

The effects of Non Executive Directors' Commitment and Chairman Independence on Earnings Management: UK Evidence

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Abstract

This paper investigates whether the extent of opportunistic earnings management (measured by discretionary accruals) is related to non-executive directors' commitment and chairman independence. Based on the UK FTSE350 companies over 2005 and 2006, we found that non-executive directors' commitment and chairman independence are important factors in constraining the inclination of managers to engage in earnings management. These findings support the argument that not only the independence of directors but also their commitment that reduces earnings management. We further found that cross-listed firms have less earnings management due to the cross-countries regularities and requirements.

Our findings have implications for stakeholders and policymakers in that we found non-executive directors' remuneration level and chairman independence are important mechanisms of corporate governance. We found that independent chairman, according to the UK corporate governance code criteria, increases earnings management while independent chairman using the code independence criteria set for non-executive directors is significantly effective in reducing earnings management. This result criticises the loose chairman independence criteria recommended by the code. We further examined the interaction effect between non-executive directors' commitment and chairman independence and found that non-executive directors' private meetings and level of remuneration extenuate (empower) the previous chairman independence and earnings management relations.

The findings are robust to alternative sensitivity analyses. This study adds to the very limited research into the relationship between corporate governance and earnings management in the UK. It also provides empirical evidence on the effectiveness of some of the regulators' recommendations, which may be of value to regulators who are interested in preparing and amending corporate governance codes. The issues addressed in this paper are very pertinent to a better understanding of the role of the non-executive directors in the corporate environment. In particular, the findings are relevant to the debate on non-executive directors' independence and quality of financial reporting.

Keywords: Earnings management; non-executive directors' commitment; chairman independence.

1. Introduction

The end of the 1990s and the beginning of the 2000s have witnessed a series of recent corporate accounting scandals across the United States and Europe (e.g. Enron, HealthSouth, Parmalat, Tyco, WorldCom, and Xerox). The core of these accounting scandals was usually the phenomenon of earnings management (Goncharov, 2005). Earnings management (hereafter, EM) has been a great and consistent concern among practitioners and regulators and has received considerable attention in the accounting literature. It has been argued that EM behaviour masks the true financial results and position of businesses and obscures facts that stakeholders ought to know (Loomis, 1999).¹

EM occurs when managers intentionally intervene in the external financial reporting process to manipulate the reported accounting numbers and mislead stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers in order to obtain personal gains or specific interests at the expense of shareholders (e.g. Schipper, 1989; Healy and Wahlen, 1999; Dechow and Skinner, 2000).²

Although many prior studies have investigated the relationship between corporate governance mechanisms and the inclination of managers to engage in EM in recent years, it is not quite clear that there is much greater understanding of this issue now than there was when the matter was first considered. The empirical investigation of this relationship has produced a very wide literature that used different samples, covered many time-periods, and revealed mixed results. Our study is important for the following reasons:

First, we provide a novel contribution to the EM literature, as we are the first to examine several corporate governance mechanisms affect on EM. We use an alternative measure of board activity by examining the association between number of meetings of non-executive directors without the presence of executive directors, and the tendency of managers to engage in EM. Also, there is no single published research that has addressed the issue of the effectiveness of the independent chairman in monitoring the firm management with respect to earnings management. In this regard, this study makes a significant contribution towards understanding the interacting role of chairman and other non- executive directors.

Additionally, the present paper examines, for the first time in the literature, the potential impact of non-executive directors' fees on EM. Another interesting aspect of investigating this issue in the UK context

¹ However, academics have not been able to provide convincing evidence (Dechow and Skinner 2000).

² Management may have various incentives to manage their firm's earnings. These include when a firm reported a loss in the previous financial year; influencing short-term share prices and fulfilling capital market expectations; carrying out lending contracts clauses, and obtaining bonus in presence of management compensation contracts (Healy and Wahlen, 1999; Dechow and Skinner, 2000).

is that the corporate governance codes in the UK have gone through long process of amendments and improvements to form the current code. We are conducting the first study to examine the relationship between corporate governance mechanisms and the extent of opportunistic EM in the UK since the Combined Code on Corporate Governance (2003) has been introduced.³ This paper may shed some light on the effectiveness of the recent corporate governance recommendations on enhancing the reporting quality in the UK. Particularly, this study found a result that criticises the loose chairman independence criteria in the UK Corporate Governance Code.

Finally, prior literature is mainly US-based. To the best of our knowledge, there is little research into the relationship between corporate governance mechanisms and managers' engagements in EM in the UK (see for instance, Peasnell et al. 2000, 2005). Hofstede (2001) documents that while the UK and US are similar in many respects, various organisational differences exist. In terms of corporate governance recommendations, numerous international accounting research identifies a number of differences in the structure and composition of boards, executive compensation levels and audit committees functions (Monks and Minow 2004; Coffee 2005; Ferguson et al. 2004).

Not only corporate governance but also the notion of earnings management is different between the two countries. Brown and Higgins (2001) argue that the extent to which US managers manage earnings is significantly higher than their counterparts in the UK. It is thus considered useful to extend the prior empirical evidence by reference and comparison to the UK context.

Using a sample of UK firms, we examine whether the magnitude of discretionary accruals (the proxy for EM) is related to non-executive directors (hereafter NED) commitment and chairman independence. We find that NED commitment, chairman independence is significantly related to EM.

The remainder of the paper is organised as follows. The next section discusses the relevant empirical literature and the hypotheses development. A further section describes the research design and the empirical predictions. The main findings are then discussed. In the final section conclusions are drawn.

2. Prior studies and hypotheses

On theoretical grounds, it has been argued that managers are required to produce reliable and relevant financial statements to communicate with shareholders to reduce the asymmetric information. Jensen and Meckling (1976) model the contractual relationship between agents (managers), who may manage and manipulate accounting choices to affect earnings and therefore, exploit their accessibility to the

³ This Code has been applied to all companies listed on London Stock Exchange (LSE) for reporting years commencing on or after 1 November 2003.

firms' private information to pursue their own interests, and principals (shareholders), who do not have sufficient monitoring power over management decisions. Such absence of control may stimulate managerial opportunistic behaviour and increase agency costs.

Earnings management practice impact firms' financial statements by producing false information, which directly mislead investors and cause incorrect capital markets valuation of security prices. Hence, market efficiency, which based upon the information flow to capital markets, can be distorted by managers' opportunistic behavior. This distortion of real financial performance that leads to incorrect decisions may create an agency cost caused by earnings management practice.

Fama and Jensen (1983) argue that firms need a system that can limit these costs. We argue that NED commitment and chairman independence as corporate governance monitoring devices are important mechanisms that can constrain EM that is considered to be a proxy for agency costs.

2.1.1 NED Commitment – Board Meeting Frequency

Many studies have examined the relationship between corporate governance effectiveness and EM and found that governance practices effectively monitor managerial decisions and therefore, limit managerial opportunistic behaviour (see for example, Beasley 1996; Dechow *et al.* 1996; McMullen and Raghunanadan, 1996; Peasnell *et al.* 2000, 2005; Xie *et al.* 2003; Park and Shin, 2004; Kim and Yi, 2006; Chtourou *et al.* 2008).

One perspective of corporate governance not sufficiently explored is NED commitment. NED commitment can be measured by several governance mechanisms such as their involvement in board meetings, NED private meetings and their activity fees. Prior research has extensively investigated independent and size mechanisms such as board independent and board size. Notwithstanding, to the best of our knowledge there are few studies that have investigated the impact of board meeting frequency on EM. We argue that this governance practice is extremely important as active boards that meet frequently should be able to devote more time in monitoring the integrity of financial reporting, and therefore effective boards are more likely to constrain EM.

Supporting this view, Xie *et al.* (2003) argue that a board that rarely meets may only have time for signing management plans and listen to presentations and therefore, may not have the time to focus on issues such as EM. Xie *et al.* (2003) used a sample of 282 firm-year observations found that EM is significantly negatively related to board number of meetings.

Furthermore, Ebrahim (2007) used a sample of manufacturing firms for years 1999 and 2000 and expected the negative relation between EM and both board and audit committee independence to be mediated by their activity. His results support the expectation that abnormal accruals are even much lower

when independent audit committees are more active but they do not show any evidence that board activity mediate the relation between EM and board independence. This leads to our first hypothesis, stated in its alternative form:

H₁: *There is a negative association between board meeting frequency and earnings management.*

2.1.2 NED commitment – Non-executive Directors Private Meeting Frequency

We also examine whether NED private meeting frequency, without the presence of executive directors, could constrain managerial opportunistic behaviour toward the firm earnings. According to the Combined Code on Corporate Governance (2003), one of the responsibilities of NED is to satisfy themselves on the integrity of financial information and that financial controls and systems of risk management are robust and defensible.

Carcello et al. (2002) concede that board diligence includes several more factors than mere board meetings. However, various prior studies examined the impact of board diligence by only considering the frequency of board meetings. We extend the test of board diligence and earnings management using NED private meeting frequency, without the presence of executive directors.

One important method of NED performance evaluation according to the code is “Individual evaluation should aim to show whether each director continues to contribute effectively and to demonstrate commitment to the role (including commitment of time for board and committee meetings and any other duties.” (P10).

Basically, NEDs are the shareholders’ representatives, since those shareholders are not involved in the firm daily business as their firm managers the agency problem raised, hence when NED has less commitment through less NED private meetings the agency costs will be flourished and their representative role is not fulfilled.

This NEDs meeting is a requirement in the UK Corporate Governance Code that “The chairman should hold meetings with the non-executive directors without the executives present” (P5). One important method of NED performance evaluation according to the same code is “Individual evaluation should aim to show whether each director continues to contribute effectively and to demonstrate commitment to the role (including commitment of time for board and committee meetings and any other duties.”P10

The NED responsibilities should have a direct impact on shareholders’ perception of the firm’s financial reporting integrity and quality, which in turn, may constrain the inclination of managers to engage in EM.

The previous Corporate Governance and EM studies mainly focused on the NED independence rather than their commitment. Some previous studies concluded that independent boards are not necessarily perform better (e.g., see, Bhagat and Black 2002; Kiel and Nicholson 2003; Dulewicz and Herbert 2004).

These conflicting results may be due to the independence of the NED is a vague concept that is actually hard to measure in practice comparing to the NED commitment, (Gilson & Kraakman 1991; Patton and Baker 1987) support this view and suggest that there are critics on the role of non-executive directors on the board, NEDs perform little role in monitoring the board because lack of real independence, time, as well as enough information.

The independence of the NED should not be taken for granted as NEDs are dependent on the executive team for information and knowledge about the company (Stiles and Taylor 2002). This lack of knowledge and limited time comparing with executive directors necessitate them to work closely with the executive directors (Keasey et al. 2002). As a consequence their independence may be impaired. Charles, (2005) argue that NED must rely on the information they receive from staff and external advisers and this has not previously been a problem since their role has traditionally been one of strategic guidance. But with corporate governance high on today's agenda, it's questionable whether non-executive directors should be so reliant on what they are told; it follows that the time non-executive directors need to dedicate to the role will be significantly increased. To make independence matter worse, the independence of NED can be deterred by some reality facts such as, Higgs' (2003) study that cover more than 600 executive and non-executive directors of UK-listed companies and found that 48 per cent NED were appointed through personal contact with a board member, while only 4 per cent were appointed through a formal interview.

Thus, when a NED involves in the company through holding their confidential meetings besides attending the normal board meeting, he or she could overcome this shortcoming, as meetings are usually important source of information that will reduce the NED dependent on the firm management for the business information.

Another criticism of NEDs is that they are too busy with other commitments and directorship and are only involved with the company business on a 'part-time' basis. Fich and Shivdasani (2006) detect a negative effect of busy boards on several performance ratios caused by the increasing distraction of multiple directorships. Jiraporn et al. (2008) find a negative impact of busy boards on the firm value originated by deeper diversification discount. They explain this relation by the board members' time shortage. These findings are not excluded to the one-tier corporate governance system such as US, but also showed that there is a negative effect of busy members of the supervisory board on the performance of a company in a two-tier corporate governance system such as Germany (see Oehmichen et al. 2009). Song, *et al.* (2004)

conduct a survey of FT 500 UK company on the operations of UK audit committees. They report that the lack of time is perceived to be the greatest impediment to audit committee effectiveness. They added that pressure from executives is still one of the prevalent problems even after corporate governance reforms.

Hence, the effective NEDs that can discharge their duties adequately are those who show more involvement in the firm business through NED private meetings. It might be easier though to split NEDs to effective NED and ineffective NED based on their commitment comparing to their independence.

Ideally the NEDs should be prepared to speak up and ask difficult questions (Zandstra 2002). They should also be prepared to differ, respect other's views and opinions and talk through them (Cutting and Kouzmin 2002; Dixon and Ogan 2003). Roberts et al. (2005) suggest that board effectiveness is related to the 'degree to which NEDs acting individually and collectively are able to create accountability within the board in relation to both strategy and performance'. They suggest that a variety of behaviors such as questioning, probing, discussing, informing, debating that are at the very heart of how NEDs seek to be effective'.

NED private meetings can give some freedom and courage for NEDs to discuss controversial issues (such as accounting choices and methods) they may not be raised in normal board meetings. The directors are the shareholders' representatives, yet this focus can be kept only by NEDs commitment. A greater awareness is required from directors including more interaction, more communication with management that lead to more understanding of the business. A common feature for NED is that the majority of them are part time employed directors as they usually have another full time directorship. For strategy making purpose as one of NED roles⁴, these various positions and experience make many NED so well suited for such a strategic role.

However, for their monitoring role this can be a drawback as they are involved in a number of businesses that may clash and they may miss some board meetings or cannot be as involved as they're suppose to be. In our study, we are more concern about the monitoring role of NED rather than their strategic making role as the monitoring role is the one which may constrain EM practices.

We used NED private meeting as a sign for devoted time and efforts for the firm affairs which may help them detecting EM behavior. This leads to our second hypothesis, stated in its alternative form:

H₂: *There is a negative association between Non-executive directors meeting frequency and earnings management.*

⁴ However, academics have not been able to provide convincing evidence (Dechow and Skinner 2000).

2.1.3 NED commitment - Non-executive Directors Fees

Some previous empirical studies find negative associations between NED share ownerships and EM (see for example, Beasley, 1996; Chtourou et al. 2008). In this paper, we use the NED fees, as a proxy for NED efforts and activity. NED is usually working full-time in another firm. Due to the recent changes and emphasis on corporate governance principles and regulations, there might be greater demand for NEDs. Taking that into account the highly competitive market for NEDs, it is plausible to believe that effective NED would usually set in highly paid firms' boards.

Adams and Ferreira (2004) use a large panel data set on director attendance behavior in publicly-listed firms for the period from 1996 to 2003; they provide robust evidence that directors are less likely to have attendance problems at board meetings when board meeting fees are higher. They suggest that directors appear to perform for even very small financial rewards.

Furthermore, it can be argued that the level of remuneration is also important from the view of attracting professional new blooded NEDs. A survey conducted on (October, 2003) by Ernst & Young on 57 members of AICD (see AICD website) indicated that directors did not believe that they were paid enough according to the responsibilities and risks associated with the role.

In reality, the level of director's remuneration compared to the level of responsibility and time involved in carrying out their duties is not well matched. When compared to the salary packages of CEOs and other senior executives, NEDs are indeed under-remunerated. A professional NED would expect the level of fees commensurate with the size and complexity of the organisation in one side and with their qualifications and experience from another side. Otherwise, they may not devote the time and commitment to efficiently conduct their role. Hence to firm to attract high quality NEDs candidates an increase in NEDs fees is needed.

We assume that the workload of NED contributes to the determination of the fees paid. NEDs are required to spend more time and efforts in the role and they will expect to be remunerated accordingly. This leads to our fourth hypothesis, stated in its alternative form:

H₃: *There is a negative association between non-executive directors fees and earnings management.*

2.1.4 Chairman Independence

Chairman independence is considered to be one vital governance attribute by the (2003) Corporate Governance Combined Code in The UK, this code states that "The chairman is pivotal in creating the

conditions for overall board and individual director effectiveness, both inside and outside the boardroom”. The code P63

Jensen (1993) argues that the duality permits the Chief Executive Officer (CEO) to effectively control information available to other board members and thus impedes effective monitoring. An independent chairman (Neither founder nor CEO) is expected to improve board monitoring by providing an independent monitoring on the CEO work (Abbott et al., 2004; Fama & Jensen, 1983).

Chau. *et al.*, (2006) argue that concentrated decision-making power as a result of non-independent chairman may impair the board’s oversight and monitoring roles. Thus, vesting the power of the CEO and the chairman in separate persons could reduce the strong individual power base, which could enhance the board’s ability to exercise effective control. However, the vast majority of the literature finds no association between CEO duality and EM (see for instance, Dechow et al. 1996; Peasnell et al. 2000; Chtourou et al. 2008).

We argue that it is not ideal to improve the financial quality and integrity in firms when the head of the hierarchy in the company is not really independent. The independent Chairman has less biased behavior when he or she has no previous relation to the firm. This leads to our third hypothesis, stated in its alternative form:

H₄: *There is a negative association between chairman independence and earnings management.*

3. Methodology, data and sample

The initial sample population chosen for this study included FTSE350 British companies in 2005 and 2006. An important justification for choosing these companies is that they cover a broad range of industrial and commercial activities and account for a significant portion of the UK economic output. Corporate governance and financial variables were obtained from DataStream and corporate annual reports. Financial sectors were left out of the study because the discretionary accruals model does not apply to financial industries (e.g. Peasnell et al. 2000; Chtourou et al. 2008). We further exclude companies working in regulated and mining industries because of the differing practice of income recognition in regulated industries and the market value of mining firms differs from other firms as it includes other major factors, such as value of any real operating options (e.g. Brennan and Schwartz, 1985). In total therefore, the sample consists of 227 companies for which data was available for all appropriate variables.

The dependent variable is the discretionary accruals estimate that measures the extent of opportunistic earnings management. In order to estimate the discretionary accruals, it is first necessary to

estimate total accruals. Using balance sheet approach, total accruals of firm i in year t ($TACC_{it}$) are computed as follows:

$$TACC_{it} = \Delta CA - \Delta CASH - \Delta CL + \Delta LD - DA \quad (1)$$

where $TACC_{it}$ is total accruals, defined as the change in non-cash current assets ($\Delta CA - \Delta CASH$) minus the change in current liabilities (ΔCL), excluding the current portion of long-term debt (ΔLD), and minus depreciation and amortisation (DA). The most widely used methods to calculate discretionary accruals in the literature are the Jones (1991) and the modified Jones (Dechow et al. 1995) models. Kothari et al. (2005) propose a model that includes an intercept and control for the firm performance using the lag of Return on Assets (ROA) to mitigate the problematic heteroskedasticity and mis-specified issues of the Jones and the modified Jones models in estimating accruals. We use Kothari et al. (2005) cross-sectional modified Jones model with a two-digit SIC code to estimate the discretionary accruals. First, industry estimates of each sample firm's 2005–2006 were obtained using OLS regression in the same two-digit SIC code. The estimated model used is as follows:

$$TACC_{it} / TA_{it-1} = \alpha_1 (1/TA_{it-1}) + \alpha_2 (\Delta REV_{it} / TA_{it-1}) + \alpha_3 (PPE_{it} / TA_{it-1}) + \alpha_4 ROA_{it-1} + \varepsilon_{it} \quad (2)$$

where $TACC_{it}$ is total accruals as calculated in (1) and scaled by the lagged total assets. TA_{it-1} is the book value of total assets of firm i at the end of year $t-1$. We follow Teoh et al. (1998) and deflate each variable in the model by the TA_{it-1} to avoid heteroskedasticity that exhibited in this model. ΔREV_{it} is sales revenues of firm i in year t less revenues in year $t-1$. The change in revenues is adjusted for the change in receivables (ΔREC_{it}) for each sample firm, in order to provide some control for the effect of changing economic conditions on the level of non-discretionary accruals (Gaver et al. 1995). PPE_{it} is gross property, plant and equipment of firm i at the end of year t . As Jeter and Shivakumar (1999) explain, the Equation: 2 “treats revenues as entirely non-discretionary. However, if earnings are managed by shifting revenues from future periods, then ΔREV_{it} would be endogenous to the model” (p.3). In order to control for this endogeneity bias, we use Kothari et al.’s (2005) model. Then, we applied the sample firm's estimated coefficients derived from equation (2) to calculate the non-discretionary accruals ($NDAC_{it}$) from the modified Jones model with the lagged ROA as follows:

$$NDAC_{it} = [\hat{\alpha}_1 (1/TA_{it-1}) + \hat{\alpha}_2 [(\Delta REV_{it} - \Delta REC_{it}) / TA_{it-1}] + \hat{\alpha}_3 (PPE_{it} / TA_{it-1}) + \hat{\alpha}_4 ROA_{it-1}] \quad (3)$$

where ΔREC_{it} is the change of accounts receivable and $\hat{\alpha}_1 \hat{\alpha}_2 \hat{\alpha}_3$ are estimated coefficients from the second Equation. Finally, the discretionary accruals ($DACR_{it}$) of the sample firms are calculated using the sample firms' total accruals ($TACC_{it}$) minus the non-discretionary accruals ($NDAC_{it}$):

DACR it = TACC it – NDAC it (4)

As in the literature, we use the absolute measure of discretionary accruals as a proxy for the extent of opportunistic earnings management.

Following the discussion above, the study contains a number of independent variables. We measure the NED commitment by using the number of board meetings in a specific year. We also examine NED commitment using a more specific measure by examining the association between number of meetings of non-executive directors, without the presence of executive directors, and the extent of EM. Our third measure of NED commitment is the NED fees measured by the total fees of the NEDs divided by the number of the NEDs on a board. Additionally, we examine the impact of chairman independence on constraining EM. The commonly used measure in the prior literature for this variable is whether the roles of the chairman and CEO are combined or not. However, empirical findings revealed that the change in duality status does not influence the market (Balinga *et al.* 1996). While Daily and Dalton (1997) found CEO duality status does not have significant effect on performance.

Additionally, the vast majority of the literature finds no association between CEO duality and EM (see for instance, Dechow *et al.* 1996; Peasnell *et al.* 2000; Chen and Kao, 2004; Lee *et al.* 2006; Chtourou *et al.* 2008. and Sun and Chang, 2009), Sun and Chang (2009) stated that they did not find evidence indicating that duality of the CEO is associated with more earnings management in either the pre or post SOX period.

Another shortcoming for the duality as a measure of chairman effectiveness is that the high proportion of firms with duality in the previous studies to the extent that it may not capture variance in the discretionary accruals. In the U.S., Brickley *et al.* (1997) and Xie *et al.* (2003) found more than 81% and 85% of their sample firm-years have CEO duality respectively, where it was about 94% in the Australian context (Ramsay *et al.* 2006). In the UK, Peasnell *et al.* (2005) found the CEO duality represent 76% of their sample between 1993 and 1996.

The non findings of the previous studies led us to a conclusion that the duality role may not be the accurate measure for the chairman effectiveness. There is a need to measure the effectiveness of the Chairman in a better way to measure whether they discharge their duties adequately, based on the UK Corporate Governance Code 2003, we used the independent chairman criteria to judge the chairman independence.

We then find a positive relation between independent chairman and EM, by reviewing the chairman independence criteria recommended by the code, we find these criteria are quite lenient with the chairman when compared with NED independence criteria. Fore instance, the chairman independence is tested only on appointment but afterwards the chairman can be considered independent even he or she is the founder of

the firm or entitled to receive extra remunerations like options or significant ownership in the firm shares. Therefore, we measure chairman independence again using the Combined Code on Corporate Governance (2003) independence criteria for non-executive directors and we expected a negative relation between independent chairman (measured according to the NED's independence criteria) and EM.

According to the Code, the non executive director should not:- have been an employee of the company or group within the last five years; has, or has had within the last three years, a material business relationship with the company either directly, or as a partner, shareholder, director or senior employee of a body that has such a relationship with the company; has received or receives additional remuneration from the company apart from a director's fee, participates in the company's share option or a performance-related pay scheme, or is a member of the company's pension scheme; has close family ties with any of the company's advisers, directors or senior employees; holds cross-directorships or has significant links with other directors through involvement in other companies or bodies; represents a significant shareholder; or has served on the board for more than nine years from the date of their first election.

For example, the chairmen should not stay more than a specific number of years in the board and should not be subject to any remuneration except fees. More importantly the test of chairman independence should be carried out along the period the chairman serves on the board and not only on appointment.

While we are interested in examining how NED commitment and chairman independence can influence the extent of EM, we are aware that there are other firm characteristics that can influence the extent of EM and which need to be controlled for the estimations.

It has been argued that larger firms have more potential for earnings management (e.g. Bartov, 1993). Watts and Zimmerman (1990) states that larger firms face higher political costs and hence have stronger incentives to manage earnings in order to reduce the potential political risk. (Pincus and Rajgopal, 2002) suggest that large firms have more pressure placed on their management to report more predictable earnings. We measure firm size as the natural logarithm of total assets at year-end (SIZE).

Additionally, Kothari et al. (2002) argue that tests related to accounting discretion that do not control for effect of performance are often miss-specified. Therefore, we control firm performance as measured by return on equity, (ROE) we prefer to use ROA to be more consistent with the previous research. However, we find a high correlation exists between ROA and CFO, therefore we use alternative similar performance measure.

We also control cash flows from operating activities (CFO) to capture performance differences across firms in different industries and to control for the association between abnormal accruals and

operating cash flow Dechow et al (1995). Consistent with prior research Peasnell et al, (2000), we define operating cash flows from operating activities divided by beginning of period total assets.

Jelinek, (2007) suggests that leverage changes may have differing impacts on earnings management. Bartov et al. (2000) argue that the financial difficulties provide firms with more incentive to engage in earnings management they control for financial difficulties using book to market ratios and financial leverage. Many prior studies find leverage is related to earning management (Becker et al., 1998; DeAngelo et al., 1994). In this study, we calculate the leverage ratio as total debt divided by total assets (LEV).

In addition, we include Growth as a control variable because the model for expected accruals could be mis-specified for firms experiencing unusual growth. Skinner and Sloan (2002) found evidence that suggests growth stocks have significantly greater negative market responses to earnings disappointments than value stocks. This result implies that growth firms have greater incentives to avoid negative earnings surprises.

Furthermore, Matsumoto (2002) documents that highly growing firms are more likely to manage earnings. Among other studies found growth is related to EM including Abdularahman and Ali (2006), Jelinek, (2007) and Huang et al (2008). As many previous studies, (GROWTH) is measured by the market-to-book ratio (MTBV).

Moreover, we control the managerial ownership effect on our model. Jensen and Meckling (1976) argued that managers with a high ownership interest in the firm are less likely to alter earnings for short-term private gains at the expense of outside shareholders. Managers whose interests are consistent with shareholders are more likely to report earnings that reflect the underlying economic value of the firm. (Warfield et al.1995). The previous studies on the association between managerial ownership and EM have revealed mix results (Warfield et al., 1995; Klein, 2002b; Gul et al., 2003; Nobuyuki Teshima and Akinobu Shuto, 2005; Bergstresser and Philippon, 2006 and Ronen et al 2006). This study will measure the managerial ownership as the percentage of total shares held by executive directors divided by the total number of shares.

Finally, we controlled for Cross-listing. There are some differences exist between the UK and the US in terms of corporate governance regimes, accounting standards and legislations. In response to a wave of financial scandals in the U.S., the Sarbanes–Oxley Act (SOX, hereafter) was enacted to restore investors' confidence by promulgating disclosure of a variety of accounting-related corporate governance mechanisms.

Some studies (e.g. Leuz, 2006; Li, Pincus, and Rego, 2008) argue that government-enforced regulations can produce better disclosures that enable firms and investors to make decisions. Similar to this

argument, Cohen, Dey, and Lys (2008) find that earnings management behaviour significantly declined after the passage of SOX. Chang and sun (2009) also find a significantly negative association between earnings management and independent audit committees after the passage of SOX but no significant findings in these associations prior to SOX. These findings indicate the SOX provisions are effective in reducing EM and affect the relationship between EM and corporate governance in cross-listed foreign firms.

Consequently, all cross-listed foreign firms (including U.K. firms) are now required to meet the same SEC requirements as U.S. firms, including SOX requirements, Thus this could make UK crosslisted firms under pressure of applying the UK requirement and the US strict requirements that produce different (presumably better) financial outcomes comparing with their counterparts that are only listed in a UK market and follow the UK regulations.

Maijoor and Vanstraelen (2006) argue that the US capital markets and the SEC have the reputation of having the most restrictive regulations regarding the quality of financial reporting but find no evidence to support their argument.

Since this study sample covers the period start from 2005, all U.K. cross listed firms that are included in this study sample and listed in the US market are required to follow SOX requirements. It is worth mentioning that about 91% of the cross-listed firms in our sample are crosslisted in U.S. stock markets. Thus, a dummy variable was included that take the value of one if a firm is cross listed out side the UK market and zero otherwise.

Model Specification

In the light of the above discussion, the various hypotheses and variables are combined into a function relation to explain the relationship between NED commitment and chairman independence with the extent of opportunistic earnings management. The empirical form of the model is set out below:

$$DACR = \beta_0 + \beta_1 CHAIRCOD + \beta_2 CHAIRIND + \beta_3 BRDMEET + \beta_4 NEDMEET + \beta_5 NEDFEE + \beta_6 ROE + \beta_7 SIZE + \beta_8 MNGOWN + \beta_9 GROWTH + \beta_{10} LEV + \beta_{12} CROSLIST + \varepsilon \quad (4)$$

Where

- β_0 : intercept;
- $\beta_1 - \beta_7$: coefficient of slope parameters;
- ε : error term.

Dependent variable:

DACR: earnings management as measured by discretionary accruals (estimated using Equation: 3).

Explanatory variables:

CHAIRIND: dummy variable; 1 if the Chairman of the board is independent (according to the code NEDs independence criteria), 0 otherwise;
 CHAIRCOD: dummy variable; 1 if the Chairman of the board is independent (according to the code chairman independence criteria), 0 otherwise;
 BRDMEET: number of board meetings.
 NEDMEET: number of meetings between non-executive directors without executive directors;
 NEDEFEES: natural logarithm of non-executive directors fees divided by the total number of non-executive directors;

Control variables:

ROE Return on equity
 SIZE Log of total assets
 MNGOWN: The percentage of total shares held by employees, or by those with a substantial position in a company that provides significant voting power at an AGM.
 MTBV Percentage of the market to book value ratio
 LEV Total debt/ total assets
 CFO Operating cash flow / Lag total assets
 CROSSLIST 1 if the firm is cross listed outside the UK stock market.

3. Results and discussions

Descriptive statistics and Pearson correlations among the primary variables of interest are provided in Table 2. The means discretionary accruals estimation is – .013 (Note that this percentage is for the sample firms and not for all firms that are used to estimate the abnormal accrual model). Interestingly, CFO mean is similar to Peasnell et al (2000) who conducted their study in the UK between 1993 and 1996. 63% of our sample firms hold NEDs’ meetings and the average board meeting is about 9 times a year. The typical sample firm has mean managerial ownership of 3%. These levels are relatively comparable to those reported in previous studies of the UK (e.g., Peasnell et al. 2000 and Short and Keasey, 1999). When applying the code criteria for chairman independence, about 76% of our sample chairmen are considered independent, however, this mean decreased to 53% when applying the strict NED independence criteria on the chairman. Finally, 77% of the study sample is cross listed in another stock market outside the UK.

The correlation matrix shows that there are some significant correlations among the independent variables. The highest correlation is between SIZE and CROSSLIST is 0.43 ($p < 0.050$), suggesting large firms tend to cross listed more than small firms.

[Table 2 about here]

The data was analysed by running a pooled cross-sectional regression using the statistical package STATA. Table 3 presents the regression results from the estimate of Equation (4). Consistent with our expectation in H1 and H2 the co-efficient on BRDMEET and NEDMEET are negatively significantly related to EM in all models examined. Although there is limited empirical evidence on the relationship

between the number of board meetings and earnings management, our result is consistent with that in Xie *et al.* (2003). NED private meetings as a monitoring device have showed stronger effect on constraining EM comparing with the normal board meetings.

However, in contrast with our expectation in H₃, the co-efficient of NEDFEES is insignificant though it appears negative in all models examined.

In terms of the comparison between chairman independent that measured according to the code's chairman independence criteria and chairman independent that measured according to the code's NED independent criteria effect on EM. Interestingly, we find that the code independence criteria might be loose to the extent that we document a positive highly significant association between EM and chairman measured according to the code. In the other hand, when adjusting the criteria and treat the chairman as any other NED in terms of independence conditions (which is more strict comparing with the code independence criteria for the chairman), we find a significant negative relation between EM and chairman independence. Consistent with our expectations in H₄, table 3 also shows that CHAIRIND has significant negative relations with DACR. This suggests that the chairman independence play important roles of constraining earnings management behavior.

MNGOWN has a significant positive relation with EM in all models. Hence, our H₆ is rejected. This finding is consisted with previous UK evidence documented by Peasnell *et al.*, (2005) Bergstresser and Philippon (2006) provide evidence that the use of discretionary accruals is more pronounced at firms where the CEO's potential total compensation is more closely tied to the value of stock and option holdings. Ronen *et al* (2006) empirical study supports this theme of relation.

A final finding in table 3 is that, as expected, GROWTH and ROE has a positive and strong relationship to DACR. This suggests that companies with high financial performance and companies with high percentage of growth are more inclined to manage their earnings.

In contrast, cross listed firms manage earning less and that might be due to the pressure of variant listing, accounting and corporate governance requirements that those firms have to comply with when they listed in different stock markets.

This result is inconsistent with Maijoor and Vanstraelen (2006) who used data for UK, Germany and France between 1992 to 2000. This may be due to various reasons. First, in their study a very low number of their sample firms are cross listed (mean only about 2%) which may not be a statistically valid test. Second, SOX has been introduced since 2002 (post their study) which may have made a significant change on corporate governance requirements for cross listed firms and therefore reflected in less EM.

The adjusted R^2 is 22.3% indicating that only a marginal portion of the variability of DACR is explained by the independent variables. This figure is however, normal for any EM studies utilizing discretionary accruals as proxy (Peasnell et al., 2000). The highest Variance Inflation Factor is only 1.403 suggesting there is no serious multicollinearity problem. Kennedy (1998) suggests VIF of more than 10 indicates harmful collinearity.

Finally, as expected we found that UK firms in our sample that crosslisted have lower EM magnitude. This result support the previous argument we demonstrate in the previous section and support the findings of (Leuz, 2006; Li, Pincus, & Rego, 2008; Cohen, Dey, and Lys 2008 and Chang and sun 2009) who generally argued that government-enforced regulations can produce better disclosures and that SOX for example has reduced EM practice.

Further Analysis:

The interaction effect of the NED fees with NED private meetings and chairman independence:

We also test the interaction effect of NED fees with NED private meetings and chairman independence. There could be other strong board characteristics exist in firms with highly paid NEDs and serve as an effective monitoring mechanism over the board. Under this situation, it could lead the study to find no significant relationship between highly paid NEDs and EM because of strong board characteristics may have successfully eliminated EM.

In this section, based on the previous results we consider the independent chairman according to the code's NED independence criteria (CHAIRIND) as a (real independent chairman), where we consider the independent chairman according to the code's chairman independence criteria (CHAIRCOD) as a (non independent chairman).

In the NED private meetings the chairman is allowed to attend, therefore these confidential meetings will be more effective if attended by real independent chairman as he or she shares with NEDs the same interests of promoting integrity and quality of the financial reporting through monitoring the firm management. On the other hand, the NED private meeting may be less affective if attended by non independent chairman who does not share the same interest and have higher position that may largely affect NED private meeting decisions and recommendations.

Following the previous discussion, we introduce four interaction variables to this study. First, the study expects that NED private meeting attended by real chairman will reduce EM practice where NED private meeting will be less effective if attended by non independent chairman.

We calculate a score for each interaction variable consists of those two individual variables.

CHAIRIND*NEDMEET= Independent chairman attend NED private meetings

CHAIRCOD*NEDMEET= Non Independent Chairman attend NED private meetings

Then, we divided the sample into two groups according to the NED fees median, above median equals to one otherwise zero, then re-examine the previous interactions after adding the effect of NED remuneration. We argue that professional, sophisticated NED who are highly compensated (according to the previous discussion in the NED fees section earlier) when hold meeting that is attended by real independent chairman, will reduce EM practice. Moreover, when professional, sophisticated NED held meetings with non independent chairman, will reduce positive effect (previously found in this study) of non independent chairman and EM practice.

CHAIRIND*NEDMEET*HNEDFEE= Highly remunerated NED hold meetings with independent chairman

CHAIRCOD*NEDMEET*HNEDFEE= Highly remunerated NED hold meetings with non independent chairman

In the Further analysis section, the correlation coefficients associated with some independent interaction variables (correlation matrix table is not reported) ranges from 0 to about 70% which indicates that multicollinearity is a potential problem in some variables. Kvanli et al (1986) point out that multicollinearity can be controlled through various means such as the omission of some of the collinear variables from the regression. Thus, to mitigate the multicollinearity problem, four regressions were run, we excluded variables that have correlation coefficient more than 50% in each model to avoid the high multicollinearity problem that result from including these variables in the same model.

Table 4 presents the regression results for the interaction variables, CHAIRIND*NEDMEET have reduced the significant positive relation between CHAIRIND and EM, However a positive association still exist. This means that NED private meetings have stronger effect than non Independent Chairman on EM. As expected CHAIRIND*NEDMEET and CHAIRIND*NEDMEET*HNEDFEE significantly reduces EM at .05 confidence level. Again NED private meetings has empowered the real independent chairman to constrain EM as real independent Chairman reduces EM at .10 level but when empowered by NED private meetings the significance of this effect on EM has increased.

We assumed that highly paid NEDs that held NED private meeting with non-independent Chairman will reduce the positive relation between non Independent Chairman and EM practice. As expected, we document a negative relation between CHAIRCOD*NEDMEET*HNEDFEE and EM (note that the relation

between CHAIRCOD and EM is significantly positive and the relation between CHAIRCOD*NEDMEET and EM is insignificant but still positive).

Interestingly, this association is not only negative but marginally insignificant (with .14 p-value). The last two results show the important role (though indirect) for NED fees on board governance, this supports our previous argument in the NED fees section that highly paid NED is more motivated to be committed and involved in the firm details which may minimise the firm engagement in earnings management.

[Table 4 about here]

Sensitivity Analyses

The multivariate models in Table 3 suggest that earnings management is correlated with NED commitment and chairman independence. In addition to the multivariate models, in this section, we conduct several sensitivity analyses to determine the robustness of the results.

In addition to applying Kothari et al (2005) model to estimate discretionary accruals using total accrual (TA_{it}), we used another proxy for EM by applying Kothari et al (2005) but using the current accruals (CA_{it}) instead of total accruals. Becker et al (1998) argue that the management may have the most discretion over current accruals and therefore, discretionary current accruals may be a better proxy for EM. Some recent studies calculated the current discretionary accruals by applying equation (3) above after eliminating PPE from the model using the current accruals as dependent variable in the model instead of total accruals (see e.g., Ashbaugh et al 2003), we estimated discretionary current accruals as follows:

$$NDAC_{it} = [\alpha_1 (1 / TA_{it-1}) + \alpha_2 [(\Delta REV_{it} - \Delta REC_{it}) / TA_{it-1}]] + \alpha_3 (ROA_{it-1})$$

The results are qualitatively similar to those presented in Table 3 with some minor differences. Board meetings are not significantly related to EM but marginally above 10% p-value. In addition, ROE and CROSLIST are still significantly related to EM but less significant (both at .10 level).

We also split the sample into two groups based on NED fees, High NED fees which is above median (39500) and Low NED fees that less than the median, then we compared the mean of the DACR in both samples, we find that DACR mean in the Low NED fees sample is higher than its counterpart in the High NED fees sample (-.015, -.011) respectively. This supports the previous results of this paper that even though no direct relation exists between NED fees and EM, NED fees they play indirect role to reduce the level of EM as explained through the interaction effect previously.

3. Conclusion

This study investigated whether some corporate governance characteristics, for UK FTSE350 index in 2005 and 2006 are associated with earnings management. As the majority of the previous research has examined the independence of the board and audit committee, we focus on commitment rather than independence measures of corporate governance. In particular, we examined the boards meetings, non executive directors meetings without the presence of executive directors and non executive directors' fees association with the discretionary accruals. We found that NEDs commitment significantly reduces EM. However, we find no direct relation between NED fees and EM.

We further questioned the appropriateness of the chairman independence criteria set by 2003 combined code. We found that independent chairman according to the code criteria increase EM, while independent chairman using the code independence criteria set for non executive directors is significantly effective in reducing EM. This result criticises the loose chairman independence criteria recommended by the code.

We also examined the interaction effect between the NED commitment variables and chairman independence. The findings suggest that NED commitment is an important governance to monitor the board non independent chairman activity and empower the independent chairman to discharge his monitoring duties.

Taken together, our findings suggest that it is not only the independence of directors but also their commitment that reduces earnings management. We argue and find that stakeholders should not count on the board to monitor the management if no committed outside directors exists in the board.

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(Table 2)
Descriptive statistics

variable	mean	min	max	Median	St. Dev.
DACR	-.013	-.354	.279	-.013	.079
CHAIRCOD	.769	0	1	1	.427
CHAIRIND	.532	0	1	1	.499
NEDMEET	.630	0	1	1	.483
BRDMEET	8.688	4	17	8	2.55
NEDFEES	41491	18000	105000	39500	12986
GROWTH	.0399	-.385	.558	.0301	.0763
SIZE	6.053	4.560	7.417	6.026	.570
CFO	.1107	-.127	.447	.097	.077
LEV	.248	0	.762	.227	.176
ROE	21.9	-44.5	140.7	16.0	23.1
CROSSLIST	.7717	0	1	1	.420
MNGOWN	.0341	0	.56	0	.094

Correlation matrix

VARIABLE	DACR	CHAIRCOD	CHAIRIND	NEDFEE	NEDMEET	BRDMEET	SIZE	CFO	LEV	GROWTH	ROE	MNGOWN	CROSSLIST
DACR	1.000												
CHAIRCOD	0.0355	1.0000											
CHAIRIND	-0.0620	0.4134*	1.0000										
NEDFEE	-0.0810	-0.0220	-0.0015	1.0000									
NEDMEET	-0.1030	0.1269*	0.0801	0.0466	1.0000								
BRDMEET	-0.0131	0.1347*	0.1176	0.0345	0.0126	1.0000							
SIZE	0.0525	-0.0269	0.0646	0.0788	0.0743	0.0651	1.0000						
CFO	-0.0702	-0.0542	-0.0459	0.0055	0.0339	-0.1817*	-0.2790*	1.0000					
LEV	0.0362	0.0805	0.0453	-0.0353	-0.0213	0.0937	0.3143*	-0.1439*	1.0000				
GROWTH	0.0362*	-0.0630	-0.1308*	-0.0429	-0.0507	0.0091	0.0172	0.1614*	0.0143	1.0000			
ROE	0.1318	0.0113	-0.0298	0.0622	0.0981	-0.0100	-0.1627*	0.0460	-0.2181*	-0.0897	1.0000		
MNGOWN	-0.0961	-0.0585	0.0600	-0.1169	-0.0033	0.0914	-0.1172	-0.0942	-0.0104	0.0134	-0.1543*	1.0000	
CROSSLIST	-0.0259	0.0201	-0.0077	0.0712	0.1380*	0.0087	0.4369*	-0.2202*	0.2160*	-0.0821	-0.0474	0.0380	1.0000

DACR, discretionary accruals; CHAIRIND, dummy variable; 1 if the Chairman of the board is independent (according to the code NEDs independence criteria), 0 otherwise; CHAIRCOD, dummy variable; 1 if the Chairman of the board is independent (according to the code Chairman independence criteria), 0 otherwise; BRDMEET, number of board meetings; NEDMEET, number of meetings between non-executive directors without executive director; NEDFEES, natural logarithm of non-executive directors fees divided by the total number of non-executive directors. SIZE, natural logarithm of total assets; ROE, return on equity. GROWTH, percentage of market t book value. CFO Operating cash flow / Lag total assets LEV, Total debt/total assets. MNGOWN, The percentage of total shares in issue held by managers/total shares; CROSSLIST, 1 if the firm is cross listed outside the UK stock market. *p <0.05.

Table 3

The effects of Non Executive Directors' Commitment and Chairman Independent on Earnings Management: UK Evidence

$$\text{DACR} = \beta_0 + \beta_1 \text{CHAIRCOD} + \beta_2 \text{CHAIRIND} + \beta_3 \text{BRDMEET} + \beta_4 \text{NEDMEET} + \beta_5 \text{NEDFEE} + \beta_6 \text{ROE} + \beta_7 \text{SIZE} + \beta_8 \text{MNGOWN} + \beta_9 \text{GROWTH} + \beta_{10} \text{LEV} + \beta_{12} \text{CROSSLIST} + \varepsilon$$

DACR	Expected sing	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
_cons	?	0.0824	0.1084	0.0873	-0.1304*	-0.1415**	-0.1491**	0.1505
CHAIRCOD	+	0.0383**	0.0268*	0.0338**	0.0394***	0.0313**	0.0348**	
CHAIRIND	-	-0.0192*		-0.0208*	-0.0194*	-0.0216*	-0.0212*	
NEDMEET	-	-0.0208**	-0.0212**	-0.0210**	-0.0212**		-0.0214**	-0.0187*
BRDMEET	-	-0.0039*	-0.0042**		-0.0041*			-0.0034*
NEDFEE	-	-0.0462	-0.0477	-0.0512				-0.0515
GROWTH	+	0.0829***	0.0861***	0.0793***	0.0839***	0.0796***	0.0802***	0.0824***
SIZE	+	0.0194*	0.0168	0.0178	0.0194*	0.0151	0.0177	0.0156
CFO	-	-0.0418	-0.0465	-0.0289	-0.0421	-0.0443	-0.0286	-0.0561
LEV	+	0.0019	0.0019	0.0013	0.0020	0.0018	0.0014	0.0020
ROE	+	0.0002**	0.0002**	0.0002**	0.0002**	0.0001*	0.0002**	0.0002**
CROSSLIST	?	-0.0276**	-0.0255*	-0.0244*	-0.0283**	-0.0263*	-0.0250*	-0.0252*
MNGOWN	?	0.1388***	0.1290***	0.1294***	0.1419***	0.1274***	0.1324***	0.1225***
R-sq		0.0431	0.0388	0.0386	0.0408	0.0276	0.036	0.0315
Prob > F		0.0002	0.0004	0.0004	0.0002	0.0008	0.0004	0.0006

Dependent variable, DACR. Numbers in parentheses are *t*-statistics based on White's (1980) heteroscedasticity consistent estimation matrix; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. DACR, discretionary accruals; CHAIRIND, dummy variable; 1 if the Chairman of the board is independent (according to the code NEDs independence criteria), 0 otherwise; CHAIRCOD, dummy variable; 1 if the Chairman of the board is independent (according to the code Chairman independence criteria), 0 otherwise; BRDMEET, number of board meetings; NEDMEET, number of meetings between non-executive directors without executive director; NEDFEES, natural logarithm of non-executive directors fees divided by the total number of non-executive directors. SIZE, natural logarithm of total assets; ROE, return on equity. GROWTH, percentage of market t book value. CFO Operating cash flow / Lag total assets LEV, Total debt/total assets. MNGOWN, The percentage of total shares in issue held by managers/total shares; CROSSLIST, 1 if the firm is cross listed outside the UK stock market.

Table (4) Further Analysis

Regression Results of the Interaction effect between NED commitment variables and Chairman independence.

DACR	Model 1	Model 2	Model 3	Model 4
_cons	0.0983	0.1081	0.2120	-0.1326*
CHAIRCOD*NEDMEET	-0.0058			
CHAIRIND*NEDMEET		-0.0227**		
CHAIRIND*NEDMEET*HNEDFEE			-0.0207**	
CHAIRCOD*NEDMEET*HNEDFEE				-0.0184
CHAIRCOD	0.0389**	0.0324**	0.0370**	0.0417***
CHAIRIND	-0.0195*		-0.0217**	-0.0194*
NEDMEET			-0.0219**	
BRDMEET	-0.0040*	-0.0039*	-0.0039*	-0.0038*
NEDFEE	-0.0488	-0.0502	-0.0456	
GROWTH	0.0822***	0.0823***	0.0835***	0.0819***
SIZE	0.0174	0.01727	0.0188*	0.0180
CFO	-0.0550	-0.0552	-0.0406	-0.0573
LEV	0.0021	0.0017	0.0012	0.0018
ROE	0.0002**	0.0002**	0.0002**	0.0002**
CROSSLIST	-0.0285**	-0.0271**	-0.0243*	-0.0274**
MNGOWN	0.1357***	0.1266***	0.1356***	0.1418***
R-sq	0.0341	0.0394	0.1477	0.0344
Prob > F	0.0009	0.0003	0.0001	0.0003

CHAIRCOD*NEDMEET=

Non Independent Chairman attend NED private meetings

CHAIRIND*NEDMEET=

Independent Chairman attend NED private meetings

CHAIRIND*NEDMEET*HNEDFEE=

Highly remunerated NED hold meetings with Independent Chairman

CHAIRCOD*NEDMEET*HNEDFEE=

Highly remunerated NED hold meetings with non Independent Chairman

For other variables definitions see previous page. Missing variables in each regression model were omitted due to high correlation existence.