The Relationship Between Governance Structure and Audit Fees Pre-Cadbury: some empirical findings

Michael J. Peel* and Mark A. Clatworthy

In this paper we provide new evidence on the relationship between internal governance structures (board composition and ownership concentration) and audit fees of UK industrial quoted companies, before the recommendations of the Cadbury Committee were implemented. We also develop a new hypothesis derived from agency theory, in an attempt to explain the puzzling positive relationship between audit and non-audit fees. In common with post-Cadbury research, we find no significant evidence that board structure variables, including chairman/chief executive officer split and the proportion of non-executive directors on the board, impact significantly on external audit fees. Also, while prior research has shown that the aggregated level of institutional and managerial ownership are negatively associated with audit fees, we find that only one constituent of this variable, namely directors' ownership, has a significant impact.

Keywords: Audit fees; board composition; non-audit fees; ownership concentration

Introduction

Although an increasing amount of research has focused on the relationship between governance structure and the entrepreneurial activities and performance of the firm, relatively little empirical work has examined the impact of internal governance characteristics on external auditor pricing decisions (see e.g. Short, et al., 1999). The role of the external auditor, who is appointed by the shareholders, is crucial in terms of the effective governance of modern corporations. In this context, the Cadbury Report (1992, p.36) stated that “The annual audit is one of the cornerstones of corporate governance. Given the separation of ownership from management, the directors are required to report on the stewardship by means of the annual report and financial statements sent to the shareholders. The audit provides an external and objective check on the way in which the financial statements have been prepared and presented.”

In line with agency theory, Adams, et al. (1997) posited that the external audit costs (fees) of companies will be (at least partly) determined by the monitoring costs of the auditor, which in turn reflect the internal governance mechanisms and board structure of the auditee. Furthermore, O’Sullivan and Diacon (1994) hypothesised that stronger internal corporate governance will be inversely associated with audit risk and hence, ceteris paribus, with lower external audit fees. They noted (p.70) that “Auditors are uniquely placed to assess the quality of corporate governance since the auditor’s liability exposure suggests that its view of a company’s governance quality is reflected in the price charged for the audit.”

O’Sullivan (1999) provided empirical evidence relating to the impact of board composition and internal governance mechanisms on the audit fees of a sample of 146 large UK quoted firms. Data were collected for the financial year 1995, thus focusing on the post-Cadbury period. In this context, O’Sullivan...
noted (p. 254) that “even though the Committee on Financial Aspects of Corporate Governance published its final report in 1992, it takes a couple of years for companies to alter their internal governance characteristics.”

O’Sullivan found no evidence that board characteristics influenced audit fees, but he did conclude (p.262) that “the widespread compliance with the Cadbury recommendations is expected to reduce the variation in board composition and leadership and consequently reduce the power of the empirical tests. An interesting extension of our study may be to undertake an examination of the relationship between board composition and audit pricing utilising pre-Cadbury data.” In consequence, as well as including a wider range of board composition variables than has been used in previous studies, a prime aim of this paper is to provide new evidence on the relationship between audit fees and governance structure for a sample of UK quoted firms in the period preceding the implementation of the Cadbury recommendations. Comparisons with post-Cadbury research are conducted in order to assess any impact that the Cadbury recommendations had on the relationship between governance characteristics and audit fees.

In a related line of research, Chan et al. (1993) investigated the relationship between corporate ownership concentration levels and audit fees and reported that, in accord with agency theory, UK quoted firms characterised by higher ownership concentration were associated with significantly lower audit fees. However, Chan et al. did not examine the impact of board composition variables on audit fees. A further aim of this paper, therefore, is to examine simultaneously the impact of internal governance structures and ownership levels on external audit fees. In addition, we extend the research of Chan et al. (1993) by analysing the separate influences of both directors and external shareholders’ ownership levels on audit fees in our sample of UK quoted firms. Finally, we develop a new hypothesis derived from agency theory, in an attempt to explain the puzzling positive relationship, which has been found in empirical research, between audit and non-audit fees.

Model development

In this section we describe, and provide motivation for, the explanatory variables employed in our empirical model of audit fee determinants. In testing the impact of board structure and ownership characteristics, it is clearly important to control for other factors which influence audit pricing decisions. Following our discussion of the control variables, we focus on the experimental board and ownership variables included in this study.

Control variables

Following previous studies (e.g. Chan et al., 1993; Francis, 1984) a general multivariate Ordinary Least Squares (OLS) model of external audit fees (AFEE) was developed with a standard vector of explanatory variables controlling for firm size (sales) audit complexity, audit risk, non-audit services provided by the auditor, auditor size and auditor location. Definitions of the control variables, together with the experimental variables (below), are shown in Table 1. With reference to the extensive previous hypotheses development and empirical evidence contained in the extant literature (see e.g. Brinn et al, 1991; Yardley et al., 1992, for reviews), a positive relationship is expected between audit fees and the firm size and complexity variables (SIZE, SUBS, FORS). These variables proxy for audit scale/effort and audit complexity and represent sales, number of subsidiaries and the ratio of foreign to total subsidiaries respectively.

In addition, after controlling for other relevant factors, most previous empirical studies have detected a big six audit fee premium (e.g. Brinn et al., 1994; Chan et al., 1993), and hence a binary variable (BIG6) — categorising audit firms as big six (coded one) and non-big six (coded zero) — is included in the model. The big six premium is hypothesised (e.g. Brinn et al., 1994) to occur because, relative to their smaller counterparts, big six auditors offer higher quality audit services and therefore command higher fees. UK studies (ibid.), in respect of both the quoted and unquoted markets for audit services, have also found that firms located in London are charged an audit premium in consequence of higher staff costs in the capital. Following Chan et al. (1993), a variable (LOND) is included in the model, with unity denoting that a company is audited by an auditor whose office is located in London (and zero otherwise). Both auditor-based variables (BIG6, LOND) are therefore expected to be positively associated with audit fees.

Simunic (1980), in his seminal paper, noted that an important determinant of the level of audit fees (at least in a theoretical framework) is the extent to which the auditor is exposed to audit risk (i.e. loss exposure), with higher
audit risk being associated with higher audit fees. Chan et al. (1993, p.769), for example, found support for this hypothesis via interviews with the partners of large UK audit firms “with all the interviewees agreeing that audit risk was a significant factor in determining the extent of necessary audit work and in consequence the amount of fee charged.” Measures of auditee profitability and gearing have been hypothesised to be potential audit risk proxies (e.g. Brinn et al., 1994). Following the studies of Francis and Stokes (1986) and Collier and Gregory (1996), who reported a significant positive relationship between corporate gearing and audit fees, our model includes a measure of corporate gearing (GEAR), which is the ratio of liabilities to assets, to proxy for audit risk. We expect higher financial risk levels (GEAR), to be associated with higher audit risk and hence with higher audit fees.

Despite the threat to audit independence which the provision of non-audit services to companies by their external auditors poses (Beck et al., 1988), the Cadbury Report (1992) did not recommend that auditors should be prohibited from providing consultancy services. It did, however, consider propositions to the effect that “such a prohibition would remove any pressure on auditors to give way to management on audit matters in order not to jeopardise their own business services” (p. 36). Following the institution of the EC Eighth Company Law Directive (see DTI, 1991) – and more specifically, Article 24 which states that auditors must be independent – the UK government made it a statutory requirement that UK companies (other than small and medium sized ones) disclose in a note to their annual accounts (for years ending on 30 September 1992 and thereafter) the remuneration paid to their auditors for non-audit (consultancy) work. According to the Department of Trade and Industry in its 1991 press release, this requirement “is intended to buttress the independence of auditors.”

However, the hypothesised benefits flowing from the provision of non-audit services by the auditor are “knowledge spill-overs” (Simunic, 1984), where the increase in client knowledge associated with the joint provision of audit and non-audit services by the auditor may “spill-over” from one service to the other, leading to cost reductions which may result in lower audit fees – or, as noted by DeBerg et al. (1991, p.20), “the total costs of one firm jointly performing both non-auditing and auditing services are less than the sum of the costs where each service is performed by a different firm.” Despite the “knowledge spill-over” hypothesis suggesting that there should be a negative association between audit and consultancy fees, the vast majority

Table 1: Variable definitions and descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Correlation with AFEE</th>
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<tbody>
<tr>
<td>AFEE: Audit fees (£000)</td>
<td>393.4</td>
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</tr>
<tr>
<td>CFEE: Consultancy fees (£000)</td>
<td>192.6</td>
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<tr>
<td>SIZE: Sales (£m)</td>
<td>506.1</td>
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<td>SUBS: No. of subsidiaries</td>
<td>18.37</td>
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<tr>
<td>FORS: Ratio of foreign to total subsidiaries</td>
<td>0.306</td>
<td>0.366**</td>
</tr>
<tr>
<td>GEAR: (long-term debt + current liabilities)/total assets</td>
<td>0.572</td>
<td>0.014</td>
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<tr>
<td>BIG6: 1 = Big 6 auditor, 0 otherwise</td>
<td>0.780</td>
<td>0.187*</td>
</tr>
<tr>
<td>LOND: 1 = Audit office in London, 0 otherwise</td>
<td>0.546</td>
<td>0.211*</td>
</tr>
<tr>
<td>TOTSH: Proportion of shares held by directors and substantial shareholders</td>
<td>0.403</td>
<td>–0.409**</td>
</tr>
<tr>
<td>SUBSH: Proportion of shares held by substantial shareholders</td>
<td>0.268</td>
<td>–0.282**</td>
</tr>
<tr>
<td>DIRSH: Proportion of shares held by directors</td>
<td>0.135</td>
<td>–0.208*</td>
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<tr>
<td>EDWS: Ratio of non-executive (outside) directors to total directors</td>
<td>0.362</td>
<td>0.019</td>
</tr>
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<td>JCCEO: 1 = Chairman is also chief executive, 0 otherwise</td>
<td>0.182</td>
<td>0.157</td>
</tr>
<tr>
<td>CHNEX: 1 = Chairman is non-executive, 0 otherwise</td>
<td>0.265</td>
<td>–0.093</td>
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<tr>
<td>VCCO: 1 = Vice chairman is also chief executive, 0 otherwise</td>
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<tr>
<td>VCNEX: 1 = Vice chairman is non-executive, 0 otherwise</td>
<td>0.174</td>
<td>0.130</td>
</tr>
</tbody>
</table>

1 Indicates a binary variable, where the mean describes the proportion of the sample taking a value of 1.

**,* Indicates Pearson’s correlation coefficients are significant at the 1% and 5% statistical levels respectively (two-tailed tests).
of empirical studies which have examined this issue have reported a significant and positive relationship (see e.g. Simunic, 1984; Palmrose, 1986; Ezzamel et al., 1996). These findings have been described as “puzzling” (Turpen, 1995). In this context, Firth (1997, p. 525) who reported a significant positive relationship between audit and non-audit services for a sample of quoted Norwegian firms, concluded that “there appears to be no plausible reason for the positive association between audit fees and consultancy fees.”

It is arguable, however, that in an agency framework, audit and consultancy fees may display a positive relationship if there is “collusion” between auditors and managers with respect to how the total fees for consultancy and audit work are split for reporting purposes. Antle (1984), for example, derived a theoretical model where auditors and managers may collude to further their self-interests. In its extreme form, Antle’s model predicts “side-payments” between management and the auditor. In this respect, Antle noted (p.16) that “the concern over management advisory (consultancy) service contracts may have arisen, at least in part, from the fear that management could use these contracts, as a vehicle for side-payments.”

In Antle’s agency framework, it can be argued that a “milder” form of collusion (i.e. not involving side-payments), may also occur if it is in the joint interest of auditors and managers to include a portion of consultancy costs as audit costs. This may then result in an observed positive (rather than an expected negative) relationship between audit and consultancy fees. Such a scenario may occur where a company is likely to be criticised (e.g. by shareholders) for contracting “excessive” consultancy work, but where relatively higher statutory audit costs (fees) are less likely to invoke such a response. For example, it has been reported (The Accountant, 1991, p.3), that E.J. Hetherington, a senior partner heading Price Waterhouse’s management consultancy practice, stated that “investors and other users of the financial statements might interpret high (consultancy) fees to mean that a company is in difficulties. Shareholders may also protest against what they perceive to be excessive amounts paid for consulting work”. Furthermore, the UK Pensions and Investment Research Consultants (PIRC) recommended that “shareholders should vote against re-appointment (of auditors) if the non-audit fees exceed the audit fee, on grounds that the independence of the auditors may be affected” (KPMG, 1995, p.1). It was also reported (Kay, 1994 p.5) that the secretary general of the National Association of Pension Funds had stated that his association was monitoring the relationship between audit and consultancy fees of UK companies, because if “there is a small audit fee and a large non-audit fee, the auditor may be inhibited from performing the audit properly.”

Although the above discussion does not imply that “side payments” occur, it is possible to argue in Antle’s theoretical framework (particularly given the above statements), that audit fees may be inflated at the expense of consultancy fees. This could result in (or at least contribute to) the observed positive relationship found between audit and non-audit fees in previous studies. In this study, the value of consultancy services provided by the auditor (CFEE), as disclosed in a note to the accounts of each company was collected, together with the audit fee (disclosed as a separate figure in the accounts) charged by the auditor in the same year.

Corporate governance variables

As noted above, Chan et al. (1993) published the first study to include an examination of the relationship between the degree of ownership control in companies and the level of their audit fees. In line with agency theory, they argued (p.770) that diversity of company ownership should be associated with “a more extensive and higher quality audit over and above that necessary to fulfil the minimum statutory requirements.” After controlling for other relevant factors, they found that, for a sample of UK quoted firms, higher ownership control (as proxied by the sum of directors’ beneficial and non-beneficial shareholdings, plus disclosed external shareholdings, as a proportion of issued ordinary shares) was significantly and negatively associated with audit fees. They concluded (p.780) that this result was consistent with agency theory because “as ownership becomes more divorced from control, agency theory would predict more extensive, and therefore more costly, audit.”

However, a potential problem in interpreting the results of the Chan et al. (1993) study is that their ownership concentration variable included the sum of both directors’ and outside (substantial) shareholdings. Although it is well established that the level of directors’ ownership is an important factor in mitigating agency costs (Jensen and Meckling, 1976), the effectiveness of substantial (e.g. institutional) shareholders in monitoring directors (i.e. reducing agency costs and hence audit fees) has been questioned (Gaved, 1997; Short et al., 1999). For example, in a recent
study of UK institutional (pension-fund) shareholders, Faccio and Lasfer (2000) found no evidence that their assumed monitoring role led to increased compliance with the Cadbury Code of Best Practice, nor to improved corporate performance. Dedman (2000) also found no evidence that institutional investors played an active role in encouraging investee companies to adopt best practice vis-a-vis their board structure. Hence, although both higher inside (directors) and outside (substantial) shareholdings are hypothesised to have the same (negative) influence on audit fees, amalgamating them in one variable (as per the Chan et al. study), may mask their separate (independent) influences, and possibly lead to erroneous inferences being drawn. In this study, therefore, as well as employing the ownership variable (TOTSH) as defined in the Chan et al. study (directors’ beneficial and non-beneficial shareholdings, plus disclosed shareholdings in excess of five per cent, as a proportion of issued ordinary shares), we also experiment, in alternative model specifications, with the two constituent elements (variables): the proportion of shares held by substantial shareholders (SUBSH, defined as the proportion of issued ordinary shares held by substantial shareholders with shareholdings in excess of five per cent); and the proportion of shares held by directors (DIRSH, defined as the proportion of issued ordinary beneficial and non-beneficial shares held by directors).

As noted above, O’Sullivan (1999), concluded that the insignificant association between internal governance variables and audit fees may have been (at least partly) attributable to his sample being post-Cadbury, when variations in board structure were significantly reduced as companies sought to comply with the Code of Best Practice, which “serves to eliminate fee reductions that had previously been received by ‘better’ governed companies” (p.262). In consequence, this study focuses on a sample of UK quoted companies (see below), which reported prior to the implementation of the Cadbury Code and introduces a wider range of board composition variables than has been utilised in previous studies (see Table 1).

Drawing on contracting theory, Adams et al. (1997, p.74) hypothesised that internal governance costs should be negatively associated with audit fees, since the monitoring function provided by external auditors (i.e. the scope of audit and therefore audit costs) may be reduced where governance mechanisms (including non-executive directors), “provide a cost efficient substitute.” In this context, agency theory postulates that shareholders’ best interests are served by a separation of the roles of a company’s chief executive and chairman (see e.g. Pearce and Zahra, 1991; Cadbury Report, 1992). More specifically, Donaldson and Davies (1991, p.50) stated that “where the chief executive officer (CEO) is chair of the board of directors, the impartiality of the board is compromised. Agency and organisational economics theories predict that where the CEO holds the dual role of chair, then the interests of the owners will be sacrificed to a degree in favour of management, that is, there will be managerial opportunism and agency loss.”

Hence, in an agency framework, it can be argued that, ceteris paribus, shareholders may desire a higher quality, and/or a more extensive, audit (i.e. monitoring) if the company board is headed by a (“dominant”) chief executive who is also chairman – which may be (at least partly) reflected in a higher audit fee. However, it is acknowledged that CEO duality is not necessarily associated with “weak” governance/performance. For example, existing empirical evidence relating to the impact of CEO duality on corporate performance is inconclusive (Short et al., 1999), with recent US evidence suggesting that improved performance may actually result (Brockley et al., 1997).

In any event, auditors may perceive the risk of audit failure to be higher where the roles of chairman/chief executive are combined, since it can be argued that there is more scope for concealment or misstatement of relevant facts, and even fraud to be perpetrated (see e.g. Stiles and Taylor, 1993, for a review of the “Maxwell case”). This should result in a more extensive audit being conducted and hence a higher expected audit fee. In this study, a binary variable (JCCEO) is used to categorise firms into those characterised by chairman/chief executive (CEO) duality (coded one), and those not characterised by CEO duality (coded zero). For the reasons outlined above, this variable is expected to be positively related to audit fees. In line with these arguments, we also include three additional “leadership” variables which have not been employed in previous studies. The first, is whether or not the chairman is a non-executive director (CHNEX, with the variable coded one if the chairman was a non-executive director, and zero otherwise). Main and Johnston (1993, p.354) have commented that “a non-executive director as chairman of the board would seem to be one obvious remedy for the principal-agent problem of separation of ownership and control.” As discussed above, to the extent that non-executive chairmen are effective in reducing
agency costs, we would expect CHNEX to be negatively associated with audit fees.

The other two new variables (VCCEO, VCNEX), focus on vice chairman appointments – and mirror JCCCEO and CHNEX – with VCCEO coded one if the vice chairman is also the chief executive and zero otherwise; and with VCNEX coded one if the vice chairman is a non-executive director and zero otherwise. We expect these variables to exert the same hypothesised relationship with audit fees as JCCCEO and CHNEX, in that the nature of these vice chairman appointments may reflect the same “good/bad” governance features (and may in fact militate against, or act as substitutes for, the board appointments reflected in JCCCEO and CHNEX).

The final variable used in this study is the ratio (expressed as a percentage) of non-executive directors to total directors on the board (EDBS). Because agency theory (and the corporate governance literature) tends to assume that outside (non-executive) directors are independent and objective (Mizruchi, 1983), then, as noted by Peel and O’Donnell (1995, p.212), “any negative effects of CEO duality, as predicted by agency theory, may be mitigated where there is a strong outside presence on the board” (see e.g. Mangel and Singh, 1993; Pearce and Zahra 1991). In line with the substitution hypothesis of Adams et al. (op. cit.), to the extent that monitoring costs are reduced via the appointment of outside directors, we would expect a negative relationship between EDBS and audit fees.9

However, as has been expounded by O’Sullivan and Diacon (1994), Collier and Gregory (1996) and O’Sullivan (1999), non-executive directors may actually encourage more audit testing by transferring their monitoring function to the external auditor.10 In this context, O’Sullivan (1999, p.261) commented that non-executive directors “may encourage increased testing by auditors so as to minimise the likelihood of future financial problems for the firm and avoid subsequent criticism being directed at them.” This argument, in contrast to the “substitutability” one, would imply a positive relationship between EDBS and audit fees (or a neutral one if the countervailing influences cancel out). As with previous research (see e.g. Chan et al., 1993; O’Sullivan, 1999), studies such as the current one cannot differentiate (isolate) the impact of competing hypotheses. The paper does, however, provide pre-Cadbury evidence on the overall (average) impact of governance variables on audit fees for comparison with the extant post-Cadbury evidence.

Sample and data

The sample of firms used in this study was previously employed in a published pre-Cadbury study which focused on the impact of board composition and non-audit (consultancy) fees on corporate performance (Peel and O’Donnell, 1995). The FAME (Financial Analysis Made Easy) database (produced by Jordans UK), provided an initial sample frame of 854 UK listed (first market) industrial companies. From these, 259 were identified as having year ends11 between 30 September and 31 December 1992. These companies were initially selected since (at the time the original data were collected) they were the first companies required to disclose consultancy fees under the statutory requirements discussed above.

A letter was sent to the company secretary of each of the 259 companies requesting a copy of the company’s 1992 annual report and accounts and a total of 132 firms (51 per cent) responded. All the data used in this study were collected from the annual reports and accounts of this sample (see Table 1). The period covered by the study ensures that the governance variables are not “biased” by the “pressure” on companies to change board composition in consequence of the Cadbury Code.12 That is, all the data used in this study were collected from company account year ends falling in 1992. After the implementation13 of the Cadbury code on 30 June 1993, it could be argued that companies were under “pressure” to appoint outside directors and split chairman/chief executive appointments. For example, O’Sullivan (op. cit., p.261) in his post-Cadbury study, concluded that “our results may indicate that the widespread adoption of minimum governance characteristics recommended by Cadbury (1992) serves to eliminate fee reductions that had previously been received by ‘better’ governed companies.” The current sample frame therefore permits an examination of governance variables on audit fees pre-Cadbury, for comparison with post-Cadbury research.

Empirical results

Table 1 reports summary statistics for the control and experimental variables, together with correlation coefficients between them and audit fees (AFEE). On average, companies in our sample paid their auditors £393,000 and £193,000 for audit and non-audit services respectively, with 78 per cent being audited by a big six (now big five) auditor. The mean proportion (40.3 per cent) of shares
models exhibited significant evidence of heteroskedasticity or multicollinearity amongst the explanatory variables.\footnote{5}

Model 1 in Table 2, is a specification which contains the control variables, together with the ownership variable (TOTSH) employed in the Chan et al. (1993) study. It shows that all the variables exhibit their hypothesised signs and are all statistically significant (at $p < 0.05$). More specifically, larger (lnSIZE), more complex (SUBS, FORS), and highly geared (GEAR) firms are associated with higher audit fees.

Consistent with previous research (e.g. Chan et al., 1993), model 1 shows that big six auditors and auditors located in London (LOND) were charging audit premiums (both variables being significant at the one per cent level). Also in accord with post-Cadbury UK research (Ezzamel et al., 1996; O’Sullivan, 1999), model 1 reveals that, after controlling for other relevant factors, higher consultancy fees (CFEE) are associated with significantly higher audit fees. As discussed above, this relationship has been described as “puzzling”, particularly as the provision of consultancy services by the auditor presents a clear threat to audit independence (Beck et al., 1988), which appears unmitigated by “knowledge spillovers” reflected in lower audit fees. As argued above (and based on Antle’s theoretical model), it is possible that the observed positive relationships between audit fees and consultancy fees reported in this and other studies, results (at least partly) from the inflated reporting of audit fees (relative to consultancy fees). As discussed by Firth (1997), it is difficult to formulate alternative explanations for the consistent (and unexpected) finding that companies which pay their auditors more for consultancy services are also charged higher audit fees.\footnote{17}

Finally we would note that, consistent with Chan et al. (1993), higher ownership levels (TOTSH) are associated with significantly lower audit fees (at $p = 0.03$). This result is consistent with the observation of Chan et al. (1993), that higher ownership concentration (directors’ plus outside share ownership) should reduce agency costs and hence audit fees. Model 2 in Table 2 includes the refined share ownership variables, which test for the incremental impact of directors’ (DIRSH) and substantial (SUBSH) shareholdings on audit fees. It shows that all the control variables remain statistically significant, and that both DIRSH and SUBSH exhibit their expected negative coefficients. However, only DIRSH is statistically significant ($p = 0.01$), with SUBSH exhibiting a statistically insignificant coefficient ($p = 0.21$). These results suggest, there-
fore, that although high directors' ownership levels appear to mitigate agency costs (by re-aligning the interests of directors and owners) higher outside (substantial) ownership levels are not associated significantly with lower audit fees emanating from reduced audit monitoring. This finding is consistent with the findings of related research (Gaved, 1997; Short et al., 1999; Faccio and Lasfer, 2000) which has questioned the monitoring efficiency of outside shareholders.

Models 3 and 4 replicate models 1 and 2 respectively, but also include the board composition variables to examine their incremental impact on audit fees. In both models 3 and 4 we note that all the control variables exhibit similar coefficients and significance levels to those in models 1 and 2, but that

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model 1 (Coeff.) †</th>
<th>Model 2 (Coeff.) †</th>
<th>Model 3 (Coeff.) †</th>
<th>Model 4 (Coeff.) †</th>
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<td>CFEE</td>
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<tr>
<td>CONSTANT</td>
<td>-1.16**</td>
<td>-1.12**</td>
<td>-1.19**</td>
<td>-1.15**</td>
</tr>
<tr>
<td></td>
<td>(3.39)</td>
<td>(3.27)</td>
<td>(3.25)</td>
<td>(3.11)</td>
</tr>
</tbody>
</table>

R² = 0.909
R² Adj = 0.904
F = 154.6**

† Estimated coefficients are unbracketed, with associated t-values shown in parentheses.
**,* Indicates t-values of coefficients (shown in parentheses) are significant at the 1% and 5% statistical levels respectively (two-tailed tests).
1 Full definitions of variables are given in Table 1.
none of the board composition variables have coefficients which approach statistical significance – with the highest t-value being only 0.56 (p = 0.58) for VCCEO. More specifically, companies characterised by CEO duality (JCCEO) are, contrary to prior expectations, associated with lower audit fees; whereas those with higher outside board membership (EDBS) are associated with higher audit fees. The signs on these variables are the same as those reported in the post-Cadbury study of UK quoted firms (O’Sullivan, 1999), but as with the current study, both variables were statistically insignificant. Hence, the current pre-Cadbury results (in relation to JCCEO and EDBS) are consistent with post-Cadbury findings, suggesting that any "cosmetic" or "window dressing" governance changes made in response to the Cadbury Report, were not biasing post-Cadbury findings.

In common with O’Sullivan’s (1999) conclusion, however, it is possible that EDBS is insignificantly related to audit fees, because the countervailing influences associated with increased outside board membership (i.e. outside directors may demand more audit monitoring and/or they may act as a substitute for auditor monitoring) result in an overall minor impact on audit fees. Consistent with the preceding analysis, models 3 and 4 show that none of the remaining board composition variables (CHNEX, VCCEO, VCNEX) exert a statistically significant influence on audit fees – indeed all exhibit coefficients (in terms of signs) contrary to those hypothesised. Hence, in common with O’Sullivan’s (1999) post-Cadbury findings, there is no evidence that, on average, auditor pricing decisions were significantly influenced by board governance structures. Of course, regression equations can only reflect the average effect of variables across the sample. It may be, for example, that some auditors do give cognisance to the “quality” and/or “independence” of board directors/leaders in their audit pricing decisions, which are not adequately captured in the extant research. What is clear, however, is that there is no systematic evidence that auditors (both pre- and post-Cadbury) recognise board governance characteristics in pricing their audit.

Conclusions

Despite the growing literature on the market for audit services, the monitoring role of auditors, and its interaction with corporate governance and audit fees, has received relatively little attention. The primary aim of this paper was to present the results of a pre-Cadbury study of the impact of board composition variables on audit pricing. Consistent with existing research, the control variables all exhibited their expected impact on audit fees, with higher audit fees being associated with larger and more complex auditees, characterised by higher risk (gearing), and which were audited by larger (big six) auditors.

Also consistent with post-Cadbury research, the empirical results suggested that higher consultancy fees (paid to the auditor) were associated with higher audit fees. This persistent finding across different countries and time periods continues to perplex researchers, in that the rationale for permitting auditors to provide consultancy services to companies (which presents a clear threat to auditor independence), is that the auditee may benefit from a reduced audit fee in consequence of “knowledge spill-over” effects. Based on Antle’s (1984) agency model, an alternative hypothesis was put forward which may at least partly explain the “puzzling” positive relationship between audit and consultancy fees, in that audit fees may be inflated at the expense of consultancy fees (particularly for those costs which fall in the “grey area” between audit and consultancy costs), which may be in the joint interests of both auditors and directors in the circumstances outlined in the paper.

New empirical evidence was also presented in relation to the impact of ownership levels on audit fees. A refinement of an ownership variable used in a previous UK study (Chan et al., 1993) was presented, in which both directors’ and outside (substantial) shareholders’ ownership concentration levels were modelled. The results suggested that higher directors’ shareholdings (reducing agency costs) were associated with significantly lower audit fees, but that the level of outside share ownership levels, although exhibiting a negative relationship with audit fees, was statistically insignificant – suggesting, in common with previous related research, that substantial outside shareholders may be largely ineffective in reducing agency costs (and hence audit fees) via their monitoring of directors.

The key finding of this study, however, was that consistent with a post-Cadbury study of UK quoted firms (O’Sullivan, 1999), a range of board composition variables were insignificantly related to audit fees. There is no evidence, therefore, that the “pressure” to improve internal corporate governance in relation to board composition in the post-Cadbury period (which may have resulted in
cosmetic changes) resulted in any systematic bias in the O'Sullivan (1999) study. Rather, it appears that, on average, auditors are not influenced significantly in audit pricing decisions by internal governance characteristics in the form of board composition/leadership.

Of course, this conclusion is tempered to the extent that extant studies (including the current one) report only the average impact of variables (via multivariate regression analysis), and cannot differentiate between competing hypotheses. In specific instances, it may be that auditors’ pricing decisions are influenced by the auditor’s view of (or at least the reputation of) board leaders and/or their assessment of how independent particular outside directors are. Such a conclusion would not necessarily be inconsistent with the findings of this study, nor the post-Cadbury research of O’Sullivan (1999), but it would require the collection of more refined/sophisticated governance variables, perhaps using alternative research methods, such as case studies.

**Acknowledgement**

We are grateful for the helpful comments provided by two anonymous referees on previous drafts of this paper.

**Notes**

1. Return on capital employed (as a measure of auditee profitability) has also been employed in previous studies (e.g., Chan et al., 1993) to proxy for audit risk. This variable was also collected for the current study. However, in common with the findings of Firth (1997), it was found to be insignificantly related to audit fees in any of the models reported in Table 2.

2. Certainly, it is relatively easy to simulate, via regression analysis, how a negative relationship between audit and consultancy fees can be changed to a positive one by increasing audit fees by the amount by which consultancy fees are reduced.

3. Previous studies (Ezzamel et al., 1996; O’Sullivan, 1999) have also used a dummy variable to indicate whether a company is in a regulated industry (electricity, water and telecommunications) because the level of non-audit to audit fees appears particularly high in this subsample. However, the sample of companies in the current study contains no firms in the regulated sector. This is not surprising given the companies in this sample have year ends in the period September to December, whereas most utilities have March year ends.

4. This may at least partly explain why, in the Norwegian study of quoted companies by Firth (1997), an ownership variable (similar to the one employed in the Chan et al., 1993 study) had an (unexpected) positive and insignificant impact on audit fees.

5. These variables included chairman/chief executive duality, the proportion of non-executives on the board, the average tenure of each non-executive director and whether or not an executive director was a member of the audit committee. In a pre-Cadbury study of the impact of audit committees on the audit fees of UK quoted companies, Collier and Gregory (1996, p.195) concluded that “the results show that the audit committee is effective in its role of overseeing the external audit and ensuring that the scope of the audit is adequate but there is no conclusive evidence to suggest that it is effective in engendering a stronger internal control environment that is reflected in reduced audit fees.” The current study does not include an audit committee variable, since this would have had to be obtained by a questionnaire survey instrument (see Collier and Gregory, 1996).

6. The empirical results reported by Adams et al. (1997), which were derived from a sample of New Zealand life assurance companies over the period 1988-93, did not, however, support this hypothesis – in that there was no statistically significant relationship between internal governance costs (proxied by expenditure on non-executive directors’ fees, actuarial and internal auditors’ costs) and audit fees. However, in a further study of UK insurance companies, O’Sullivan and Diaccon (1994) reported that audit fees were (unexpectedly) significantly positively related to separate chairman and chief executive appointments, but significantly negatively associated with the proportion of non-executives on boards.

7. Although the CEO duality variable has been used in previous audit fee studies and although shareholders in the AGM are ultimately responsible for appointing and removing auditors – as noted by a referee to this paper, in practice, it is probable that any increased audit effort results from auditors’ perceptions of increased agency costs, rather than via shareholders formally demanding increased audit effort.

8. More specifically, Stiles and Taylor (1993, p.45), in discussing UK business scandals (particularly the “Maxwell case”), and ways to prevent fraudulent transactions, noted that “The Cadbury Committee was set up a year ago after a spate of scandals, including Maxwell. The one overarching lesson to be learned from the case is that a company dominated by one man can circumvent almost all controls if he has the will and is intelligent enough.” They recommended (as did the Cadbury Committee), that the roles of chairman and CEO should therefore be separated.

9. Additional motivation for using the variables JCCEO and EDIBS in this study stems from the studies of Argenti (1976) and Slatter (1984). Both studies noted that a key determinant of corporate collapse (and hence higher audit risk) was
10. We are grateful to an anonymous referee for drawing these issues to our attention.

11. A priori, there is no obvious reason why the selected account year ends should bias the reported results. For example, a study of UK listed companies (Chan et al., 1993) reported that a binary variable (representing account year ends between 1 December and 31 March, to control for “busy season” effects) was insignificantly related to audit fee variations.

12. As noted by an anonymous referee, the pre-Cadbury incidence of CEO duality reported in this paper (18.2 per cent) appears relatively low. For example, Main and Johnston (1993) reported that 25 per cent of their sample of large UK listed companies were characterised by CEO duality in 1991. In addition, based on questionnaire research, Collier (1993) reported an even higher proportion (36 per cent) for a sample of 142 large UK listed firms for the same year (1991). Although there is inconsistency in the findings of previous studies, it is possible that the sample in the current study is biased against this characteristic. We would, however, note that all the findings in relation to our control variables (Table 2) are consistent with previous research.

13. The Cadbury Committee Code of Best Practice was published in December 1992. It then became a requirement in the London Stock Exchange that companies with accounting periods ending after 30 June 1993 (i.e. July 1993) had to disclose whether they had complied with the Code. Although it is possible some firms in the current sample changed their governance systems prior to this requirement, this appears unlikely since as noted by O’Sullivan (1999, p.236), “It takes a couple of years for companies to alter their internal governance characteristics.”

14. Although the sampling criteria differ, these comparative results are consistent with the view that UK quoted companies have increased outside board participation and reduced CEO duality post-Cadbury. However, as discussed in note 12 to this paper, it is possible that CEO duality is understated in the current sample.

15. Function specification tests, using the Ramsey Reset procedure (see Pesaran and Pesaran, 1997) indicated that all the regression equations reported in Table 2 were specified appropriately, in that all the Ramsey Reset tests were statistically insignificant (with p > 0.86).

16. In common with previous audit fee studies, Breusch and Pagan (1979) heteroscedasticity tests were conducted on all the model residuals reported in this paper. These tests revealed no significant evidence (at p < 0.10) of heteroscedasticity. To test for potential multicollinearity, variance inflation factors (VIFs) were calculated for the variables in each model (see e.g. Neter et al., 1989). As noted by Firth (1997, p. 520), “only VIFs in excess of 10 are deemed evidence of significant multicollinearity.” The highest VIF for any of the variables reported in Table 2 was only 2.6 (for lnSIZE), suggesting that multicollinearity is not a significant problem.

17. However, as noted by a referee to this paper, it is possible that higher audit and non-audit fees may arise as a result of “poor” management at the firm level.

18. It is possible that a dominant chairman/CEO may be able to exert more pressure on an auditor to reduce costs. We are grateful to an anonymous referee for this point.

19. As noted by a referee to this paper, this scenario is less likely if the audit and consultancy arms of audit firms are competing profit centres and act independently.

References


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