Corporate Governance Quality and Earnings Management: Evidence from UK FTSE 100 and AIM (2007-10)

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Yousuf Khan and Kenneth D'Silva

Abstract

Contextual setting, motivation and objectives
There is some evidence to suggest that the quality of corporate governance positively influences both financial performance and share price. Accordingly, it is of merit to assess that quality. This is heightened by increasing regulatory and procedural impositions on financial reporting - coupled with continuing demands for greater transparency. As such, current features within, and the publication of, the UK Code on Corporate Governance (2010) provides a fresh and further opportunity to evaluate the impact of Corporate Governance Quality (CGQ) on Firm Performance (FM) in terms of mitigating managerial opportunism. Accordingly, the purpose of this research paper is to empirically assess the impact of Corporate Governance Quality (CGQ) on Firm Performance (FO) and on managerial opportunism to mitigate unallocated accruals, on a recent sample of UK listed companies (FTSE 100 and AIM).\(^1\)

Design/methodology/approach
Corporate Governance quality is a computed composite function of some key corporate governance characteristics such as - duality, board characteristics and various CG committees. Sample companies evaluated within the research are classified as having strong or weak CGQ and as such CGQ is employed a dichotomous variable. An empirical approach is used to test three hypotheses, evaluating the relationship between CGQ and Firm Performance in the presence of Earnings Management (EM). Firm Performance is determined by firm profitability (FP), firm value (FV) and stock returns (SR) using the following proxies: Earnings per Share (EPS), Share Price (SP) and Dividend Yield (DY) respectively, on a sample of 40 companies from FTSE 100 and AIM companies over 2007-2010. OLS Pooled Panel Data regression techniques are used to test the hypotheses whereas discretionary accruals (DAC) are estimated using the Cross-Sectional Modified Jones (1991) model.

Findings
Prior results suggest that due to regulatory impact, firms constrain EM in the UK. In the context of leverage, it is argued that highly leveraged FTSE 100 firms are as likely to manipulate earnings as highly leveraged AIM companies. Moreover, the findings demonstrate that CGQ impacts firm performance negatively suggesting that CGQ is mitigating managerial opportunism. Furthermore, contrary to prior results, this investigation indicates a positive correlation between CGQ and DAC which indicates that CGQ constrains managerial opportunism in the presence of optimal contracts between the principal and the agent creating managerial efficiency resulting in managers conveying underlying economic reality to the outside world through earnings smoothing rather than earnings management.

Originality/value/implications
Contrary to prior research, a negative and significant relationship is found between CGQ and Firm Performance, proxied by EPS, SP and DY suggesting greater levels of transparency in financial reporting. The association between CGQ and EM, as a mechanism of controlling managerial behaviour, should provide policy makers an impetus to strengthen Corporate Governance (CG) practice as a tool for greater transparency and minimal information asymmetry. This has some positive implications for both the internal and external audit. If Corporate Governance mitigates agency costs, this should be reflected in the audit price, whereby, auditors can relax assumptions and the complexity of substantive tests. Particularly in the case of external audit, the internal audit function may provide basis for reliance and hence assist management and external auditors in concentrating on quality issues.

Keywords: Corporate Governance Quality, Earnings Management, Discretionary Accruals

\(^1\) FTSE 100 = Top 100 Companies listed on the London Stock Exchange (LSE) AIM = Alternate Investment Market on the LSE.
Research context

The evolution of the modern corporation has had a great impact on the social and economic affairs of globally. The structural organisation of corporations is largely influenced by the social, economical and political landscape in the country of origin. With the surge in number and size of corporations, new and enhanced regulations and standards have imposed by states to regulate corporate behaviour. In the emerging markets the typical structure of organisations is characterised by prevailing family or state ownership. Therefore, ownership has been concentrated in emerging markets. In developed markets (such as the US/UK) the tendency has been for ownership to be dispersed and a phenomenon has emerged that described the nature of the corporations on the basis of the principal – agent dichotomy (Berle and Means, 1932).

Berle and Means (1932) argue that the nature of the corporations is explained on the basis of the principal – agent dichotomy. Shareholders (who play the role of principals) need managers (who play the role of agents) to invest their funds and with a view to maximising investment. However, the custody over the assets of the firm are in the hands of management, who are not always proactive in following the interest of shareholders (owners). Consequently, a conflict of interests arises as described by the ‘Agency Theory’ (AT). Aligning shareholders’ and managers’ interests is a costly procedure as it involves ‘monitoring’ managerial actions. Moreover, consistent with AT it is observed that managers tend to follow their own interests when there is an agency problem leading to higher agency costs on the basis of earnings management (Beaudoin, 2008).

Earnings quality can be measured by using accrual amounts as companies may have high accruals on balance sheet for business reasons (e.g. sales growth). Moreover, accruals models focus on firm performance (McNichols and Wilson 1988, Dechow et al. 1995, Kasznik 1999) instead of managerial discretion. However, total accruals are made of nondiscretionary accruals (reflect business conditions such as growth) and discretionary accruals (reflect management choices). Corporations (e.g. Nortel, Xerox) have tried to overstate their earnings by using discretionary accruals. High discretionary accruals are associated with earnings manipulation (e.g. Healy 1985, DeAngelo 1986, and Jones 1991). When companies report abnormal performance and there is a non-linear association between performance and accruals, nondiscretionary accruals can be misclassified as discretionary accruals.

In order to estimate the non-discretionary component of total accruals a regression model is applied using cross-sectional (accrual data from different companies, from the same industry sector are regressed) or time-series analysis (accrual data from a single company is regressed but for several time periods). From the above two methods, the cross-sectional analysis is used to estimate discretionary accruals year-by-year for the following technical reasons:

- Using a time-series analysis the researcher might not obtain sufficient observations in the time period investigated in order to have strong parameter estimates for a linear regression;
- Firms from the same industry have a resembling operating cycle.

Moreover, firms with a shorter history than the ones used in time-series analysis can be examined (e.g. new companies that engage in initial public offering). A popular models used in determining discretionary accruals is ‘The Cross-Sectional Modified Jones (1991) Model’ (CSMJM) as

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2 The range of accounting choices available to the manager (the agent) in making accounting judgment.
3 A regression model is “a statistical measure that attempts to determine the strength of the relationship between a dependent variable and a range of independent variables”.
it usually results in “a larger sample size that is less subject to a survivorship bias” (Bartov et al. 2000, p. 4).

The Cross-Sectional Modified Jones (1991) Model is used to determine discretionary accruals as an independent variable to test the following hypotheses:

(H1): There subsists a contemporaneous relationship between CG quality and firm profitability when accounting for firm size and in the presence of discretionary accruals (DAC);

(H2): There subsists contemporaneous relationship between CG quality and firm value when accounting for firm size and in the presence of discretionary accruals (DAC);

(H3): There subsists contemporaneous relationship between CG quality and stock returns when accounting for firm size and in the presence of discretionary accruals (DAC).

A positive relationship is expected between CG quality and Firm Performance measured by firm profitability, firm value and stock returns suggesting that while managers may engage in earnings management, this is for efficiency rather than opportunism since higher CG quality can contribute towards mitigating the agency costs in the presence of optimal contracts.

A literature review

Some twenty-years ago Corporate Governance was still in its infancy for many boardrooms and few paid attention to “the system by which companies are directed and controlled” (Cadbury, 1992, p.15). Corporate Governance has gained momentum since 1991, when Sir Adrian Cadbury first issued the report on Corporate Governance in the UK. The Committee on the Financial Aspects of Corporate Governance was set up in response to some corporate scandals that took place in the UK during the 1980’s. Corporate debacle of Maxwell and Polly Peck, suggested a weakness in the audit function to detect and report fraud complemented by the seeming ineffectiveness of accounting standards and the ease with which managerial opportunism was exercised.

Even though Corporate Governance has been subject to many regulatory changes in the UK since the Cadbury Report in 1992, many researchers believe that Corporate Governance is reviewed only when problems appear and subject to short-termism. As previously mentioned, the Cadbury Report was commissioned by the UK government after the corporate scandals in the 1980’s and the Greenbury Report (1995) expressed the public concern towards excessive directors’ remuneration. Additionally, Higgs and Smith Reports (both 2003) were commissioned as a result of corporate failures elsewhere in the world (Enron and WorldCom-USA). All things considered, future reviews of Corporate Governance should provide effective guidelines to Corporate Governance problems as a whole and, therefore, controlling managerial behaviour.

Jensen and Meckling (1976) and Fama and Jensen (1983) have all added significant contributions to Corporate Governance. The Agency theory explains the separation of ownership from control between the principal (owners) and the agent (managers). Recent financial crisis in the banking sector and the knock on effect to industry exposed managerial attitudes towards risk and risk management suggesting weakness in board oversight. Moreover, information asymmetry provides

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4 Mutual fund companies (investment vehicles used to collect funds from different investors and invest in securities) choose their funds based on past performance (only the ones that were successful).
managers with net advantage over the principal, giving rise to agency problems and hence lower levels of transparency and quality of reported earnings (Jensen and Meckling 1976, Fama 1980).

Researchers have long tried to explain the impact of CGQ on firm performance and on managerial opportunism to mitigate unallocated accruals. However, most studies have investigated the link between firm performance and CG aspects such as board size, board composition, remuneration, shareholder activism, ownership and independence of directors (Gompers et al. 2003, Bauer et al. 2004, Bebchuk et al. 2004).

Using 24 CG mechanisms, Gompers et al. (2003) analysed the impact of CG on stock returns for 1500 US companies during the 1990s. The portfolio consists of firms with large take-over amendments (Dictatorship Portfolios) and firms with low amendments (Democracy Portfolio). The results showed that CG had a positive impact on stock returns during 1990 to 1999. A Governance Index (GI) was used as a proxy to balance managers’ and shareholders’ power. Analysing the relationship between GI and subsequent returns, annual returns of 14% for the Dictatorship Portfolio were observed while Democracy Portfolio showed an annual return of 23.3%. Carhart (1997) model was used to explain the style differences between the two portfolios. Moreover, investors who bought shares from Democracy Portfolio and sold shares in the Dictatorship Portfolio earned abnormal returns of 8.5% each year. One of the limitations of this work is that the data could not provide a strong conclusion for the causality problem. They also found that weak shareholder rights cause weak profitability and sales growth when the book-to-market ratio is used.

Bauer et al. (2004) finds, contrary to Gompers et al. (2003), a negative relation between CG standards and performance ratios in the Eurozone market. Following Gompers et al. (2003) approach, portfolios of well-governed and poorly-governed companies were compared. The companies were ranked using their European Monetary Union (EMU) rating. The top 20 percent best rated firms from the EMU were labeled as ‘Good Governance Portfolio’, while the bottom 20 percent were assigned to the ‘Bad Governance Portfolio’. For the construction of the UK portfolios, the relative score of the firm, as opposed to the sample, was the main criteria. Using a zero-investment strategy, an annual return of 2.1 percent was observed for the EMU portfolios and 7.1 percent for the UK portfolios during January 1997 to July 2002. To account for the factors that lead to these results, the Carhart (1997) model was implemented. However, the history of CG ratings was limited and this might have influenced the results. Moreover, both proxies were based on accounting earnings which are subject to manipulation.

Following, Gompers et al. (2003) approach, Bebchuk et al. (2004) established which of the provisions identified by IRRC are associated with shareholder returns and firm value. An ‘entrenchment index’ was developed from the six provisions previously identified to empirically establish the impact of the index on firm performance. One of the observations was that if the level of the index goes up than the value of the company decreases, as measured by Tobin’s Q. Additionally, firms with higher index levels gained abnormal returns during 1990 to 2003. Also, Bebchuk et al. (2004) discovered that the six provisions they used explained the correlation between Gompers et al. (2003) provisions (24 IRRC provisions) and the decline in firms’ value and share returns in the 20th century. Hermes (2005) considers that good CG increases shareholder value in the long-term. The review is based on analysing the following three main categories: opinion-based research, focus list research and performance of shareholder engagement funds, and governance-ranking research.
Accounting earnings are used to measure profitability and are composed of operating cash flow and accruals. McNichols (1999) identifies the trade-offs of three research designs: aggregate accruals, specific accruals and the distribution of earnings. He suggests that almost all the findings are due to the use of aggregate models which are used to explain discretionary behaviour. Healy and Wahlen (1999, p. 368) described earnings management from a standard-setters’ perspective as:

"Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers."

Both Schipper (1989) and Healy and Wahlen (1999) argued that earnings management is heavily correlated with managerial discretion. From a contracting view, managers manage earnings so they can opportunistically maximize their objectives (Scott, 2003). Healy (1985) indicates that in the light of incentives (short-term bonus incentives) managers tend to follow their own interests. Moreover, having superior information over external parties, managers might manage earnings in order to meet targets in view of short-term bonuses. However, managerial behaviour problem can be minimised subject to internal monitoring mechanisms or external market mechanisms.

Managing earnings is strongly related to the following reasons; to reduce income taxation, not meeting analysts’ earnings expectations, reporting a decrease in earnings or in the worst case scenario a loss in earnings. Managers tend to report higher earnings in the light of bad news to meet earnings expectations and bonus targets. Also, when a new CEO is appointed it is often encountered for him to take ‘a bath’ at the expense of the predecessor and not be held responsible for the company’s poor performance. In the past ‘big-bath’ has also been associated with provisions. Big-bath provisions are hard to achieve nowadays as companies are less able to make big provisions (exceptional charges to the income statement) on good times (profits are acceptable), and bring them in subsequent years when the liabilities were actually contracted, without following the regulations imposed.

In a world where earnings management is closely scrutinised, corporations have tried to overstate their earnings by using discretionary accruals (e.g. Xerox, Nortel and Sunbeam). Accruals can be seen as a reflection of earnings management and the size of accruals can be used as a measure for earnings manipulation. Excess expense accruals were used to overcome the effect of sudden shortfalls in operating results. However, all of these corporations were subsequently forced by SEC to revise their financial statements. Sir Arthur Levitt, the former Chairman of the SEC, notes that accruals should report earnings and consequently the economic performance of the company rather than management’s desire (cited in Beaudoin, 2008, p.2).

Generally Accepted Accounting Principles (GAAP) at times requires accounting judgment in the preparation and presentation of financial reports. This led to misinterpretation and managers have been able to manage earnings within regulatory limits. Various techniques have been developed in

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5 The term ‘big-bath’ is often used to describe the “manipulation of a firm’s income statement to make poor results look even worse”.

6 Liabilities that are uncertain with respect to amount and time.

7 Accruals are accounts on the balance sheet that include non-cash assets and liabilities. The accounts consist, among others, on goodwill, accounts payable, accounts receivable, future interest expense and future tax liability.
order to overstate earnings such as; altering actual cash flow costs and making accrual decisions. Some period-ending accruals, in the light of incentives, can either be transferred to the following period or result in earnings management.

Discretionary accruals judgments have been under scrutiny by auditors and consequently Agency theory might not explain earnings management. Beaudoin (2008) analysed, using Agency theory, earnings management decisions and the influence on corporate social behaviour. Beaudoin et al. (2008) findings support Agency theory and the fact that managers tend to act in their own interest and maximise their utility by increasing discretionary expense accruals. In companies where the agency problem persists, managers will try to meet their bonus targets (e.g. transfer earnings to current year). Prior results have also indicated that agency problems can be mitigated in the presence of stringent oversight mechanisms.

Extant research have examined the relationship between cash incentives and earnings management (Healy, 1985); Holthausen et al., 1995; Gaver et al., 1995; Dechow et al., 1996; Burgstahler and Dichev, 1997; DeGeorge et al., 1999; Guidry et al., 1999; Beatty et al., 2002; Cheng and Warfield, 2005). Healy (1985) argues that short-term bonuses are determinants of earnings management. He also states that when managers have already met their bonus targets or no bonuses are in place managers tend to have income-decreasing accruals. Moreover, when accruals contribute to enhancing bonuses there is a tendency of income-increasing accruals.

Accountants use the following approaches to detect earnings management: they either add accruals to operating cash-flow or they study the discontinuities in earnings’ distribution. Further, in order to detect earnings management the following metrics have been proposed: the Healy Model (1985), the DeAngelo Model (1986), the Industry Model (Dechow and Sloan (1991)), the Jones Model (1991), the Cross-sectional Jones Model (DeFond and Jiambalvo (1994)), the Cross-sectional Modified Jones Model, the Modi et Jones Model (Dechow et al. (1995)), the Forward-looking Modified Jones Model (Dechow et al. (2002)) and deferred tax expense (Philips et al.(2002)). Other researchers, as McNichols (2000) suggest, did not base their studies on aggregate models of accruals (MCNichols and Wilson, 1988; Moyer, 1990; Petroni, 1992; Beaver and McNichols, 1998; Penalva, 1998; Nelson, 2000; and Petroni et al., 2000). They all believe that due to industry settings managerial discretion is observed in accruals. On the other hand, aggregate models of accruals focus on the behaviour of each accrual in determining the discretionary and non-discretionary portion of accruals.

However, accruals models have been subject to criticism (MCNichols and Wilson, 1988; McNichols, 2000). They argue that accruals models focus on firm performance and not on managerial discretion. Even though, the association between managerial allocated discretion and firm performance in the context of Agency theory has been closely scrutinised (Berle and Means, 1932; Jensen and Meckling, 1976). Berle and Means (1932) comment that shareholders want to maximise profits but shareholders’ interests are not always aligned with managers’ objectives. Managerial discretion has been negatively associated with firm performance as it allows managers to follow their own interests rather than shareholders’ objectives (Jensen and Meckling 1976, Fama 1980, Fama and Jensen 1983a, 1983b, Jensen and Ruback 1983). However, agency theory implies that managers have non-profit-
maximising objectives. All in all, earnings management can be seen as the black hole in GAAP as long as firms have the power in choosing which accounting policies and procedures best suits their interests.

Dechow et al. (1995) tested five accrual-based models and their findings show that all the models are able to detect earnings management and that the Modified Jones Model was the strongest one. However, their results might have been influenced by the fact that their company were subject to SEC for earnings overstatement. Other researchers evaluate the relationship between discretionary accruals and audit qualifications and the robustness of Cross-sectional Jones Model and Cross-sectional Modified Jones Model with respect to earnings management (Bartov et al., 2001). They assumed that behind qualified audit opinions lies managed earnings and their findings suggests that only the above two models are consistent in detecting earnings management. Moreover, Bradshaw et al. (1999), as cited in McNichols (2000), argue that aggregate accruals show evidence of earnings manipulation.

From an agency perspective, where any employee can play the role of the agent and its supervisor the role of the principal, incentive contracts and information asymmetry can contribute towards manipulating earnings. While bonus incentives are set to deal with unexpected risks, Watts and Zimmerman (1986) state that bonus’ incentives have unforeseen consequences.

**Research objectives and significance**

The present research aims to add to the existing literature on CG in the UK, where CG quality is higher than in emerging markets. In particular, this study aims to answer the following main research question:

*What is the impact of CG quality on firm profitability stock returns, and firm value when accounting for firm size and in the presence of DAC?*

The sample population excludes financial, insurance and regulated companies that were members of either FTSE 100 or AIM when the data was collected in November 2011. A OLS Panel Data regression analysis is conducted to account for the impact of CGQ on firm performance and on managerial opportunism to mitigate unallocated accruals. It is expected that FTSE 100 companies have better CG than AIM companies as it is compulsory for FTSE 100 and optional for AIM companies to comply or explain how they applied the principles of *The UK Corporate Governance Code (2010)*.

In relation with the present research, the objectives of this paper are as follows:

**Objective 1 in relation to research question 1 (RQ1):**

To evaluate the relationship between CG quality and firm profitability when controlling for firm size and in the presence of discretionary accruals (DAC);
Objective 2 in relation to research question 2 (RQ2):

To evaluate the relationship between CG quality and firm value when controlling for firm size and in the presence of discretionary accruals (DAC);

Objective 3 in relation to research question 3 (RQ3):

To evaluate the relationship between CG quality and stock returns when controlling for firm size and in the presence of discretionary accruals (DAC); where

RQ1: What is the impact of CG quality on firm profitability when controlling for firm size and in the presence of discretionary accruals (DAC)?

RQ2: What is the impact of CG quality on firm value when controlling for firm size and in the presence of discretionary accruals (DAC)?

RQ3: What is the impact of CG quality on stock returns when controlling for firm size and in the presence of discretionary accruals (DAC)?

The next section discusses the research design and methods used to empirically assess the impact of CGQ on firm performance in the presence of DAC in the UK context.

Research design and methodology

The present research is influenced by the epistemological and ontological view of an objective knowledge and singular reality and relies on numerical data to test the stated hypothetical propositions using SPSS. Therefore, the researcher is influenced by the philosophical stand of positivism.

Data sources and sample selection

The data collected is of secondary source and the sample population consists of 40 companies included on the FTSE 100 and AIM companies over the period 2007-2010. However, the sample is based on companies that were members of both FTSE 100 and AIM on the date of selection. Since the data is publicly available, no issues arise in relation to ethical concerns. The research uses non-financial, non-insurance and non-energy (gas and electricity) companies derived from London Stock Exchange website, Thomson One Banker and annual reports. Financial companies and firms with insufficient data have been eliminated as it is hard to compute discretionary accruals.
In order to better assess the problem of good or poor CG eight companies (four from FTSE 100 and four from AIM companies) from five different sectors have been chosen according to the London Stock Exchange (LSE) classification on 12th November 2011 (Mining, Media, Retail & food, General Retailers, Travel and leisure). The main criteria in choosing the sample were: sector, region (UK, mostly London), type of company, and market capitalisation. Industry sectors and features might influence the aggregate level of a CG score and the forthcoming results and consequently only non-financial, non-insurance and non-energy companies were selected. The following companies presented in Table 1 are included in the sample set:

Table 1: Sample set companies

<table>
<thead>
<tr>
<th>Companies</th>
<th>FTSE 100</th>
<th>AIM</th>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vedanta Resources PLC</td>
<td>Vane Minerals PLC</td>
<td></td>
<td>Mining</td>
</tr>
<tr>
<td>Rio Tinto PLC</td>
<td>Serabi Gold PLC</td>
<td></td>
<td>Mining</td>
</tr>
<tr>
<td>BHP Billiton PLC</td>
<td>Mwana Africa PLC</td>
<td></td>
<td>Mining</td>
</tr>
<tr>
<td>Anglo American PLC</td>
<td>GMA Resources PLC</td>
<td></td>
<td>Mining</td>
</tr>
<tr>
<td>British Sky Broadcasting Group PLC</td>
<td>M&amp; C Saatchi PLC</td>
<td></td>
<td>Media</td>
</tr>
<tr>
<td>WPP PLC</td>
<td>Next Fifteen Comm. Group PLC</td>
<td></td>
<td>Media</td>
</tr>
<tr>
<td>ITV PLC</td>
<td>Netplay TV PLC</td>
<td></td>
<td>Media</td>
</tr>
<tr>
<td>Pearson PLC</td>
<td>Yougov PLC</td>
<td></td>
<td>Media</td>
</tr>
<tr>
<td>Tesco PLC</td>
<td>Zetar PLC</td>
<td></td>
<td>Retail food</td>
</tr>
<tr>
<td>Unilever PLC</td>
<td>Wynnstay Group PLC</td>
<td></td>
<td>Retail food</td>
</tr>
<tr>
<td>Associated British Foods PLC</td>
<td>Snacktime PLC</td>
<td></td>
<td>Retail food</td>
</tr>
<tr>
<td>Morrison (Wm) Supermarkets PLC</td>
<td>M.P. Evans Group PLC</td>
<td></td>
<td>Retail food</td>
</tr>
<tr>
<td>Kingfisher PLC</td>
<td>Asos PLC</td>
<td></td>
<td>General Retailers</td>
</tr>
<tr>
<td>Marks And Spencer Group PLC</td>
<td>Eco City Vehicles PLC</td>
<td></td>
<td>General Retailers</td>
</tr>
<tr>
<td>Next PLC</td>
<td>Stagecoach Theatre Arts PLC</td>
<td></td>
<td>General Retailers</td>
</tr>
<tr>
<td>Burberry Group PLC</td>
<td>Stanley Gibbons Group PLC</td>
<td></td>
<td>General Retailers</td>
</tr>
<tr>
<td>Compass Group PLC</td>
<td>Young &amp; Co’s Brewery PLC</td>
<td></td>
<td>General Retailers</td>
</tr>
<tr>
<td>Carnival PLC</td>
<td>Prezzo PLC</td>
<td></td>
<td>Travel and Leisure</td>
</tr>
<tr>
<td>Intercontinental Hotels Group PLC</td>
<td>Tottenham Hotspur PLC</td>
<td></td>
<td>Travel and Leisure</td>
</tr>
<tr>
<td>Whitbread PLC</td>
<td>Tasty PLC</td>
<td></td>
<td>Travel and Leisure</td>
</tr>
</tbody>
</table>
**Metric used to estimate Earnings Management**

The Cross-Sectional Modified Jones (1991) Model, which uses OLS Pooled Panel data Regression method\(^8\), is used to estimate abnormal (discretionary) accruals (to detect earnings manipulation) and calculate discretionary accruals which will be used in the regression models to test the three main hypothetical propositions. This research involves a three step process. Using Becker *et al.* (1998) approach, total accruals are calculated using the cash-flow statement approach as cash-flow is a dependable measure of firm performance:

**Cross-Sectional Modified Jones (1991 Model):**

\[
TAC_t = \alpha_1 \left( \frac{1}{A_{t-1}} \right) + \alpha_2 \left[ \frac{\Delta REV_t - \Delta REC_t}{A_{t-1}} \right] + \alpha_3 \left( \frac{PPE_t}{A_{t-1}} \right) + \varepsilon_t
\]

Where,

- \(TAC_t\) = Total Accruals
- \(\varepsilon_t\) = error term representing Discretionary Accruals

All variables in the model are scaled by lagged assets

**Step 1**

\[
TA_t = EBE_t - OCF_t
\]

Where,

- \(EBE_t\) = earnings after interest and tax but before exceptional items in the event period
- \(OCF_t\) = Operating cash-flow in the event period

**Step 2**

This step is used to determine \(\alpha_1, \alpha_2, \alpha_3\) coefficients which are industry specific parameters and are calculated using SPSS.

\[
NDAC_t = \alpha_1 \left( \frac{1}{A_{t-1}} \right) + \alpha_2 \left[ \frac{\Delta REV_t - \Delta REC_t}{A_{t-1}} \right] + \alpha_3 \left( \frac{PPE_t}{A_{t-1}} \right)
\]

Where,

- \(NDAC_t\) = this period nondiscretionary accruals
- \(\Delta REV_t\) = the change in revenues as for the current period
- \(PPE_t\) = gross property, plant and equipment at the current of this year
- \(A_{t-1}\) = Opening total assets; and \(\alpha_1, \alpha_2, \alpha_3\) are estimated parameters.

\(^8\) Regression method is used to split total accruals in discretionary and nondiscretionary constituents.
Step 3

In step 3, discretionary accruals (DAC$_t$) are calculated as the difference between total accruals and nondiscretionary accruals where $\alpha_1$, $\alpha_2$, $\alpha_3$ are the estimated parameters as shown in step 2:

$$DAC_t = TAC_t - NDAC_t$$

DAC$_t$ = this period discretionary accruals

Performance variables

The data for all the variables presented in Table 2 was gathered from Thomson One Banker database with the exception of CG ratings, which were collected from Bloomberg. The Governance Metrics International (GMI) ratings were available on Bloomberg for the FTSE 100 companies with the specification that the data has been discontinued as of May 1, 2009. However, no ratings were available for Rio Tinto PLC, BHP Billiton PLC and Unilever PLC. In order to deal with this inconvenience we analysed the ratings provided by the Institutional Shareholder Service relative to the index and industry as these provides a better perspective of CGQ.

As all the other ratings for the remaining sample population provided the same conclusions we decided that all the three companies have strong CGQ (we base this decision on the fact that from a score of 100 points, all the three companies have more than 65 points, assuming that firms with a score higher than 65 points have strong CGQ). Portfolios of high and weak CG were constructed as follows. The companies which had an overall rating higher than 6.5 were assigned as having strong CGQ, whereas companies with the rating lower than 6.5 were seen as having weak CGQ. The CGQ variable is dichotomous and ‘0’ is assigned to firms with higher quality CGQ and ‘1’ otherwise.

As no ratings were available for AIM companies, we constructed our portfolios based on the companies’ external auditors. Thus, if the auditors are a Big4 (PricewaterHouseCoopers, Deloitte Touche Tohmatsu, Ernst & Young, KPMG)\textsuperscript{9} company, we assume the firm analysed has strong CGQ and consequently is assigned a value of 0 otherwise 1 for firms of non Big 4 auditors.

Table 3: Performance variables

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Variable Code</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings Per Share</td>
<td>EPS</td>
<td>Available from Thomson One Banker. We use basic EPS (number of shares in existence) and not diluted EPS.</td>
</tr>
<tr>
<td>Share Price</td>
<td>SP</td>
<td>The closing price of a share is used as proxy for firm value.</td>
</tr>
</tbody>
</table>

\textsuperscript{9} BIG4 comprises of the four largest international service providers in financial services, including audit.
Dividend Yield | DY | A ratio calculated as annual dividends per share to share price. A high dividend yield indicates that the dividend pays a high percentage return on the stock price.
--- | --- | ---
Corporate Governance Quality | CGQ | Is used as a quality variable assigned value 0 if CG quality is strong, 1 otherwise.
Total Assets | Asset | The value of total assets for the year analysed.
Operating Cash Flow | OCF | The value of cash generated from operating activities, usually calculated as revenues minus operating expenses.
Discretionary Accruals | DAC | Calculated as total accruals minus nondiscretionary accruals according to the Cross-Sectional Modified Jones Model.
Leverage | LEV | Calculated as total debt divided by total assets, this variable reflects the amount of debt needed to finance the operations of a company.
Market | Market | This variable is used to distinguish between the two markets, FTSE 100 and AIM. It takes the value 0 if the company analyzed is from FTSE 100 and 1 if it is from AIM.

**Hypotheses and Regression Models**

Using the general multivariate regression model described below, we develop our own model in order to test the impact of CGQ on firm performance.

\[ Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots + \beta_n X_n + \varepsilon \]

As such we develop this model for the three hypotheses we are testing, for both samples of listed companies:

**Model 1 in relation to H1:**

\[ \text{EPS} = \alpha + \beta_1 \text{CGQ} + \beta_2 \text{Asset} + \beta_3 \text{OCF} + \ldots + \beta_n \text{DAC} + \beta_5 \text{LEV} + \beta_6 \text{Market} + \varepsilon \]

Model 1 tests the hypothesis that:

*There is a contemporaneous relationship between CGQ and firm profitability when accounting for firm size and in the presence of DAC.*

**Null hypothesis 1:**

H10: There is no difference in the means of EPS for firms with strong or weak CGQ.

H1a: There is a difference in the means of EPS for firms with strong or weak CGQ.

**Model 2 in relation to H2:**

\[ \text{SP}_{it} = \alpha + \beta_1 \text{CGQ}_{it} + \beta_2 \text{Asset}_{it} + \beta_3 \text{OCF}_{it} + \ldots + \beta_4 \text{DAC}_{it} + \beta_5 \text{LEV}_{it} + \beta_6 \text{Market}_{it} + \varepsilon_{it} \]
Model 2 tests the second hypothesis which states that:
*There is a contemporaneous relationship between CGQ and firm value when accounting for firm size and in the presence of DAC.*

**Null hypothesis 2:**

H2o: There is no difference in the means of SP for firms with strong or weak CGQ.

H2a: There is a difference in the means of SP for firms with strong or weak CGQ.

**Model 3 in relation to H3:**

\[ \text{DY}_{it} = \alpha + \beta_1\text{CGQ}_{it} + \beta_2\text{Asset}_{it} + \beta_3\text{OCF}_{it} + \beta_4\text{DAC}_{it} + \beta_5\text{LEV}_{it} + \beta_6\text{Market}_{it} + \varepsilon_{it} \]

We use the above model to test the third hypothesis presumption that:
*There is a contemporaneous relationship between CGQ and stock returns when accounting for firm size and in the presence of DAC.*

**Null hypothesis 3:**

H3o: There is no difference in the means of dividend yield (DY) for firms with strong or weak CGQ.

H3a: There is a difference in the means of DY for firms with strong or weak CGQ.

**Limitations of the research**

As every other research this study has its own limitations, from which the following have been included:

- Limitation as to sample size and time;
- The research uses only publicly available data and no kind of qualitative analysis is performed, therefore the results are limited;
- The literature review may have omitted some studies that might be relevant in this context;
- Assumptions have been made in order to interpret the social reality in question;

**Findings and Conclusions**

The main objective of this research was to investigate the relationship between CGQ and firm performance, as described by firm profitability, firm value and stock returns by investigating a sample of 40 companies from both FTSE 100 and AIM companies in the presence of DAC. Therefore, three
hypotheses were tested using the OLS Pool Panel Regression model related to firm performance in UK companies.

With regard to hypothesis 1, contrary to expectation we discovered a negative relationship between CGQ and firm profitability (EPS) when accounting for firm size and DAC. Moreover, we found significant results to reject also the second and third hypotheses as well, according to which CGQ has a positive impact on firm value and stock returns. We expected a negative relation between CGQ and DAC as evidence of earnings manipulation through DAC in FTSE 100 and AIM. However, we found a positive relationship between CGQ and DAC suggesting managerial efficiency and not managerial opportunism.

The argument is strengthen by the negative correlation between CGQ and EPS suggesting that CGQ is mitigating managerial opportunism and by the negative relation between OCF and DAC suggesting that the managers from our sample population are engaged in managerial efficiency. Therefore we agree with the prior findings of McNichols and Wilson (1988), Dechow et al. (1995), Kasznik (1999) who argued that accruals models focus on firm performance and not on managerial discretion.

In relation with the literature review previously conducted we agree with Bauer et al. (2004) findings. However, they used Deminor’s CG ratings to account for CG standards and their proxies for firm performance, were net profit margin and return on equity. Nevertheless, their results are significant only for the Eurozone market. What is more, we reject the following researchers’ findings which were discussed in the relevant literature review: Gompers et al (2003), Bauer et al. (2008) and Hermes (2005).

It was also expected that when CGQ is high companies are likely to report higher OCF and hence engage in managerial opportunism. However, our findings present an inverse relation between CGQ and OCF, which translates into managerial efficiency and lowering the risk taken and business activity. To sum up, the sample consists of stable companies and efficient management, worth investing in.

In the context of leverage, we based our assumption that highly leveraged FTSE 100 companies are as likely to engage in earnings management as highly leveraged AIM firms. We found proof of high CGQ along the sample population which means lower leverage and consequently less risk taken. This relation is supported by the positive correlation between OCF and leverage showing that the companies did not borrowed excessively in order to finance their operations. Therefore, cheaper finance facilities were sourced in term of debt.

It seemed logical to assume at the beginning of this research that the higher the CGQ of a company, the higher its performance is and consequently the bigger the opportunity of managers to engage in creative accounting. Moreover, a positive relationship between CGQ and firm performance was also signaled by past researchers. During the last decade, more and more highly profitable companies were engaged in accounting practices (Enron, WorldCom) and used to report one more cent of earnings which added substantial valuation impact. However, our results show evidence that managers of the sample companies were highly efficient and therefore following the interests of their
shareholders. Consequently, there is no conflict of interests between the agents and the principals in the sample population as the Agency Theory asserts.

**Recommendations and policy contribution**

**Recommendations**

Corporate Governance quality, stock returns, firm value and firm profitability are important concepts within the accounting and finance field. The methods used in this study and the statistical techniques have all contributed to these results. Moreover, while some researchers agreed that CGQ has a positive impact on firm performance and can mitigate managerial opportunism, some have disagreed with these findings. In the end it all resumes to the nature, volume and quality of data collected. We believe, it is necessary that managers disclose their judgment decisions as it is believed that higher CGQ translates into higher transparency and consequently mitigates managers’ incentives to round up earnings. It is felt that managers are concerned about the value of stock and, thus, the share price due to their remuneration contract. They easily find themselves in the position of manipulating earnings as investors use EPS figures to value stocks.

It was noticed that during difficult financial times, such as the recent financial crisis in 2008, which coincided with the years analysed by us, incentives are low as investors know that companies are likely to overstate their earnings. Consequently, they do not rely on earnings announcements. This can be a good reason why our model shows no evidence of managerial opportunism. What is more, it seems managers of the companies analysed are efficient and provide a clear picture of accounting information.

We recommend researchers to engage in a larger sample than ours in order for the dataset to be representative. Perhaps no industries or companies from both FTSE 100 and AIM should be excluded. It will also be interesting to observe whether this relationship between CGQ and firm performance in the light of DAC weakens when the economy in the UK will be ‘back on its feet’.

**Policy contributions**

It is hoped and expected that the findings of this research will add significant value and additional information concerning CGQ, firm performance and earnings management to interested parties. The features used may help develop a high quality CG system and might help companies in developing an effective business model on which to base their strategy. Moreover, since our results suggest there is no conflict of interests between the principal(s) and the agent(s), we believe our proposed models will be a good measure in any company in enhancing corporate social behaviour. However, the models are constructed on UK sample firms CG system international samples may yield different results particularly form emerging countries perspective.
**Internal and external Audit**

Implications for internal and external auditing transpire on the basis of the findings. When CG Quality mitigates managerial opportunism, both audits could consider less stringent tests to be applied. Further, the external audit could rely on the work the internal audit and develop their work programme on the basis that substantive testing could be reduced. External auditors could rely on the authenticity of managerial representation since the Audit Committee quality would allow auditors accept managerial representations and replies.

In the event that CG Quality constrains managerial behaviour and high quality financial reports are published, external auditors could reduce audit costs thus presenting the firm in a better light to users of financial reports and other stakeholders.

**Further research**

Moreover, in the UK the monitoring process has been shifted from shareholders to institutional investors, highlighting the growing importance of institutional investors in dispersed ownership structures. Our results have shown that dispersed ownership in the UK can also reduce transaction costs and managerial opportunism. Thereby, policy makers are faced with the challenge of developing an effective CG framework in the UK and give regard to control mechanisms (e.g. take-over’s, managers’ remuneration, etc.). Consequently, other researchers may wish to consider the following questions:

1. What is the impact of CGQ on firm performance in the presence of an active-takeover market in the UK?
2. What is the impact of CGQ on firm performance in the presence of managers’ high remuneration packages in the UK?
3. What other CG mechanisms could constitute an effective tool in aligning the interest of managers with the one of shareholders and therefore contribute towards mitigating the agency problem?

To sum up, the association between CGQ and EM, as a mechanism of controlling managerial behaviour, should provide policy makers an impetus to strengthen Corporate Governance (CG) practice as a tool for greater transparency and minimal information asymmetry.
REFERENCES


