raymond, Wong and Firth (2010) investigate whether good governance structures help constrain management's opportunistic behaviours measured by transfer pricing manipulations in China. Their sample covers 266 listed companies on the Shanghai Stock Exchange in 2004. They find that audit committees with financial experts are less likely to engage in transfer pricing manipulations.

Although all these studies use different samples, different time periods, different countries and different earnings quality proxies, they are unanimous in finding that financial experts on audit committees contribute to higher quality financial reporting.

Therefore, we expect that an effective audit committee will constrain opportunistic managerial behaviour of earnings management, which will improve the quality of reported earnings. The following hypothesis is developed to test this expectation:

H1. *Firms with an effective audit committee are associated with lower earnings management, measured by discretionary accruals, compared to firms without an effective audit committee.*

### **3.2 Audit committees, earnings management and blockholders**

A key issue in corporate governance is whether blockholders contribute to the reduction of agency problems or whether they exacerbate them (Shleifer and Vishny, 1997). According to Zhong, Gribbin, and Zheng (2007), there are two competing views when studying blockholders' effect. First, according to the alignment effect and consistent with the agency

theory perspective, small blockholders can sell their stocks quickly if they are not pleased with the performance of managers, whereas large blockholders find it hard to sell a large block of stock without it having considerable impact on the firm, including lowering its stock price. Thus, large blockholders normally adopt a long-term strategy and, thus, they need to monitor managers to produce more benefits from their equity ownership. Blockholders have the ability to monitor and 'voice' their concerns and objections as a result of their large voting rights. This, in turn, provides some monitoring of managers, which enables the blockholder also to affect the board of directors' composition (Person, 2006).

On the other hand, according to the entrenchment effect, gaining effective control of a corporation enables the controlling owner to determine how profits are distributed among shareholders. Blockholders have the means to influence firms through electing directors and voting on changes in the corporate structure. In practice, they also apply their influence through informal channels, such as negotiations and dialogues with management (Brav, Jiang, Partnoy and Thomas, 2008 and Guthrie and Sokolowsky, 2010). Empirically, Cronqvist and Fahlenbrach (2007) find that blockholders influence investment, financial and executive compensation policies, as well as growth, financial leverage, CEO pay and a firm's performance measures.

The presence of powerful shareholders, such as blockholders, suffices for CEOs to turn to earnings management as a low cost alternative to improving short-term performance. This interpretation complements the argument advanced by Shleifer (2004) that competitive pressures contribute to the rise of aggressive corporate accounting practices as managers face powerful incentives to drive up their share prices. Thus, blockholders can put pressure on managers to report a favourable financial performance and they also hold the threat of intervention to perceived underperforming management (Shleifer and Vishny, 1997 and Barclay and Holderness, 1991). Consequently, the existence of large blockholders may pressure managers to engage in income-increasing earnings management to report a favourable financial performance.

Some prior studies support this view. Zhong *et al.* (2007) examine these two views on the effect of blockholders on earnings management. They study 5,475 firm-year observations from 1994 to 2003 using pooled cross-sectional data and the modified Jones model to measure the magnitude of earnings management. Their results are consistent with the second view, indicating that blockholder ownership is positively associated with discretionary accruals.

Furthermore, Fan and Wong (2002) examine the relations between earnings informativeness, measured by the earnings-return relation, and the ownership structure of 977 companies in seven East Asian

economies. Their results show that concentrated ownership structures create agency conflicts between controlling owners and outside investors. Their evidence supports the argument that controlling owners are perceived to report accounting information for self-interested purposes, causing the reported earnings to lose credibility to outside investors. Hoi and Robin (2010) find a similar result that, on average, blockholder ownership negatively affects a firm's value.

Large blockholders generally use their power through the voting process to influence the appointment of board members. They use this influence to ensure that their interests are safeguarded. The presence of blockholders in the corporate ownership structure raises the interesting research question of whether such a presence weakens the effectiveness of an audit committee in monitoring managerial opportunistic earnings management.

The ultimate objective of the appointment of independent members to the audit committee is to ensure that there is no undue pressure on audit committee members from individuals with controlling interests (Jaggi and Leung, 2007). However, if there are blockholders with a controlling interest, non-executive members of the audit committee will realize that their personal relationships with these large shareholders may influence their reappointment and, as a consequence, they may not oppose the views of the blockholder. Thus, if non-executive members of an audit committee have to show loyalty to the controlling shareholders, their independence and, thus, their effectiveness is compromised.

As a result, this study expects to find less effective monitoring by audit committees, which may result in higher earnings management, in firms with high blockholder ownership than in firms that are less affected by blockholder influences. As in some prior literature (e.g., Peasnell et al., 2005), blockholder ownership is measured as a dummy variable that takes the value of 1 if that ownership exceeds 10%, and zero otherwise. The following hypothesis is developed to test this expectation:

**H2.** *Audit committees are more effective in constraining managerial opportunistic earnings management behaviour in firms with less blockholder domination.*

#### **4. Research design**

This section discusses the methods, models, definitions of variables, and data collection employed in examining the associations between audit committee effectiveness and earnings management, considering the effect of blockholder ownership, as well as related control variables.

#### **4.1. Measurement of Earnings Management**

The present study uses discretionary accruals as a measure of earnings management. Discretionary accruals (DAC) are defined as the difference between total accruals and non-discretionary accruals, where discretionary accruals are estimated using the Kothari et al. (2005) model as follows:

$$TACC_{it} / TA_{it-1} = \alpha (1 / TA_{it-1}) + \beta_1 (\Delta REV_{it} - \Delta REC_{it}) / TA_{it-1} + \beta_2 (PPE_{it} / TA_{it-1}) + \beta_3 ROA_{it-1} + \varepsilon_{it}$$

where TACC = total accruals, defined as the difference between net income before extraordinary items and cash flow from operations; A = beginning of year total assets;  $\Delta REV$  = change in net revenue;  $\Delta REC$  = change in account receivables; PPE = gross value of property, plant, and equipment; and ROA = lagged return on assets.

To estimate the coefficients of the above accruals model, ordinary least squares (OLS) regression is used to estimate the equation by industry for each year. The model resulting from the above equation is then used to calculate discretionary accruals through the difference between total accruals and non-discretionary accruals for each firm. The calculation of discretionary accruals is conducted for each industry in each year and covers 17 industries over three financial years.

#### **4.2 Measurement of audit committee effectiveness**

The corporate governance structure has multiple dimensions, and each function may substitute for or complement others within a given dimension to form an optimal governance structure. Recent studies, such as Dey (2005) and Chang and Sun (2009), consider a comprehensive set of individual governance variables to measure various corporate governance dimensions. Similarly, Jenkins (2002) uses four components to measure audit-committee effectiveness. Abbott et al. (2000) measure audit committee effectiveness using a dummy variable that takes the value of one if the audit committee consists entirely of outsiders and meets at least two times per year, and a value of zero otherwise. We follow these studies, plus the UK Code recommendations, to structure an audit committee score. This measure of audit committee effectiveness assumes that the audit committee variables function better collectively than individually.

Therefore, this study uses an aggregated audit committee score consisting of four audit committee variables as an indicator of overall audit committee effectiveness. These four variables are a fully independent audit committee, at least one director with a financial background/experience on the audit committee, an active audit committee that meets at

least three times per year, and an audit committee that consists of at least three members. These four variables together serve as a signal of an effective audit committee, and investors might usefully perceive that a higher aggregated audit committee score is likely to relate to less earnings management.

### **4.3 Control Variables**

This study's regressions include two sets of control variables based on the findings of previous literature. The first set comprises firm characteristics. A firm's performance is measured by return on assets (ROA: net profit divided by total assets), which is an indicator of the management's ability to efficiently utilise corporate resources (assets) that ultimately belong to the shareholders. Leverage (long-term debt divided by total assets) represents the debt structure of a company and is used as a proxy for debt covenant violation (Efendi, Sirvastara and Swanson, 2007). Jiang, Lee and Anandarajan (2008) suggest that leverage changes may have differing impacts on earnings management. Annual sales growth (GROWTH) is used to control for a firm's pace of development because, in times of rapid growth, a company may experience pressure to maintain or exceed anticipated growth rates. Matsumoto (2002) suggests that firms with higher growth prospects are more likely to be involved in earnings management. To control for "big bath" type charges that could indicate poor accrual quality (e.g., Healy, 1985), an indicator variable LOSS is used and this equals one if the firm has reported a loss in the period, and zero otherwise. In addition, LACCR is last year's total accruals and it equals net income before extraordinary items, minus the operating cash flow scaled by beginning of year total assets. This variable captures the reversal of accruals over time. CFO is cash flow from operating activities divided by total assets at the beginning of the period. Jiang et al. (2008) and Dechow, Sloan and Sweeney (1995) show that CFO influences the magnitude of discretionary accruals, and higher CFOs are associated with lower discretionary accruals.

A dummy variable CROSSLIST that takes the value of 1 if the company is cross-listed in a US capital market, and zero otherwise. In the US, all cross-listed foreign firms are now required to meet the same SEC requirements, including the SOX requirements, as US firms. This could pressure UK cross-listed firms to apply both the UK and the US strict requirements, thus producing different (presumably better) financial outcomes than their counterparts that are listed only on the London Stock Exchange (LSE) and subject only to UK regulations. Firm size (SIZE), measured as the natural logarithm of the firm's total assets, is taken as a proxy for the complexity of the firm (Fama & Jensen, 1983) since the scale and complexity of a large firm could obscure our proposed relationship.

Our second set of control variables includes proxies for corporate governance. Board size (BRDSIZE) is measured as the number of directors on the board. Lipton and Lorsch (1992) suggest that larger boards are able to commit more time and effort to overseeing management compared to smaller boards. Board independence (BRDIND) is measured as the fraction of independent non-executive directors on the board. Managerial ownership (MANGOWN) is measured as the percentage of total shares held by executive directors divided by the total number of shares. Warfield et al. (1995) show that managerial ownership is inversely associated with discretionary accruals.

This study's 578 firms operate in 17 industries, as categorized by the two digit SIC codes. It includes a dummy variable for each SIC code and this provides 17 industry variables in our regression models. Therefore, following Himmelberg, Hubbard and Palia (1999), regressions are reported after estimating industry fixed effects and including year dummy variables. All reported p-values are based on White's (1980) heteroskedasticity consistent standard errors. This study also adds a year dummy variable for year 2006 and another year dummy variable for year 2007 to control for the possibility that the results reflect only intertemporal variation in accruals (Xie et al, 2003).

$$DAC_j = \gamma_0 + \gamma_1 \text{AUDSCORE}_{jt} + \gamma_2 \text{BLOCK}_{jt} + \gamma_3 \text{BRDIND}_{jt} + \gamma_4 \text{BRDSIZE}_{jt} + \gamma_5 \text{MANGOWN}_{jt} + \gamma_6 \text{SIZE}_{jt} + \gamma_7 \text{LEV}_{jt} + \gamma_8 \text{GROWTH}_{jt} + \gamma_9 \text{CFO}_{jt} + \gamma_{10} \text{ROA}_{jt} + \gamma_{11} \text{LOSS}_{jt} + \gamma_{12} \text{CROSSLIST}_{jt} + \gamma_{13} \text{LACCR}_{jt} + \gamma_j \text{YEAR} + \gamma_k \text{INDUSTRY}_i + \text{error}$$

- |          |   |
|----------|---|
| DAC      | Absolute value of the discretionary accruals estimated by the Kaothari, et al. (2005) model.  |
| AUDSCORE | A scale out of four points, one point for each of the following variables: fully independent audit committee, at least one financial expert, at least three meetings per year and at least three members in the audit committee |
| BLOCK    | A dummy variable taking the value of one if the firm has an external stockholder owning 10% or more of the outstanding shares, and zero otherwise.  |

*Control Variables:*

BRDIND	The proportion of independent non-executive directors to total board members.
BRDSIZE	The number of directors on the board.
MANGOWN	The percentage of total shares held by executive directors divided by the total number of shares.
SIZE	The natural logarithm of total assets at year end.
CFO	Cash flows from operating activities divided by beginning of period total assets.
ROA	Net income divided by the total assets at the beginning of the year.
CROSSLIST	A dummy variable that takes the value of 1 if the company is cross-listed in a US capital market, and zero otherwise.
LOSS	A dummy variable that takes the value of 1 if the firm has reported a loss in the period, and zero otherwise.
LACCR	Last year's total accruals = (net income before extraordinary items - operating cash flow) / lagged total assets
INDUSTRY	Industry dummies for the industry effect.
YEAR	Dummy variables for the year effect.

#### **4.4 Sample selection and data collection**

##### **4.4.1 Sample Selection**

This study covers three years of reporting periods from December 2005 to December 2007. There are five reasons for this choice. Firstly, this study uses the UK Corporate Governance Code (2003) as a guide for corporate governance variables and this Code has been effective since November 2003. Secondly, the introduction of the International Financial Reporting Standards (IFRS) in 2005 makes it consistent to investigate the earnings management and audit committee relationship post-IFRS. Thirdly, this study cover the period after the introduction of SOX and some recent research suggests that SOX has improved audit committees' effectiveness. As Chang and Sun (2009) point out, the passage of SOX marks the beginning of the mandatory disclosure of audit committee composition and other corporate governance information for cross-listed foreign firms. They posit that the provisions of SOX improve the effectiveness of an independent audit committee and other corporate-governance functions in monitoring the earnings quality of cross-listed foreign firms. Fourthly, the years 2005, 2006 and 2007 have been chosen, and later years are not considered, due to the emergence of a financial crisis in September 2008. Finally, due to the large amount of data that had to be hand-collected for the audit committee variables, limiting the study period to three years makes that task viable.

The initial sample for this study is the FTSE 350 Index, which is the top 350 UK listed firms by total market capitalisation. Targeting the FTSE 350 firms ensures both statistical power in the tests and maximum data availability. This selection also has

the benefit of making the sample somewhat homogeneous with respect to size, though this raises the concern about the generalisation of our findings. Furthermore, FTSE 350 firms implement corporate governance mechanisms recommended by the UK Code to the same level, whereas medium and small firms outside the FTSE 350 have a lower level of corporate governance compliance. For instance, the Code (2003, p.9) states that "The board should establish an audit committee of at least three, or in the case of smaller companies, two members, who should all be independent non-executive directors."

Financial and regulated industries are then excluded from the initial sample (see Table I, Panel A). Compared to other industries, regulated industries have an incentive to adopt conservative accounting practices and to defer income recognition because their revenues are set on fixed accounting rates of return. Therefore, capturing management's opportunistic manipulations is difficult. Financial companies are omitted because their special accounting practices mean that the discretionary accruals model does not apply to them, as illustrated in previous empirical studies (e.g., Peasnell, Pope, and Young, 2005).

This study includes industries that provide a sufficient number of firm observations to ensure unbiased estimation. Therefore, industry groups with less than six observations are also excluded from the sample, following prior research (DeFond and Jiambalvo, 1994; Subramanyam, 1996a). It should be noted that, in order to calculate earnings management accurately, industries that contain less than six firms are excluded, except in cases where such an industry shares some characteristics with another industry. In those cases, this research combines the two industries under the name of the larger industry. For example,

the Travel & Leisure industry is combined with the Leisure, Entertainment & Hotels industry; the Food & Drug Retailers industry is combined with the General Retailers industry.

Moreover, extreme outliers are dropped from the sample due to the regression sensitivity to them. Following Li (2007), observations in the top and bottom 0.5 percent of the distribution of some not normally distributed variables are deleted to mitigate the effects of outliers.

Missing corporate governance variables are mainly due to the lack of disclosure by some of the

sample firms about the financial qualifications of the audit committee's members. The final usable sample is 578 firm years.

Table 1, Panel B indicates that the firms are normally distributed from an industry perspective. It can be seen that firms in our sample with large blockholders operate in a broad array of industries, which should help to alleviate concerns about the generalisation of our results. Industry representation varies from 4% to 9% of the total sample.

**Table 1.** Samples of the research

<b>Panel A: Sample size and selection procedures for the study period</b>				
<b>Description</b>	2005	2006	2007	<b>Pooled</b>
Initial sample (FTSE 350)	350	350	350	1050
<i>Excluded:</i>				
Financial and regulated companies	(57)	(65)	(72)	(206)
Missing annual reports or shorter than 12 months fiscal year	(13)	(13)	(8)	(34)
Missing audit committee data	(18)	(14)	(11)	(43)
Missing DataStream information	(29)	(27)	(22)	(78)
Industries smaller than 6 firms	(31)	(28)	(23)	(82)
Outliers	(9)	(11)	(9)	(29)
<b>Final usable sample</b>	<b>189</b>	<b>192</b>	<b>197</b>	<b>578</b>

<b>Panel B: Industry Distribution of the Sample</b>				
<b>Industry group</b>	<b>High-Blockholders Sample</b>		<b>Low-Blockholders Sample</b>	
	<b>Number</b>	<b>Percentage</b>	<b>Number</b>	<b>Percentage</b>
Aerospace & Defence	18	0.06	16	0.06
Business Support Services	12	0.04	14	0.05
Chemicals	12	0.04	13	0.05
Oil and Gas	26	0.08	23	0.09
Computer Software & Services	15	0.05	12	0.04
Construction & Building Materials	24	0.08	22	0.08
Distributors	16	0.05	13	0.05
Electronic & Electrical Equipment	17	0.06	19	0.07
Engineering & Machinery	16	0.05	11	0.04
Food Producers & Processors	14	0.05	16	0.06
General Retailers	25	0.08	19	0.07
Health	10	0.03	12	0.04
Leisure Entertainment & Hotels	17	0.06	15	0.06
Media & Photography	29	0.09	19	0.07
Support Services	23	0.07	13	0.05
Transport	12	0.04	14	0.05
Restaurants Pubs & Breweries	23	0.07	18	0.07
Total	309	100%	269	100%

#### 4.4.2 Data Collection

Data on corporate governance variables is hand collected from the 2005, 2006 and 2007 annual reports for each firm (source: Northcote). The process involves scrutinising directors' personal details provided in the corporate governance report section of the annual reports to establish which, if any, of the

audit committee members qualifies as a financial expert, which audit committee members are non-executive independent directors, and the number of audit committee meetings. Companies' annual reports also provide the necessary data to populate the blockholder ownership variables. In the UK, a holding of more than 3% of interest in the firm by any entity has to be disclosed in the annual report in



accordance with sections 198 to 208 of the Companies Act 1985. Earnings management and control variables are collected and calculated from DataStream.

## 5. Results

### 5.1 Descriptive statistics and Spearman correlations among variables

The analysis of the presence of blockholders indicates that, out of the 578 sample firms, 269 firms have no blockholders with at least 10% ownership, whereas 309 firms (53%) have at least one blockholder owning 10% or more of the shares. This is similar to previous UK studies, such as that of Peasnell et al. (2005), which report a similar mean of firms having a large blockholder.

Descriptive statistics on the absolute values of DAC are provided in Panel A of Table 2. The DAC mean and median are higher in firms with blockholder ownership. The audit committee effectiveness score is lower in the high-blockholders group and the means difference is significant at the 10% level. The compliance level in terms of board independence is also higher in low-blockholders firms and, on average, they have a larger board. The

average board size in this study is around 9 members. Board size in the UK appears to be smaller than board size in US firms (e.g., mean size of around 11 in Bhagat & Black, 2002) but larger than in Australian firms (e.g., mean size of around 7 in Kiel & Nicholson, 2003). The previous UK study by Peasnell, et al. (2005) reports a mean board size of around 8 members. In terms of managerial ownership, the typical sample firm has a mean of 3%. This is comparable to the findings of previous studies of the UK. For example, Peasnell et al. (2005) report a mean managerial ownership of 2%.

Interestingly, the CFO mean is similar to that of Peasnell et al. (2005) who conducted their study on UK firms between 1993 and 1996. The typical sample firm has a mean of - 0.11 for CFO. The average ROA is - 0.11, which is slightly lower than the reported ROA values for Australian firms studied by Kiel and Nicholson (2003), and lower than the average ROA in the US firms studied by Huang, Mishra and Raghunandan (2007). More blockholder firms than non-blockholder firms report losses during the sample period, and this may indicate the use of the big bath technique of earnings management in firms with blockholders.

**Table 2.** Descriptive Statistics

Variables	High-Blockholder firms (N= 309)			Low-Blockholder firms (N=269)			Means Differences
	Mean	Median	SD	Mean	Median	SD	t-stat
DAC	0.070	0.053	0.085	0.055	0.045	0.044	3.45 ***
AUDSCORE	3.177	2.980	0.827	3.280	3.069	0.747	-1.48*
BRDIND	0.437	0.444	0.138	0.451	0.444	0.128	-2.94***
BRDSIZE	9.070	9.000	2.508	9.394	9.000	2.326	-1.76*
MANGOWN	0.038	0.000	0.097	0.027	0.000	0.078	0.75
CFO	-0.118	-0.103	0.083	-0.103	-0.095	0.063	-2.32**
ROA	-0.114	-0.103	0.097	-0.112	-0.097	0.073	0.98
GROWTH	0.077	0.058	0.253	0.161	0.084	0.549	0.93
LEVERAGE	24.51	23.36	18.73	25.22	23.63	17.15	-1.47
SIZE	5.985	5.934	0.574	6.110	6.073	0.564	-1.65*
LOSS	0.113	0.000	0.317	0.041	0.000	0.199	2.09***
CROSSLIST	0.751	1.000	0.433	0.844	1.000	0.364	-1.17
LACCR	-0.054	-0.047	0.097	-0.035	-0.037	0.061	-3.00***

DAC=Absolute value of the discretionary accruals. AUDSCORE= A scale out of four points represents the audit committee effectiveness, BLOCK= A dummy variable taking the value of one if the firm has an external stockholder owning 10% or more of the outstanding shares, and zero otherwise. BRDIND= The proportion of independent non-executive directors to total board members, BRDSIZE=The number of directors on the board, MANGOWN=The percentage of total shares held by executive directors divided by the total number of shares, SIZE=The natural logarithm of total assets at year end, CFO= Cash flows from operating activities divided by beginning of period total assets, ROA= Net income divided by the total assets at the beginning of the year, CROSSLIST= A dummy variable that takes the value of 1 if the company is cross-listed in a US capital market, and zero otherwise, LOSS= A dummy variable that takes the value of 1 if the firm has reported a loss in the period, and zero otherwise, LACCR= Last year's total accruals, INDUSTRY= Industry dummies for the industry effect, YEAR= Dummy variables for the year effect.

The correlation coefficients between independent variables are shown in Panel B of Table 2. They show that firm size is positively correlated with board size and crosslisting. Audit committee aggregated scores are positively correlated with board independence and board size. Another relatively high correlation is between CFO and ROA on one side and

between ROA and LOSS on the other side. However, there is no harmful collinearity among the variables since none of the variables correlates above 60 %. In addition, there is no independent variable that produces a variance inflation factor (VIF) greater than 10, confirming that multicollinearity is not a problem in this study's model.

**Table 2.** Descriptive statistics

Panel B: Spearman Correlations													
	AUDSCR	BLOCK	BRDIND	BRDSIZE	MANGOWN	CFO	ROA	GROWTH	LEVERAG	SIZE	LOSS	CROSSLIS	LACCR
AUDSCORE	1												
BLOCK	-0.0578	1											
BRDIND	0.2103*	-0.0493	1										
BRDSIZE	0.1058*	-0.0666	0.0295	1									
MANGOWN	-0.0152	0.0629	-0.175*	-0.0469	1								
CFO	0.0379	-0.101*	0.0632	0.0011	-0.1637*	1							
ROA	0.0891	-0.0139	0.0293	0.0016	-0.0535	0.532*	1						
GROWTH	0.1023*	-0.100*	0.0264	0.0159	-0.0019	-0.043	-0.08	1					
LEVERAGE	-0.0675	-0.0196	0.0905*	-0.0156	-0.1509*	0.0874	0.081	-0.0574	1				
SIZE	0.1587*	-0.108*	0.3825*	0.5060*	-0.2549*	0.246*	0.21*	0.0148	0.2355*	1			
LOSS	0.0175	0.1314*	-0.015	-0.0686	0.0027	0.247*	0.44*	-0.096*	0.0284	-0.0016	1		
CROSSLIS	0.1177*	-0.114*	0.1724*	0.1897*	-0.2053*	0.167*	0.20*	-0.0484	0.1618*	0.4503*	0.0371	1	
LACCR	-0.0494	0.1128*	-0.0481	0.0524	-0.0778	-0.296*	0.23*	0.0613	-0.0686	0.0195	0.1586*	-0.0387	1

\*Significant at 5% level.

DAC=Absolute value of the discretionary accruals. AUDSCORE= A scale out of four points represents the audit committee effectiveness, BLOCK= A dummy variable taking the value of one if the firm has an external stockholder owning 10% or more of the outstanding shares, and zero otherwise. BRDIND= The proportion of independent non-executive directors to total board members, BRDSIZE=The number of directors on the board, MANGOWN=The percentage of total shares held by executive directors divided by the total number of shares, SIZE=The natural logarithm of total assets at year end, CFO= Cash flows from operating activities divided by beginning of period total assets, ROA= Net income divided by the total assets at the beginning of the year, CROSSLIS= A dummy variable that takes the value of 1 if the company is cross-listed in a US capital market, and zero otherwise, LOSS= A dummy variable that takes the value of 1 if the firm has reported a loss in the period, and zero otherwise, LACCR= Last year's total accruals, INDUSTRY= Industry dummies for the industry effect, YEAR= Dummy variables for the year effect.

## 5.2 Regression results

### 5.2.1. The Association between earnings management and audit committees

The OLS results for the full sample show that the coefficient on the audit committee effectiveness measure (AUDSCORE) is negatively associated with the level of discretionary accruals ( $\beta = -0.009$ ,  $t = 1.92$ ,  $p < 0.05$ ). This finding supports our first hypothesis that UK firms that comply with the UK Code recommendations for audit committees exhibit higher earnings quality. This result is consistent with previous studies in Anglo-American countries, such as those of Klein (2002), Benkel et al. (2006) and Chang and Sun (2009). The coefficient for board size is negative, as expected, but insignificant. The coefficient for BLOCK is positive as predicted but also insignificant. The results show that there is a negative relationship between earnings management and the proportion of independent directors on the board ( $\beta = -0.070$ ,  $t = 4.01$ ,  $p < 0.01$ ). This finding is in line with the vast majority of previous findings, such as those of Klein (2002), Xie et al. (2003), Peasnell et al. (2005), Davidson et al. (2005), Benkel et al. (2006), Dimitropoulos and Asteriou (2010) and Lo et al. (2010). Nevertheless, the result is different from

that of some studies conducted outside the Anglo-American countries, especially in Asian countries such as Malaysia (Rahman and Ali, 2006), Indonesia (Siregar and Utama, 2008) and Hong Kong (Jaggi et al., 2009), where no significant relationship is found between board independence and earnings management. The different Asian results in terms of board independence and audit committee effectiveness may be due to the dominance of family-controlled firms in these countries, which may result in family dominance over board matters as a result of weak corporate governance regimes in countries with less investor protection, as discussed in section 3. The coefficient on the control variable MANAGOWN is negative but insignificant. This result may be because managerial ownership of firms in this study sample is negligible. Table II, Panel A, shows a managerial ownership mean of about .03 compared to 21% in the US, as documented by Warfield et al. (1995). Given this low level of managers' equity ownership, it is unlikely that managerial ownership can align the interests of managers with those of other owners. However, this result is consistent with prior UK studies (Peasnell et al., 2005 and Laux and Laux, 2009).

Consistent with the expectations of agency theory and with prior studies' findings, such as those

of Dimitropoulos and Asteriou (2010), SIZE is found to have a significant positive relationship with earnings management at a level of  $p=0.01$ . Prior studies suggest that large firms have more pressure on their management to report more predictable earnings (Pincus and Rajgopal, 2002). Thus, managers are likely to engage in earnings management to achieve this predictability. The result shows that CFO is significantly and negatively related with the earnings management indicator. This finding is consistent with the notion that CFO influences the magnitude of the discretionary accruals. It is also consistent with prior studies that find firms with a strong CFO performance are less likely to manage discretionary accruals because they are already performing well (Jiang et al., 2008 and Becker, DeFond, Jiambalvo and Subramanyam 1998). The leverage ratio is positively associated with discretionary accruals, suggesting that a higher level of financial leverage pressures managers into involvement in earnings management. The coefficient on the control variable LACCR is negative and significant, as expected. ROA and LOSS are positively related to DAC at 1% level; this is consistent with prior studies that find firms with a strong performance are more likely to manage discretionary accruals (Dechow et al., 1995). The results on GROWTH and CROSSLIST are in the expected directions, but the coefficients are not significant. The result of CROSSLIST does not support the argument of Cohen, Dey and Lys (2008) and Chang and Sun (2009) that government-enforced regulations can produce better accounting practice.

**5.2.2. Impact of blockholder ownership on the association between audit committees effectiveness and discretionary accruals**

To examine the effect of blockholder ownership on the association between audit committee effectiveness and discretionary accruals, the full sample is divided into two sub-samples. One consists of firms with high blockholder ownership, defined as at least one blockholder owning 10% or more of the firm's equity and the other sub-sample consists of firms with low blockholder ownership. Hypothesis H2 is tested by separately estimating the same model after eliminating the variable BLOCK in the two sub-samples. The AUDSCORE coefficient is expected to be strongly negative for firms with low blockholder ownership and either insignificant or positive for high blockholder firms. The results are presented in Table 3.

The results show that the AUDSCORE coefficient for firms in the second group (low blockholders) is significantly negative at the 0.01 level, as expected, whereas it is insignificant for firms with high blockholder ownership. These findings thus support our second hypothesis, H2, that audit committees are more effective in constraining earnings management in firms with less blockholder dominance which, in turn, suggests that the presence of a large blockholder weakens the monitoring effectiveness of the audit committee.

Interestingly, board independence (BRDIND) behaves in the same way as the audit committee variable; the BRDIND coefficient is significantly negative at 0.01 level in the low blockholder group but insignificant for firms with high blockholder ownership. The results for other control variables are qualitatively similar to the main regression for the full sample.

**Table 3.** the effect of blockholder ownership on the association between audit committee effectiveness and discretionary accruals

Panel A: Partition analyses using OLS regressions							
Variables	PredSign	All Sample		High-Blockholder firms		Low-Blockholder firms	
		Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Intercept	?	0.013	2.930***	0.002	2.70**	-0.046	-1.590*
AUDSCORE	-	-0.009	-1.920**	-0.009	-1.330	-0.012	-3.270***
BLOCK	+	0.002	0.500				
BRDIND	-	-0.070	-4.010***	-0.037	-1.460	-0.116	-5.530***
BRDSIZE	-	-0.001	-1.290	-0.001	-0.550	-0.001	-1.050
MANGOWN	-	-0.023	-0.990	-0.036	-1.190	0.025	0.800
CFO	-	-0.239	-5.650***	-0.143	-2.930***	-0.494	-6.050***
ROA	+	0.244	6.620***	0.181	4.150***	0.412	5.990***
GROWTH	+	0.001	0.290	0.034	2.600**	0.005	1.290
LEVERAGE	+	0.000	2.920***	0.000	1.610*	0.000	2.410**

SIZE	+	0.011	2.070**	0.008	1.210	0.008	1.240
LOSS	+	0.025	3.030***	0.018	1.870*	0.021	1.540*
CROSSLIST	-	-0.008	-1.470	-0.007	-1.000	0.007	0.980
LACCR	-	-0.758	24.410***	-0.827	-23.57***	-0.609	-9.850***
INDUSTRY			<i>included</i>		<i>Included</i>		<i>included</i>
YEAR			<i>included</i>		<i>Included</i>		<i>included</i>
F -value			59.94***		60.73***		32.94***
Adj. R-2			62%		74%		40%
N			578		309		269

DAC=Absolute value of the discretionary accruals. AUDSCORE= A scale out of four points represents the audit committee effectiveness, BLOCK= A dummy variable taking the value of one if the firm has an external stockholder owning 10% or more of the outstanding shares, and zero otherwise. BRDIND= The proportion of independent non-executive directors to total board members, BRDSIZE=The number of directors on the board, MANGOWN=The percentage of total shares held by executive directors divided by the total number of shares, SIZE=The natural logarithm of total assets at year end, CFO= Cash flows from operating activities divided by beginning of period total assets, ROA= Net income divided by the total assets at the beginning of the year, CROSSLIST= A dummy variable that takes the value of 1 if the company is cross-listed in a US capital market, and zero otherwise, LOSS= A dummy variable that takes the value of 1 if the firm has reported a loss in the period, and zero otherwise, LACCR= Last year's total accruals, INDUSTRY= Industry dummies for the industry effect, YEAR= Dummy variables for the year effect.

The effect of blockholder ownership on the relationship between audit committee effectiveness and earnings management found in this study suggests that blockholder ownership may not be as effective as propagated by agency theorists in reducing agency problems, and particularly in enhancing audit committees' roles in constraining earnings management. This result provides slight support for previous empirical studies that could not document any effect of the blockholder in preventing opportunistic earnings management (e.g., Park and Shin, 2003; Peasnell et al. 2005; Rahman and Ali, 2006).

The results also support the recent findings of the reversal effect of blockholders in corporate governance and earnings quality. Zhong et al. (2007) find that outside blockholder ownership is positively associated with discretionary accruals. Guthrie and Sokolowsky (2010) present empirical evidence that firms manage earnings upwards around seasoned equity offerings in the presence of large outsider blockholdings, but not in their absence.

This result is line with prior findings on the negative impact of concentrated ownership on earnings and disclosure quality (e.g. Fan and Wong, 2002; Jaggi and Leung, 2007; Jaggi et al. 2009). Jaggi and Leung (2007) and Jaggi et al (2009) show that the monitoring effectiveness of the audit committee and the corporate board is moderated in family-controlled firms through family ownership concentration.

Therefore, the findings of this study support the entrenchment hypothesis that large shareholders may expropriate the interests of other investors and stakeholders by colluding with management, as observed by Fama and Jensen (1983) and Shleifer and

Vishny (1997) and that concentrated ownership enables blockholders to use accounting information to their own advantage (Claessens et al., 2000). However, the result is in contrast with the presumption in the literature that large shareholders have great power and strong incentives to guarantee shareholder value maximization (the incentive alignment hypothesis) (Jensen and Meckling, 1976).

## 6 Further Analyses and Robustness Checks

### 6.1 Alternative Measurement of Earnings Management

In addition to applying the Kothari *et al.*, (2005) model of estimating DAC using total accruals (TAC), this study applies the same model using the current accruals (CAC). Becker et al., (1998) suggest that management have greater discretion over current accruals than long-term accruals. In the UK, Gore, Pope and Singh, (2007) find that discretionary working capital accruals have the effect of significantly increasing the frequencies of firms achieving earnings targets both overall and by small margins. Therefore, discretionary current accruals may be a superior proxy for earnings management than discretionary long-term accruals. Some recent studies, such as Ashbaugh, Lafond and Mayhew (2003) use the discretionary current accruals by applying the same modified Jones model after eliminating PPE. Following Ashbaugh *et al.*, (2003), this study also adds the return on assets of the previous year (ROA) as an additional regressor to the cross-sectional modified Jones model in the current

accrual model. Thus, the equation used to calculate the current discretionary accruals (CDAC) is as follows:

$$TACC_{it} / TA_{it-1} = \alpha (1 / TA_{it-1}) + \beta_1 (\Delta REV_{it} - \Delta REC_{it}) / TA_{it-1} + \beta_2 ROA_{it-1} + \varepsilon_{it}$$

The results (untabulated) for the full sample and sub-samples of CDAC are qualitatively similar to the results for the main test reported in Table III. For example, the AUDSCORE coefficient is negative and significant for the low-blockholders sub-sample, and insignificant for the high-blockholders sub-sample. BRDIND and BRDSIZE show the same results while control variables coefficients have the same directions with slight differences in the significance levels. The above findings support the suggestion of our main test results that audit committees are less effective in firms with high ownership concentration.

## 6.2 Alternative specifications of blockholders

Another sensitivity test is carried out to investigate whether 5% and 15% blockholders, measures used in some prior research (e.g., Zhong *et al.*, 2007), has the same effect on audit committee effectiveness. Concentrated blockholders ownership enables a large shareholder to have more power on the firm's board, and this may be the initial motivation rather than holding the firm's equity, while low ownership stakes lead to little or no incentive to monitor managers as that activity is economically unbeneficial. Thus, blockholders that monitor managers' actions obtain the benefit of their monitoring only by the percentage of stocks they own but all have to bear the costs of their monitoring (Zhong *et al.*, 2007). Demsetz and Lehn (1985) support this view empirically, finding that large equity holders have incentives to bear the fixed costs of collecting information and engaging in monitoring management. Hence, smaller blockholders may behave differently from the larger blockholders that were found to encourage earnings management.

In the main test, BLOCK is defined as any investor that holds more than 10% of the company's shares. This test will investigate whether a blockholder that owns between 5% and 10% of the company's shares encourages the management to manipulate earnings figures. A dummy variable (BLOCK 5%) that has the value of one if a blockholder has more than 5% but less than 10% of the company shares, and zero otherwise, is introduced and the main regressions are re-tested. This variable is also used to separate the sample into two sub-samples. This procedure produces 497 firms with blockholders and 81 firms without blockholders, and the mean for BLOCK 5% is 86%. Interestingly, the AUDSCORE result (untabulated) is significantly negative in both groups even though it is less

significant in the blockholder firms compared to the non blockholders firms (at 10% and 1% respectively). The above result may be due to the fact that small blockholders do not have sufficient power to use accounting information to their own advantage or to expropriate other investors and stakeholders by colluding with management.

This study also tests whether the findings are sensitive for higher levels of blockholder ownership. This test will investigate whether a blockholder that owns between more than 15% of the company's shares encourages the management to manipulate earnings figures. A dummy variable, BLOCK 15%, that has the value of one if a blockholder has more than 15% of the company shares, and zero otherwise, is introduced and the main regressions are re-tested. This variable is also used to separate the sample into two sub-samples. This procedure produces 121 firms with such blockholders and 457 firms without such blockholders, and the mean for BLOCK 15% is 21%. In terms of audit committee effectiveness and board independence, these test results (untabulated) produce similar findings to those of the main test, and the other variables also showed qualitatively similar results. The study could not investigate further cut-off measures of blockholders (such as BLOCK 20%) as the number of observations in blockholders group is not sufficient to carry out a reliable statistical test.

This study also conducts an additional test on the total sample by including an interaction variable between BLOCK and AUDSCORE. A single regression containing the two-way interaction between AUDSCORE and BLOCK is tested, using the following regression.

$$DAC_{jt} = \gamma_0 + \gamma_1 \text{AUDSCORE}_{jt} + \gamma_2 \text{BLOCK}_{jt} + \gamma_3 \text{AUDSCORE}_{jt} * \text{BLOCK}_{jt} + \sum \text{controls} + \text{error}$$

The results (untabulated) indicate that the AUDSCORE coefficient is significantly negative and the interaction coefficient is positive and significant at 1% level. As a result, the above findings sustain our main findings for the second hypothesis that audit committees are more effective in constraining earnings management in low blockholder ownership firms and ineffective in constraining earnings management in high blockholder ownership firms. These findings thus suggest that blockholders weaken the monitoring effectiveness of audit committees.

## 6.3 Endogeneity

The prior literature (for example, Himmelberg *et al.*, 1999, and Weir, Laing and McKnight, 2002) argues that models containing corporate governance or ownership variables suffer from endogeneity problems. Himmelberg (2002) argues that corporate governance is determined exogenously by environmental factors such as legal efficiency, regulation and corporate control market rules such as

the Combined Code in the UK. Coles, Daniel and Naveen (2008) also argue that governance at the level of the firm must therefore be treated as endogenous.

This study recognises that audit committee effectiveness may not be fully exogenously determined. Though an effective audit committee is assumed to reduce earnings management, it can also be argued that audit committee characteristics may be influenced by managers involved in earnings management practice. In other words, a firm with higher earnings management may avoid establishing

an effective audit committee whereas a firm with lower earnings management may prefer to have an effective audit committee.

If the endogeneity problem exists, the coefficient estimates calculated using ordinary least squares (OLS) could be biased and may yield inconsistent estimates. According to McKnight and Weir (2009), the particular form of endogeneity faced in governance and ownership models is simultaneity, whereby the independent variable and the right hand side variables may be simultaneously determined.

**Table 4.** Data fixed-effects instrumental variable regressions of audit committee and earnings management

Panel-data fixed-effects instrumental variable regressions of audit committee and earnings management							
Variables	PredSign	All Sample		High-Blockholder firms		Low-Blockholder firms	
		Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Intercept	?	0.013	0.530	-0.001	-0.020	0.037	1.140
AUDSCORE	-	-0.009	-1.720*	-0.010	-1.400	-0.013	-2.470***
BLOCK	+	0.002	0.490				
BRDIND	-	-0.070	-4.010***	-0.037	-1.480	-0.115	-5.520***
BRDSIZE	-	-0.001	-1.290	-0.001	-0.500	-0.002	-1.260
MANGOWN	-	-0.023	-0.990	-0.035	-1.170	0.033	1.070
CFO	-	-0.239	-5.540***	-0.144	-2.860***	-0.522	-6.310***
ROA	+	0.244	6.600***	0.179	4.100***	0.437	6.350***
GROWTH	+	0.001	0.290	0.032	2.440**	0.006	1.400
LEVERAGE	+	0.000	2.910***	0.000	1.530*	0.000	2.380**
SIZE	+	0.010	2.040**	0.008	1.150	0.010	1.430
LOSS	+	0.025	3.020***	0.018	1.810*	0.024	1.770*
CROSSLIST	-	-0.008	-1.470	-0.007	-0.970	0.009	1.210
LACCR	-	-0.758	-22.280***	-0.826	-19.17***	-0.622	-10.14***
INDUSTRY			Included		Included		included
F -value			54.34***		62.92***		33.74***
Adj. R-2			63%		75%		42%
N			578		309		269

DAC=Absolute value of the discretionary accruals. AUDSCORE= A scale out of four points represents the audit committee effectiveness, BLOCK= A dummy variable taking the value of one if the firm has an external stockholder owning 10% or more of the outstanding shares, and zero otherwise. BRDIND= The proportion of independent non-executive directors to total board members, BRDSIZE=The number of directors on the board, MANGOWN=The percentage of total shares held by executive directors divided by the total number of shares, SIZE=The natural logarithm of total assets at year end, CFO= Cash flows from operating activities divided by beginning of period total assets, ROA= Net income divided by the total assets at the beginning of the year, CROSSLIST= A dummy variable that takes the value of 1 if the company is cross-listed in a US capital market, and zero otherwise, LOSS= A dummy variable that takes the value of 1 if the firm has reported a loss in the period, and zero otherwise, LACCR= Last year's total accruals, INDUSTRY= Industry dummies for the industry effect, YEAR= Dummy variables for the year effect.

The Hausman test gives a  $\chi^2$  of 93.47 ( $p = 0.000$ ) for this model, which suggests that the null hypothesis of no correlation can be rejected and therefore the instrumental variables fixed effects model is tested. The results shown in Table IV are in agreement with the OLS results reported in the main test. Some variables have either more or less significant levels but the direction and significance

remain the same. Thus, endogeneity does not appear to unduly affect this study's results.

Therefore, the instrumental variables approach is adopted, as in Himmelberg et al. (1999), Coles et al. (2008) and McKnight and Weir (2009), using the lagged values of the endogenous variables as instruments. In this test, all corporate governance and ownership variables are treated as endogenous. Another possible solution to the endogeneity problem

is the use of simultaneous equations. However, some previous studies, such as Coles et al. (2008), report similar results when using simultaneous equations and instrumental variables approaches.

## **7 Conclusions**

The prior literature shows a negative relationship between audit committees effectiveness and earnings management. This paper has argued that this overlooks a critical aspect of the underlying rationale of the entrenchment view, explicitly that the relationship should be heterogeneous with respect to the impact of blockholder ownership. Taking this aspect into account yielded a prediction that audit committees may not be effective in constraining managers opportunistic behaviour in firms with a high blockholder ownership. This study investigated this prediction using a sample of firms that represent Type II agency conflicts.

A unique hand-collected sample covering a period after the introduction of the latest corporate governance combined codes, SOX and IFRS, was studied. In general, the findings show that effective audit committees perform an important role in constraining earnings management in UK firms, a result that is comparable to the vast majority of prior research findings in Anglo-American countries. The findings support the UK financial authority's efforts to encourage firms to establish an audit committee that is fully independent, that has financial expertise, and that is active and sizable. These characteristics are proved to enhance the quality and reliability of reported earnings.

However, when comparing sub-samples of firms that have high and low blockholder ownership, the empirical results supported the study's prediction that audit committees are ineffective in constraining earnings management in firms with high blockholder ownership. This result may be interpreted as showing that the dominance of a large blockholder may reduce corporate board and audit committee independence and thus the monitoring effectiveness of the audit committee. The results also suggest that, while audit committees are effective in reducing owner-manager conflicts, they are ineffective in mitigating the conflicts between majority and minority shareholders. These conclusions, along with some similar recent evidence (e.g., Rose, 2009 and Guthrie and Sokolowsky, 2010) may raise doubts about the effective monitoring role of blockholders that is widely held in corporate governance literature. Therefore, it would be worthwhile to investigate further the usefulness of the current procedures that empower blockholder influence on the board of directors. It would also be interesting to investigate the role of different type of blockholder, such as banks, corporations and individuals, in influencing the effectiveness of various corporate governance and disclosure variables.

Like most studies of a similar nature, this study is subject to a number of limitations. First, even though this study uses two proxies for earnings management, and although discretionary accruals is the standard measure of earnings management, these measures are prone to measurement errors and thus the validity of these findings depends upon the accuracy of discretionary accruals as an appropriate proxy for earnings management. Secondly, although sensitivity tests are performed on different levels of blockholder's ownership, the validity of the findings is also subject to an appropriate estimation of the blockholder's control of the firm. Thirdly, the study sample consists of large publicly traded UK firms and it is uncertain that the findings could be generalised to smaller firms. Finally, considering the average negative value for ROA during the sample period, which may represent recessionary conditions, caution should be taken when interpreting or generalising this study's findings.

Despite these inherent limitations, the findings provide useful insights to regulators for improving the current regulations on corporate governance mechanisms in different ownership contexts. This study's findings may be generalised to other Anglo-American countries with institutional environments similar to that of UK. The result also improves investors' awareness of the extent of corporate governance effectiveness in improving the earning quality in firms with ownership concentrations. Last, but not least, the findings of this study add to the corporate governance and earnings quality literature on the role of blockholder ownership.

## **References**

1. Abdul Rahman, R., and Ali F. H. M., 'Board, Audit Committee, Culture And Earnings Management: Malaysian Evidence', *Managerial Auditing Journal*, 783-804, 2006.
2. Ashbaugh, H., Lafond, R., and Mayhew, B. W., 'Do Non Audit Services Compromise Auditor Independence? Further Evidence'. *The Accounting Review* Vol. 78, 611-639, March 2003.
3. Barclay, M. J., and Holderness, C. G., 'Negotiated Block Trades and Corporate Control', *Journal of Finance*, Vol. 25, 861-78, 1991.
4. Baxter, P., and Cotter, J., 'Audit Committees and Earnings Quality', *Accounting and Finance*, Vol. 49, 267-290, 2009.
5. Becker, C., DeFond, M., Jiambalvo, J., and Subramanyam, K. R., 'The Effects of Audit Quality on Earnings Management', *Contemporary Accounting Research*, Vol. 15, 1-24, March 1998.
6. Bedard, J., Chtourou S. M., and Courteau, L., 'The Effect of Audit Committee Expertise, Independence and Activity on Aggressive Earnings Management', *Auditing: A Journal of Practice & Theory*, Vol. 23, 155-17, 2004.
7. Benkel, M., Mather, P., and Ramsay, A., 'The Assassination Between Corporate Governance and Earnings Management: The Role of Independent

- Directors', *Corporate Ownership and Control*, Vol. 3, 45-67, 2006.
8. Bhagat, S., and Black, B., 'The Non-correlation Between Board Independence and Long-term Firm Performance', *Journal of Corporation Law*, Vol. 27, 231-273, March 2002.
  9. Brav, A., Jiang, W., Partnoy, F., and Thomas, R., 'Hedge Fund Activism, Corporate Governance, and Firm Performance', *The Journal of Finance*, Vol. 63, 1729-1775, 2008.
  10. Chang, J., and Lian Sun, H., 'Crossed-listed Foreign Firms' Earnings Informativeness, Earnings Management and Disclosures of Corporate Governance Information under SOX', *The International Journal of Accounting*, Vol. 44, 1-32, 2009.
  11. Chun-Keung, H., and Robin, A., 'Agency Conflicts, Controlling Owner Proximity, and Firm Value: An Analysis of Dual-Class Firms in the United States', *Corporate Governance: An International Review*, Vol. 18, 124-135, March 2010.
  12. Claessens, S., and Fan, J., 'Corporate Governance in Asia: A survey', *International Review of Finance*, Vol. 3, 71-103, March 2002.
  13. Claessens, S., Djankov, S., and Lang, H. P., 'The Separation of Ownership and Control in East Asian Corporations', *Journal of Financial Economics*, Vol. 58, 81-112, 2000.
  14. Cohen, D. A., Dey, A., and Lys, T. Z., 'Real and Accrual-based Earnings Management in the Pre and Post-Sarbanes Oxley Periods', *The Accounting Review*, Vol. 83, 757-787, March 2008.
  15. Cohen, J. R., Krishnamoorthy, G., Wright, A., 'Corporate Governance in the Post Sarbanes-Oxley Era: Auditor Experiences', *Contemporary Accounting Research*, Vol. 57, 129-156, 2008.
  16. Coles, J., Daniel, N., and Naveen, L., 'Boards: Does One Size Fit All?', *Journal of Financial Economics*, Vol. 87, 329-356, 2008.
  17. Davidson, R., Goodwin-Stewart, J., and Kent, P., 'Internal Governance Structures and Earnings Management', *Accounting and Finance*, Vol. 45, 241-267, 2005.
  18. Dechow, P. M., and Dichev, I. D., 'The Quality of Accounting and Earnings: The Role of Accrual Estimation Errors', *The Accounting Review*, Vol. 77, 35-59, 2002.
  19. Dechow, P., Sloan, R., and Sweeney, A., 'Detecting Earnings Management', *The Accounting Review*, Vol. 70, 193-225, March 1995.
  20. Dechow, P., Sloan, R., and Sweeney, A., 'Causes and Consequences of Earnings Manipulation: An Analysis of Firms Subject to Enforcement Actions by the SEC', *Contemporary Accounting Research*, Vol. 13, 1-36, 1996.
  21. DeFond, M. L., and Jiambalvo, J., 'Debt Covenant Violation and Manipulation of Accruals: Accounting Choice in Troubled Companies', *Journal of Accounting and Economics*, Vol. 17, 145-176, March 1994.
  22. Demsetz, H., and Lehn, K., 'The Structure of Corporate Ownership: Causes and Consequences', *The Journal of Political Economy*, Vol. 93, 1155-1177, 1985.
  23. Dey, A., 'Corporate Governance and Financial Reporting Credibility', (Working Paper, University of Chicago), 2005.
  24. Dimitropoulos, P. E., Asteriou, D., 'The Effect of Board Composition on the Informativeness and Quality of Annual Earnings: Empirical Evidence from Greece', *Research in International Business and Finance*, Vol. 24, 190-205, 2010.
  25. Efendi, J., Sirvastara, A., and Swanson, E. P., 'Why do Corporate Managers Misstate Financial Statements? The Role of Option Compensation, Corporate Governance, and other Factors', *Journal of Financial Economics*, Vol. 85, 667-708, March 2007.
  26. Fama, E. F., and Jensen, M. C., 'Separation of Ownership and Control', *Journal of Law and Economics*, Vol. 26, 301-25, 1983.
  27. Fan, J. P., and Wong, T. J., 'Corporate Ownership Structure and the Informativeness of Accounting Earnings in East Asia', *Journal of Accounting and Economics*, Vol. 33, 401-425, March 2002.
  28. Francis, J., Schipper, K., and Vincent, L., 'Earnings and Dividends Informativeness When Cash Flow Rights Are Separated from Voting Rights', *Journal of Accounting & Economics*, Vol. 39, 329-60, 2005.
  29. Gilson, R. J., and Gordon, J. N., 'Controlling Shareholders', (*Columbia Law and Economics Working Paper*), No. 228; (*Stanford Law and Economics Olin Working Paper*), No. 262, 2003.
  30. Goergen, M., and Renneboog, L., 'Insider Retention and Long-run Performance in German and UK IPOs', *Managerial Finance*, Vol. 51, 55-84, 2005.
  31. Gore, J. P. O., Pope, P. F., and Singh, A., 'Earnings Management and the Distribution of Earnings Relative to Targets: UK Evidence', *Accounting and Business Research*, Vol. 37, 123-150, 2007.
  32. Guthrie, K., and Sokolowsky, J., 'Large Shareholders and the Pressure to Manage Earnings', *Journal of Corporate Finance*, Vol. 16, 302-319, 2010.
  33. Healy, P., 'The Impact of Bonus Schemes on the Selection of Accounting Principles', *Journal of Accounting and Economics*, Vol. 85-107, 1985.
  34. Himmelberg, C., 'Measuring the Real Effects of Corporate Governance', (Working paper, Columbia University), 2002.
  35. Himmelberg, C., Hubbard, R. G. and Palia, D., 'Understanding the Determinants of Managerial Ownership and the Link Between Ownership and Performance', *Journal of Financial Economics*, Vol. 53, 353-384, March 1999.
  36. Huang, H-W., Mishra, S. and Raghunandan, K., 'Types of Non-audit Fees and Financial Reporting Quality', *Auditing: A Journal of Practice and Theory*, Vol. 26, 133-45, March 2007.
  37. Jaggi, B., and Leung, S., 'Impact of Family Dominance on Monitoring of Earnings Management by Audit Committees: Evidence from Hong Kong', *Journal of International Accounting, Auditing and Taxation*, Vol. 16, 27-50, 2007.
  38. Jaggi, B., Leung, S., and Gul, F., 'Family Control, Board Independence and Earnings Management: Evidence Based on Hong Kong Firms', *Journal of Accounting and Public Policy*, Vol. 28, 281-300, 2009.
  39. Jenkins, N. T., 'Auditor Independence, Audit Committee Effectiveness and Earnings Management', (Working paper, Washington University), 2002.
  40. Jensen, M., and Meckling, W., 'Theory of the firm: Managerial Behaviour, Agency Costs and Ownership Structure', *Journal of Financial Economics*, Vol. 3, 305-360, April 1976.



41. Jiang, W., Lee, P., and Anandarajan, A., 'The Association Between Corporate Governance and Earnings Quality: Further Evidence using the GOV-Score', *Advances in Accounting, Incorporating Advances in International Accounting*, Vol. 24, 191-201, 2008.
42. Kiel, G., and Nicholson, G., 'Board Composition and Corporate Performance: How the Australian Experience Informs Contrasting Theories of Corporate Governance', *Corporate Governance: An International Review*, Vol. 11, 189-205, March 2003.
43. Kothari, S. P., Lcone, A. J., and Wasley, C. E., 'Performance-Matched Discretionary Accruals', *Journal of Accounting and Economics*, Vol. 39, 163-197, 2005.
44. La Porta, R., Lopez-De-Silanes, F., and Shleifer, A., 'Law and Finance', *Journal of Political Economy*, Vol. 106, 1113-1155, July 1998.
45. La Porta, R., Lopez-De-Silanes, F., and Shleifer, A., 'Corporate Governance around the World', *Journal of Finance*, Vol. 54, 471-517, March 1999.
46. Laux, C, and Laux, V., 'Board Committees, CEO Compensation, and Earnings Management', *The Accounting Review - American Accounting Association*, Vol. 84, 869-891, March 2009.
47. Lipton, M, and Lorsch, J. W., 'A Modest Proposal for Improved Corporate Governance', *Business Lawyer*, Vol. 1, 59-77, March 1992.
48. Lo, A.W.Y., Wong, R.M.K., and Firth, M., 'Can Corporate Governance Deter Management from Manipulating Earnings? Evidence from Related-Party Sales Transactions in China', *Journal of Corporate Finance*, Vol. 16, 225-235, March 2010.
49. Matsumoto, D., 'Management's Incentives to Avoid Negative Earnings Surprises', *The Accounting Review*, Vol. 77, 483-514, 2002.
50. McKnight, P. J., and Weir, C., 'Agency Costs, Corporate Governance Mechanisms and Ownership Structure in Large UK Publicly Quoted Companies: A Panel Data Analysis', *The Quarterly Review of Economics and Finance*, Vol. 49, 139-158, 2009.
51. Park, Y. W., and Shin, H-H., 'Board Composition and Earnings Management in Canada', *Journal of Corporate Finance*, Vol. 10, 431-457, March 2004.
52. Peasnell, K. V., Pope, P. F., and Young, S., 'Accrual Management to Meet Earnings Targets: UK Evidence Pre- and Post-Cadbury', *British Accounting Review*, Vol. 32, 415-445, July 2000a.
53. Peasnell, K. V., Pope, P. F. and Young, S., 'Board Monitoring and Earnings Management: Do Outside Directors Influence Abnormal Accruals?', *Journal of Business Finance and Accounting*, Vol. 32, 1131-1346, 2005.
54. Pincus, M., and Rajgopal, S., 'The Interaction between Accrual Management and Hedging: Evidence from Oil and Gas Firms', *The Accounting Review*, Vol. 77, 127-60, March 2002.
55. Piot, C., and Janin, R., 'External Auditors, Audit Committees and Earnings Management in France', *European Accounting Review*, Vol. 16, 429-54, March 2007.
56. Rose, J. M., 'Heterogeneous Impacts of Staggered Boards by Ownership Concentration', *Journal of Corporate Finance*, Vol. 15, 113-128, 2009.
57. Sarbanes-Oxley Act, Pub. L, No. 107-204, 2002.
58. Shleifer, A., and Vishny, R., 'Large Shareholders and Corporate Control', *Journal of Political Economy*, Vol. 94, 1-88, 1997.
59. Siregar, S.V., Utama, S., 'Type of Earnings Management and the Effect of Ownership Structure, Firm Size, and Corporate-Governance Practices: Evidence from Indonesia', *The International Journal of Accounting*, Vol. 43, 1-27, 2008.
60. Subramanaym, K., 'Board Compensation, Ownership Structure and Hostile Takeovers: Some UK Evidence', *Accounting and Business Research*, Vol. 12, 105-147, March 1996a.
61. Teshima, N, and Shuto, A., 'Managerial Ownership and Earnings Management: Theory and Empirical Evidence from Japan', *Journal of International Financial Management and Accounting*, Vol. 19, 107-132, March 2008.
62. Warfield, T, and Wild, J., 'Managerial Ownership, Accounting Choices, and Informativeness of Earnings' *Journal of Accounting and Economics*, Vol. 20, 61-91, 1995.
63. Weir, C., Laing, D., and McKnight P. J., 'Internal and External Governance Mechanisms: Their Impact on the Performance of Large UK Public Companies', *Journal of Business Finance and Accounting*, Vol. 29, 579-611, July 2002.
64. White, H., 'A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity', *Econometrica*, Vol. 48, 817-838, 1980.
65. Xie, B., Davidson, W., and DaDalt, P., 'Earnings Management and Corporate Governance: The Roles of the Board and the Audit Committee', *Journal of Corporate Finance*, Vol. 9, 295-317, March 2003.
66. Yang, J, and Krishnan, J., 'Audit Committees and Quarterly Earnings Management', *International Journal of Auditing*, Vol. 9, 201-219, 2005.
67. Zhong, K., Gribbin, D. G., and Zheng, X., 'The Effect of Monitoring by Outside Blockholders on Earnings Management', *Quarterly Journal of Business and Economics*, Vol. 46, 37, March 2007.