

Does audit committee effectiveness impact auditor assessed audit risk?

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ABSTRACT:

Following the recent introduction of corporate governance regulations, audit committees are expected to play a key role in improving financial statement integrity and as a consequence reduce audit risk. However, audit committees may report compliance with regulatory requirements, yet only serve a ritualistic role (Cohen, Krishnamoorthy and Wright, 2008b). Using survey data we compile a list of characteristics used by external auditors as indicators of *actual* audit committee effectiveness (auditor chosen list). We empirically examine the association between audit committee effectiveness and auditor assessed audit risk, where audit committee effectiveness is measured in two ways: regulatory requirements and the auditor chosen list. We hypothesise that audit committee effectiveness will only reduce auditor assessed audit risk when the auditor chosen list is used. Results support this expectation. Our research contributes to the extant literature by identifying the characteristics of audit committee effectiveness used by auditors and demonstrating a link between audit committee effectiveness and auditor assessed audit risk.

Keywords: Audit committees, audit risk, corporate governance

JEL Classification Code: M42

I. INTRODUCTION

Regulators have substantially expanded the oversight role of the audit committee; the objective being improved financial statement integrity (for example, Blue Ribbon Committee (BRC), 1999). The audit committee should enhance the audit function as it is a formal link between the board and the external and internal auditors (Munro and Buckby, 2008). Thus, assessed audit risk is expected to be influenced by an auditor's perceptions regarding the ability of an audit committee to effectively discharge its monitoring role. Despite the high monitoring expectations on audit committees, our understanding of the characteristics that make them effective in the eyes of their external auditors is incomplete.

While research has documented a positive relation between audit committee independence, number of meetings and financial expertise with various measures of financial statement quality (Cohen Krishnamoorthy and Wright, 2002), contradictory results continue to be reported. For example, Klein (2002) found no difference in abnormal accruals between companies with wholly and partially independent audit committees. In contrast, aggressive earnings management was reduced (Bédard, Chtoutou and Courteau, 2004) only when the audit committee was wholly rather than partially independent.

Despite the inconclusive empirical results, many countries have introduced audit committee regulations based on these externally observable proxies (Sarbanes-Oxley Act (SOX), Australian Securities Exchange (ASX) Corporate Governance Principles and Recommendations, The Combined Code on Corporate Governance (U.K.)). While legislation for compliance with good governance is important, it is not sufficient to ensure effectiveness (Martinov-Bennie, 2007) with governance often having more form than substance (Cohen, Krishnamoorthy and Wright, 2008a). High profile corporate collapses¹ in many countries,

have demonstrated that compliance with regulatory requirements does not necessarily ensure audit committee effectiveness. More recently, qualitative research has indicated additional characteristics that may be appropriate proxies for audit committee effectiveness (Gendron and Bedard, 2006; Turley and Zaman, 2007).

The purpose of this study is to investigate how audit committee effectiveness is perceived and evaluated by external auditors. Due to their close association, external auditors are in an ideal position to judge the actual effectiveness of their clients' audit committees. This information is expected to influence their assessment of audit risk. Surveyed audit partners and managers from each first-tier and six mid-tier firms were asked to identify audit committee characteristics they believe best indicate audit committee effectiveness from a list compiled from prior literature and interviews with first-tier audit partners. Their responses recognise that audit committee effectiveness is indicated by many non-mandated characteristics.

Various corporate governance factors (Cohen et al., 2008a) including the existence of an audit committee (Stewart and Munro, 2007) have been linked to auditor assessed audit risk. However, there is limited empirical evidence establishing this link (Cohen et al., 2008a). This paper explores the relation between audit committee effectiveness and audit risk, where audit committee effectiveness is measured in two ways: using audit committee characteristics commonly required by regulations (the regulated list) and secondly, using the list of characteristics that the auditors rated most highly (auditor chosen list). As most companies comply with the regulated list of characteristics, it is expected that assessed audit risk will only be impacted when the auditor chosen list is used. Results support this expectation providing evidence on the link between audit committee effectiveness and audit risk.

The remainder of this paper is organised as follows. The next section reviews prior literature, develops our research question and hypotheses. The research design, results and sensitivity analysis are discussed in sections III, IV and V respectively. This is followed by a discussion of the results in section VI and the conclusion and limitations are presented in section VII.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

The audit committee is an important monitor of a company's financial reporting system (BRC, 1999). Internationally, there is evidence of a significant rise in the use of audit committees and in harmonisation of their role and responsibilities (Turley and Zaman, 2007).

Not all audit committees are effective (Kalbers and Fogarty, 1993). An effective audit committee is independent of management, ensures the integrity of financial reporting, appoints independent external auditors, monitors the audit process and oversees the risk management process².

When assessing effectiveness, research has predominately concentrated on identifying externally observable characteristics of audit committees that may be linked to improved financial reporting integrity such as reduced abnormal accruals (Klein, 2002), reduced earnings management (Bédard et al., 2004), fewer earnings restatements (Abbott and Parker, 2000), less fraud (Beasley, 1996), the appointment of higher quality auditors (Chen, Moroney and Houghton, 2005) and stronger relations with internal auditors (Scarborough, Rama and Raghunandan, 1998). Many of these audit committee characteristics, including director independence, directors' financial expertise and the number of meetings have been incorporated into various international regulations.

Audit committees where the majority of directors are independent have been associated with reduced earnings management (Davidson, Goodwin-Stewart and Kent, 2005; Vafeas, 2005; Xie, Davidson and DaDalt, 2001), are more likely to appoint a higher quality audit firm (Chen et al., 2005; Lee, Mande and Ortman, 2004) and to monitor the internal audit function. Other factors may influence the independence of the audit committees such as: the attitude of the audit committee members, their willingness to confront management (Krishnamoorthy, Wright and Cohen, 2002), their access to objective information (Gendron and Bédard, 2006) and audit committee tenure. We report the independence characteristics that external auditors believe are most indicative of audit committee effectiveness.

Despite the use of various definitions of “financial expert”, audit committee members with financial expertise have been found to be effective in constraining earnings management (Bédard, Chtourou and Courteau, 2004; Carcello Neal, Palmrose and Scholz, 2006a; Carcello, Hollingsworth, Klein and Neal, 2006b; Xie et al., 2003), reducing fraud and restatements (Abbot, Parker, and Peters, 2004), lowering auditor resignation (Lee et al., 2004) and have greater interaction with internal auditors (Raghunandan Read and Rama, 2001). Other studies have found no relation between the audit committee financial expertise and earnings restatements (Lin, Li and Yang, 2006), fraud (Persons, 2005) or the appointment of an industry specialist audit firm (Chen et al., 2005).

Current research reports that audit committee accounting expertise rather than financial expertise is associated with improved accruals quality (Carcello et al., 2006b; Dhaliwal et al., 2006) and fewer restatements (Carcello et al., 2006b). DeFond, Hamm and Xu (2005) report a positive market reaction to the appointment of an accounting expert to the audit committee, but no reaction to the appointment of a financial expert. We report the expertise

characteristics that external auditors believe are most indicative of audit committee effectiveness.

To perform effectively, an audit committee must be diligent. Diligence has been operationalized as the number of audit committee meetings, with an higher number of meetings decreasing the likelihood of financial statement fraud and non fraudulent misstatements (Abbott and Parker, 2000; Abbott et al., 2004), restatements (Abbott et al., 2004), earnings management (Vafeas, 2005; Xie et al., 2003) and increasing the likelihood of the company appointing an industry specialist audit firm (Abbott and Parker, 2000). As the frequency of meetings is a crude measure of diligence (Menon and Williams, 1994), we report the diligence characteristics that external auditors believe are most indicative of audit committee effectiveness.

Contradictory results in the research and recent collapses of companies with audit committees compliant with regulations (Gendron and Bédard, 2006) and fraud cases³ (Martinov-Bennie, 2008) suggest that the currently established, observable characteristics provide an incomplete picture of audit committee effectiveness. Compliance with regulations may be apparent rather than substantive (Cohen et al., 2002; Cordery, 2007). Recent qualitative research has concentrated on internal processes from the perspective of participants or those who interact with the committee (Cohen et al., 2008a, 2008b, 2007; Gendron and Bédard, 2006; Turley and Zaman, 2007). As small sample sizes limit the generalizability of the findings reported in these studies, we contribute to the literature by conducting a survey allowing for a larger sample size. To determine which characteristics audit partners and managers believe are associated with effectiveness our research question asks:

RQ1 What characteristics do external auditors utilize to assess actual audit committee effectiveness?

Audit risk assessment is an important component of the client acceptance decision, audit planning and the conduct of the audit (Cohen et al., 2002, Cohen and Hanno, 2000). A number of factors influence audit risk assessment; one is corporate governance (Cohen and Hanno, 2000). Strong corporate governance can reduce the external auditor's perceptions of business and audit risk (Cohen et al., 2004; DeZoort and Salterio, 2001).

There is limited research on the consequence of audit committee effectiveness on the audit risk assessment. Interviews with external auditors reveal that their discussions with the audit committee impact their audit risk assessment (Cohen et al., 2008a). In an experimental setting, existence of an audit committee led to a reduction in the perceived level of audit risk, with a further decline associated with increased frequency of meetings and the external audit partner's attendance at those meetings (Stewart and Munro, 2007). The generalizability of this latter research is limited by the small number of audit committee variables that were manipulated in the study.

We explore the association between audit committee effectiveness and audit risk, where audit risk is designated by participating auditors based upon actual client engagements. Audit committee effectiveness is measured in two ways: using the regulated list of common audit committee requirements and then the auditor chosen list. The regulated list comprises the traditional audit committee characteristics reported in research and appearing in regulations around the world (SOX, ASX, The Combined Code on Corporate Governance (U.K.)): frequency of meetings, a majority of independent directors, non executive directors, a

financial expert and a size of at least three members. The auditor chosen list is derived the list of characteristics rated most highly by the auditor partners and managers surveyed.

As the top 300 listed Australian companies must disclose and explain non compliance with regulated characteristics of audit committees, there is an incentive to adopt those characteristics. As such, adoption of the regulated characteristics is not expected to vary significantly across high and low risk companies. Thus the first (null) hypothesis predicts that:

H1 There is no relation between the regulated list of characteristics of audit committee effectiveness and auditor assessed audit risk.

Auditors make more favourable risk judgements when corporate governance is good (Sharma Boo and Sharma, 2008). Their interaction with their clients provides the opportunity to recommend improvements to audit committee structure. It is anticipated that the characteristics identified by audit partners and managers as being the best indicators of audit committee effectiveness will be associated with their assessed audit risk. Thus, we expect that companies with audit committees that have more of the characteristics most commonly associated with effectiveness as determined by the surveyed auditors, will be assessed as lower risk by those auditors.

H2 There is a negative relation between the auditor chosen list of characteristics of audit committee effectiveness and auditor assessed audit risk.

III. RESEARCH DESIGN

Model

To test the association between audit committee effectiveness and audit risk a cross sectional logit model was developed. The model was developed using control variables appearing in agency theory research.

$$\text{AUDRISK} = \alpha_0 + \beta_1\text{ACE} + \beta_2\text{SIZE} + \beta_3\text{LEV} + \beta_4\text{DUAL} + \beta_5\text{DIRSH} + \beta_6\text{BLOCKSH} + \varepsilon$$

AUDRISK, is auditor assessed audit risk; 1 if high risk, 0 otherwise. ACE is the variable of interest, measuring the proportion of characteristics that a client has in common with either the regulated list (ACEREG) or the auditor chosen list (ACEAUD). ACEREG is used to test Hypothesis 1 and ACEAUD is used to test Hypothesis 2. The ACE variable ranges between zero and 1.

SIZE⁴ is the natural log of sales. LEV is the natural log of the debt to equity ratio. DUAL is coded 1 if the chairman of board is the CEO, 0 otherwise. DIRSH relates to director share ownership and is a coded 1 if directors hold $\geq 5\%$ of outstanding shares, 0 otherwise. BLOCKSH a dummy variable coded 1 if there is a significant ($\geq 5\%$) outside shareholder who is not affiliated with the board, 0 otherwise. Appendix 2 provides a more detailed explanation on all variables.

Survey Instrument

An online survey instrument was developed incorporating audit committee characteristics identified from prior literature, regulation and interviews with first-tier audit partners. The first section of the survey dealt with the external auditors' perception of the usefulness of various audit committee characteristics as indicators of an effective audit committee. In the second section, auditors were asked to think of two clients, one high risk and the other low

risk. For each of those clients the auditor was asked to indicate the characteristics of each client's audit committee and to provide information on the company size, leverage and various corporate governance factors. The final section requested demographic details pertaining to the respondent.

Participants

After pilot testing the survey on audit partners from each first-tier firm (five in total) and an ex-auditor, the survey link was sent to a partner at each first-tier and six mid-tier firms⁵. The contact partner forwarded the link to audit partners and managers within their firms.

Table 1 contains a breakdown of the participants. Of the 129 participants, 67 (52%) were partners (or the equivalent) with an average of 20 years experience. The remaining 62 (48%) participants were managers with an average of 8.5 years experience. All participants provided usable data in the creation of the auditor chosen list of audit committee characteristics. There was less usable data available for testing the hypotheses. Of the 70 responses from first-tier auditors approximately 30% stated that they had no high risk clients, while a similar proportion of mid-tier auditors claimed to have no high risk clients with an audit committee (and did not provide other usable data for those clients). The remaining missing data were due to incomplete information being provided. In summary, of the 129 participants, 57 (44%) provided usable data for a high risk client and 87 (67%) provided usable data for a low risk client.

[Insert Table 1 here]

IV. THE RESULTS

Research Question 1: Auditor Chosen List

Our research question asked which characteristics external auditors use to assess actual audit committee effectiveness. Based on prior research and interviews with external auditors, a comprehensive list of twenty-five audit committee characteristics linked to effectiveness was compiled (refer Appendix 1). From that list, participating auditors were asked to select the five characteristics they believed were the best indicators of audit committee effectiveness. The consensus view of external auditors is provided by reporting the frequency of selection of each characteristic in the top five characteristics (refer Table 2). Based upon the prior literature, characteristics were categorised as relating predominately to audit committee independence, expertise or diligence.

[Insert Table 2 here]

The characteristics that the auditors selected most often as being in their top 5 (the auditor chosen list)⁶ were: audit committee members ask challenging questions of management (55%), audit committee meetings allow sufficient time for discussion on issues raised (37%), audit committee members commit an appropriate amount of time to audit committee tasks (30%), the audit committee receives a copy of internal audit reports and management's responses (30%) and audit committee members receive high quality agenda material before each audit committee meeting (30%). While the most frequently selected variable is an independence variable, diligence appears to be the most valued attribute of an effective audit committee. These characteristics were combined to create the composite ACEAUD variable used in testing hypothesis 2.

Consistent with the views expressed by audit committee members (Gendron et al, 2004), and U.S. auditors (Cohen et al, 200), Australian external auditors perceive that the audit committee members' willingness to ask challenging questions is a valuable characteristic indicating an effective audit committee. However, the maintenance of a whistleblowing process (SOX requirement), the tenure of audit committee members and the audit committee review of non-audit services (SOX requirement) were ranked as relatively unimportant characteristics in indicating actual audit committee effectiveness.

Expertise characteristics were rated as less important by external auditors in their assessment of audit committee effectiveness. However, in accord with recent research, the inclusion of an accounting expert (27%) on the audit committee was considered a better indicator of an effective audit committee than the inclusion of a financial expert (23%).

Diligence characteristics rated highly in our survey. Clearly external auditors value the time and effort that an effective audit committee puts into their role. Not surprising, considering the monitoring role undertaken by internal auditors, the audit committees review of the internal audit reports and management's response was perceived as an important characteristic indicating actual audit committee effectiveness. This review was considered more important than the internal auditor's attendance at audit committee meetings. Many of the diligence attributes can only be observed by those with access to the audit committee and are currently not required to be disclosed in financial statements. As such, when relying on publicly available information to measure effectiveness, significant and important characteristics capturing diligence are omitted from the analysis.

Hypotheses

Both hypotheses investigate the link between audit committee characteristics and audit risk using information on low risk and high risk clients as assessed by external auditors. As documented in Table 1, usable data were provided for 57 high risk and 87 low risk clients.⁷

Descriptives and Correlations

The descriptive statistics are reported in Table 3. The *t-test* for the two variables of interest provides univariate support for our hypotheses. No significant differences were found between high and low risk companies in relation to compliance with the regulated characteristics (ACEREG) for audit committees, consistent with H1 ($p > .1$). There is a significant difference in the auditor chosen list (ACEAUD) between high (.66) and low (.76) risk companies and in the expected direction, providing preliminary support for H2 ($p < .03$, *two tail*).

[Insert Table 3 here]

A Pearson correlation matrix (refer Table 4) and Spearman's Rho test (unreported) were performed. Not surprisingly there was a positive correlation between SIZE and ACEREG indicating that the larger companies are more likely to comply with regulated recommendations.¹⁰ There was no correlation between audit risk and ACEREG and a negative correlation between audit risk and ACEAUD, again providing univariate support for both hypotheses.

[Insert Table 4 here]

Hypothesis 1: Regulated List

The first hypothesis predicted no relation between the regulated list of characteristics of audit committee effectiveness (ACEREG) and auditor assessed audit risk. The results presented in Table 5 reveal that ACEREG is not significant ($p > .5$), which is consistent with hypothesis 1. This finding suggests that the regulated list of audit committee characteristics is not useful in differentiating between low and high risk clients. The only control variable approaching significance is DIRSH ($p < .1$) indicating a positive relation between director shareholding and assessed audit risk.

[Insert Table 5 here]

Hypothesis 2: Auditor Chosen List

The second hypothesis predicted a negative relation between the auditor chosen list of characteristics of audit committee effectiveness (ACEAUD⁸) and auditor assessed audit risk. The results presented in Table 6 reveal that ACEAUD is significant ($p < .06$, two tail) indicating that companies assessed by their auditors as a low audit risk tend to have an audit committee with the auditor chosen characteristics. This result provides support for our second hypothesis. This result is conservative, given that approximately 28% of mid-tier auditors were unable to provide data on a high risk company as their high risk companies do not have an audit committee. The control variables were not significant in this model.

[Insert Table 6 here]

V. SUPPLEMENTARY ANALYSIS

Respecifying ACEAUD

The ACEAUD variable was respecified using the top 6 characteristics (replacing top 5) identified by external auditors as likely to signify audit committee effectiveness (refer Table 2). The additional characteristic (audit committee meetings are frequent enough to fulfil their obligations) was ranked equally with the fifth characteristic but was excluded from the initial ACEAUD variable as it is a characteristic required by regulations. This coefficient was significant ($p < .08$, *two tail*, not tabulated).

Investigation by tier

Audit risk at audit tier level

An analysis was undertaken of the association of audit risk and audit committee characteristics at audit-tier firm level. In companies audited by the first-tier firms, there was a significant positive association between ACEREG and audit risk ($p < .06$, *two tail*, not tabulated). Interestingly, high audit risk companies have higher compliance levels with regulations than low risk companies. Directors of higher risk companies may choose to signal their oversight focus through the observation of regulations. Corporate governance is more important when client audit risks are high due to a greater need for monitoring and guidance (Cohen et al., 2002). No association was found between ACEAUD and audit risk amongst first-tier firms.

There was no significant association between ACEREG and audit risk in the mid-tier clients. In Australia corporate governance regulations allow companies to opt out of recommendations if they disclose and justify any non compliance. For smaller companies,⁹ who are more likely to be audited by the mid-tier, stakeholders are more likely to accept non

compliance due to cost/benefit arguments. However there was a significant relationship ($p < .08$, *two tail*, not tabulated) between audit risk and ACEAUD in this tier, indicating that these auditors look beyond the regulations when assessing audit committee effectiveness.

A further regression was performed on a subset of the data consisting of first-tier low risk and mid-tier high risk clients. The results (not tabulated) were significant and in the expected direction for ACEAUD ($p < .06$, *two tail*) but were not significant for ACEREG. SIZE became significant in this model ($p < .01$, *two tail*).

Characteristic ranking at audit tier level¹⁰

A comparison was made between auditors from each tier on their ranking of the 25 characteristics listed in the appendix. Significant differences were found in relation to a number of characteristics. First-tier auditors were more likely than mid-tier auditors to select in their top 5: sufficient length of meetings ($p < .04$, *two tail*), willingness of the audit committee to ask challenging questions of management ($p < .07$, *two tail*) and that the chairman meets with the internal auditor ($p < .08$, *two tail*). It is likely that this latter characteristic is irrelevant to many companies audited by the mid-tier as they are less likely to have an internal audit function. The mid-tier selected the provision of high quality agenda material ($p < .05$, *two tail*) and the financial literacy of the audit committee chairman ($p < .05$, *two tail*) as more indicative of an effective audit committee more frequently than first-tier auditors.

Characteristics ranking by auditor position

Overall, partners and managers ranked most audit committee characteristics consistently. However managers ranked characteristics required by SOX more favourably than did audit

partners. In particular, managers were more likely than partners to select these characteristics in their top 5: the audit committee had responsibility for the actual selection, appointment and dismissal of the auditor ($p < .04$, two tail), maintenance of the whistleblowing process ($p < .02$, two tail), review of auditor provided non-audit services ($p < .05$, two tail) and that audit committee members remained up to date ($p < .05$, two tail). This reliance on regulations may be due to their lower years of experience and the predominance of the SOX legislation in the years in which they have been involved with audit committees. Partners ranked the characteristic audit committee meetings allow sufficient time for discussion higher than managers ($p < .02$, two tail).

Matched pair regression analysis

As reported earlier, an uneven sample of high risk and low risk clients was obtained from survey responses (refer Table 1). Matched pairs of high and low risk companies were available from 46 respondents. A within-subject regression was performed using these 92 companies testing both hypotheses. Consistent with results in the full sample, the coefficient for the variable of interest ACEREG for H1 was insignificant. As regards H2, the coefficient for ACEAUD had the expected sign but the results were insignificant ($p > .10$). This is a consequence of a lack of power in the small sample size.

VI. DISCUSSION

External auditors use a number of characteristics in addition to those required by regulations to assess the effectiveness of audit committees. The regulated list comprises observable characteristics: frequency of meetings, a majority of independent directors, non executive directors, a financial expert and a size of at least three members.

While external auditors indicate the importance of the independence and diligence of audit committee members they value alternative proxies of these attributes. Our results signify that the audit committee's willingness to challenge management, the time audit committee members are prepared to devote to their audit committee role and the quality of the information they receive are important characteristics of audit committees that are indicators of actual audit committee effectiveness providing support for results obtained in case study research (Gendron and Bédard, 2006; Turley and Zaman, 2007). Unfortunately these characteristics are difficult to codify in regulations.

We contribute to the debate over the relevance of the inclusion of an accounting versus a financial expert on the audit committee. External auditors report that the inclusion of an accounting expert is a characteristic of more effective audit committees. Despite U.S. external auditors reporting that they placed very little reliance on the audit committee's assistance in the resolution of reporting disagreements with management (Cohen et al., 2008a; Gendron and Bédard, 2006), both pre and post SOX, Australian external auditors reported this to be a characteristic of an effective audit committee (23%). The survey responses support previous Australian research (Stewart and Munro, 2007) indicating that an effective audit committee does participate in negotiations over the treatment of contentious accounting issues.

Post SOX, external auditors rely more on corporate governance information in planning and performing the audit (Cohen et al., 2008a). The audit committee is responsible for overseeing the quality and integrity of the financial reporting process and therefore is a component of corporate governance expected to impact on the auditor's assessment of the company's audit risk. We find that characteristics of audit committees are associated with audit risk. Due to

the widespread compliance with regulations, we find these regulations provide auditors with less evidence on the effectiveness of the audit committee. Characteristics identified as important indicators of audit committee effectiveness in our survey responses were associated with external auditor assessments of audit risk.

VII. CONCLUSION AND LIMITATIONS

The effectiveness of audit committees has received increasing attention due to accounting scandals and the recent introduction of audit committee regulations. We contribute to the literature in two ways. Firstly, we investigate external auditors' perception of the usefulness of a comprehensive list of audit committee characteristics as indicators of actual audit committee effectiveness. Secondly, we investigate the association between auditor assessed audit risk and two sets of characteristics that proxy for actual audit committee effectiveness: a regulated list and an auditor chosen list.

Using data obtained from an online survey, we examine external auditors' perception of a comprehensive list of audit committee characteristics derived from prior research. External auditors rely upon characteristics related to the independence and the diligence of the audit committee members when assessing actual audit committee effectiveness. Of particular importance is the time audit committee members are prepared to give to the role, the quality of the information they receive and their ability to remain sceptical, question and challenge management. External auditors perceive an accounting expert is more relevant than a financial expert in ensuring an effective audit committee.

Our research finds that mere compliance with audit committee regulations does not influence auditor assessed audit risk. External auditors recognise the "substance" of corporate

governance over its “form”. When auditors chose the characteristics that best indicate audit committee effectiveness a significant negative relation was found between effectiveness and assessed audit risk.

Our findings have important implications for both regulators and researchers. Audit committee effectiveness is associated with auditor assessed audit risk only when the auditor chosen list is used. Much of the corporate governance literature has relied upon financial statement disclosures to measure audit committee effectiveness (see for example Abbott et al. 2000; Abbot et al. 2004). Yet our findings suggest that with increased public awareness and regulation in recent years, companies are now more likely to adopt the regulated list of characteristics rendering this list a less reliable gauge of actual audit committee effectiveness. The regulated list of audit committee characteristics is not relied upon by auditors when making their audit risk assessment. In contrast, auditors rely on characteristics they have identified as relevant indicators of audit committee effectiveness.

Limitations

Actual audit committee effectiveness cannot be observed. The results reported here are based on external auditor perceptions of effectiveness based upon their observations. A second limitation arises from the distribution method of the survey. Partners and managers from all first-tier and six mid-tier firms were invited to participate in this survey. Due to concerns regarding anonymity it is impossible to assess any differences between the group that completed the survey and the group that decided not to.

Endnotes

¹ At the time of its collapse Enron complied with all SEC and U.S. stock exchange requirements in relation to audit committees (Felo, Mahoney and Solieri, 2002) and was considered to have a high quality board.

² This definition was compiled during interviews with first-tier audit partners prior to conducting the survey described in this paper.

³ For example, National Australia Bank's corporate governance guidelines and its corporate structure received a five star rating in the Horwath Corporate governance Report in 2003, prior to the discovery of significant foreign exchange frauds (Martinov-Bennie, 2007)

⁴ Loss is a variable that may impact audit risk. Loss was excluded from our model due to the large number of losses in high risk mid-tier firms. Among first-tier firms loss was a perfect predictor and could not be used.

⁵ A Kruskal-Wallis test (not tabulated) was run to compare ranking of characteristics across the ten participating firms. The result is not significant, suggesting that the auditor populations sampled do not differ significantly from each other. A comparison between the tiers is conducted in the supplementary analysis section of this paper.

⁶ Regulated characteristics were excluded as they appear in the regulated list.

⁷ Forty six respondents provided complete data for both high and low risk client. A regression analysis of the matched pair data is reported in the supplemental analysis.

⁸ The ACEAUD variable was calculated based on the top 5 characteristics identified by external auditor. It was calculated for each company individually based on compliance with these five characteristics.

⁹ The ASX recommendations require the top 300 companies to adopt an 'if not, why not approach' to audit committee recommendations, rather than mandating all requirements be adopted. Note: not all requirements of the Australian securities exchange are incorporated into the regulated list. Rather the list consists of common characteristics required by international regulators.

¹⁰ All regressions used the consensus view of auditors. Separate regressions were not conducted using mid-tier and first-tier top 5 characteristics.

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APPENDIX 1
Audit Committee Characteristics

Audit committee characteristics	Source
Audit committee members ask challenging questions of management	Gendron and Bédard, 2006 Cohen et al., 2008
Audit committee meetings allow sufficient time for discussion on issues raised	Smith Committee, 2003
Audit committee members commit an appropriate amount of time to audit committee tasks	Gendron & Bédard, 2006 Turley & Zaman, 2007
The audit committee receives a copy of internal audit reports and management's responses	Gendron and Bédard, 2006 Gendron et al., 2004
Audit committee members receive high quality agenda material before each audit committee meeting	Gendron and Bédard, 2006
Audit committee meetings are frequent enough to fulfil their obligations	Regulated requirement Abbott & Parker, 2000 Abbott et al., 2004
The audit committee is sceptical of management	Krishnamoorthy et al., 2002 Gendron and Bédard, 2006
The audit committee includes an accounting expert	Carcello et al., 2006b Dhaliwal, Naiker and Navissi, 2006
Audit committee members are made aware of the effect of key accounting policies adopted in the financial reports	Cohen et al., 2008
The audit committee participates in negotiations between management and the external auditor over contentious accounting issues	Gendron and Bédard, 2006 Cohen et al., 2008 Stewart and Munro, 2007
Audit committee members are up to date on regulatory changes relating to corporate governance and accounting principles	Gendron and Bédard, 2006
The audit committee includes a financial expert	Regulated requirement Bédard et al., 2004 Carcello et al., 2006a
The audit committee chairman is financially literate	Audit partner interviews
Audit committee members ask challenging questions of the external auditor	Gendron & Bédard, 2006
The audit committee chairman meets independently with the external auditor	Gendron and Bédard, 2006 Turley and Zaman, 2007

APPENDIX 1 (Continued)
Audit Committee Characteristics

Audit committee characteristics	Source
The audit committee has the actual responsibility for selection, appointment and dismissal of the external auditor	SOX requirement Persons, 2005
The audit committee examines unrecorded discrepancies detected by the external auditor	Cohen et al., 2008
Audit committee meetings are regularly attended by management	Gendron et al., 2004
The audit committee chairman meets independently with the internal auditor	Gendron and Bédard, 2006
The audit committee maintains a whistle blowing process	SOX requirement
The audit committee reviews the extent of non-audit services provided by the external auditor.	SOX requirement Felo et al., 2002
Audit committee members meet with management without the external auditor in attendance	Audit partner interviews
Audit committee members meet with management without the chief internal auditor in attendance	Audit partner interviews
The audit committee members generally have a tenure of between 2 and 7 years	Persons, 2005 Gendron and Bédard, 2006
Audit committee meetings are regularly attended by the chief internal auditor	Raghunandan et al, 2001 Gendron and Bédard, 2006 Cohen et al., 2008

APPENDIX 2
Regression Model Variables

ACE	The variable of interest, measures the proportion of characteristics that a client has in common with either the regulated list (ACEREG) or the auditor chosen list (ACEAUD). ACEREG is used to test Hypothesis 1 and ACEAUD is used to test Hypothesis 2. Ranges between zero and 1.
SIZE	A control variable, measures the natural log of sales. This variable is logged to obtain a normal distribution. Size may influence audit risk assessment in two opposing ways. While a large company is often more complex increasing risk, they are also more likely to have an active and informed audit committee (Raghunandan et al., 2001). Consistent with prior research, this variable is expected to be negatively related to risk (Beasley, 1996)
LEV	A control variable, measures the natural log of debt to equity ratio. This variable is logged to obtain a normal distribution. Debtholders can function as an additional control mechanism assisting in the monitoring of managements' actions either due to their own actions or through the enforcement of higher quality audits (DeFond, 1992). Alternatively higher debt may cause the company to be more risky due to liquidity issues, or increase the likelihood of earnings management in order to meet debt covenants (Beneish and Press, 1993). No sign is predicted for this variable.
DUAL	A control variable, measures duality. It is a dummy variable coded 1 if the chairman of board is CEO, 0 otherwise. DUAL controls for the additional power resident in one person. A person acting as CEO and chairman has more opportunity to influence other Directors (Beasley, 1996). This variable is expected to be positively related to audit risk.
DIRSH	A control variable, measures director share ownership. It is a dummy variable coded 1 if directors hold $\geq 5\%$ of outstanding shares, 0 otherwise. Different theories exist as to the impact of director share ownership on risk. Some argue that it aligns the director's interest to that of the shareholders; others believe that it may encourage managers to inflate stock prices (Abbott et al, 2004; Beasley, 1996). No sign is predicted for this variable.
BLOCKSH	A control variable, measures unaffiliated block shareholders. It is a dummy variable coded 1 if there is a significant ($\geq 5\%$) outside shareholder who is not affiliated with the board, 0 otherwise. Block shareholders may serve as an additional control mechanism (Beasley, 1996). This variable is expected to be negatively related to audit risk.

TABLE 1
Participants

	First-tier		Mid-tier		Total
	Partners	Managers	Partners	Managers	
Participants *	32	38	35	24	129
Usable data for testing hypotheses: #					
▪ Data for high risk clients	17	13	17	10	57
▪ Data for low risk clients	23	25	24	15	87

* All participants provided usable data for the creation of the auditor chosen list of audit committee characteristics

Approximately 30% of first-tier participants reported that they did not have any high risk clients and 28% of mid-tier participants reported that many high risk clients did not have audit committees and they did not provide data on a high risk client. Others provided incomplete information which could not be used.

TABLE 2
Audit Committee Characteristics
Complete list ranked from first to last by external auditors

Other characteristics	Row in survey	Category*	Frequency selected in top 5 %
Audit committee members ask challenging questions of management	21	I	55
Audit committee meetings allow sufficient time for discussion on issues raised	13	D	37
Audit committee members commit an appropriate amount of time to audit committee tasks	19	D	30
The audit committee receives a copy of internal audit reports and management's responses	2	D	30
Audit committee members receive high quality agenda material before each audit committee meeting	23	D	30
Audit committee meetings are frequent enough to fulfil their obligations	14	D	30
The audit committee is sceptical of management	7	I	27
The audit committee includes an accounting expert	4	E	27
Audit committee members are made aware of the effect of key accounting policies adopted in the financial reports	20	D	23
The audit committee participates in negotiations between management and the external auditor over contentious accounting issues	6	E	23
Audit committee members are up to date on regulatory changes relating to corporate governance and accounting principles	18	E	23
The audit committee includes a financial expert	5	E	23
The audit committee chairman is financially literate	16	E	23
Audit committee members ask challenging questions of the external auditor	22	I	23
The audit committee chairman meets independently with the external auditor	17	I	22
The audit committee has the actual responsibility for selection, appointment and dismissal of the external auditor	1	I	17
The audit committee examines unrecorded discrepancies detected by the external auditor	3	D	16
Audit committee meetings are regularly attended by management	11	I	12
The audit committee chairman meets independently with the internal auditor	15	I	9
The audit committee maintains a whistle blowing process	8	I	6
The audit committee reviews the extent of non-audit services provided by the external auditor.	9	I	5
Audit committee members meet with management without the external auditor in attendance	25	I	3
Audit committee members meet with management without the chief internal auditor in attendance	24	I	3
The audit committee members generally have a tenure of between 2 and 7 years	10	I	2
Audit committee meetings are regularly attended by the chief internal auditor	12	I	2

* Key to categories:

I independence, **D** diligence, **E** expertise

TABLE 3
Descriptive Statistics

Panel A: Continuous variables

	Audit Risk		<i>t</i> -test	<i>p</i> -value (two tailed)
	0 Mean (std dev)	1 Mean (std dev)		
N =	87	57		
ACEREG	.782 (.22)	.765 (.26)	0.413	.68
ACEAUD	.76 (.27)	.66 (.30)	2.251	.026
SIZE	18.95 (2.43)	18.48 (2.57)	1.129	.261
LEV	-1.59 (2.19)	-1.24 (2.12)	-0.961	-.354

Panel B: Dichotomous variables

	Audit Risk		χ	<i>p</i> -value
	0 Mean (std dev)	1 Mean (std dev)		
DUAL	.13 (.33)	.16 (.35)	75.11	.000
DIRSH	.36 (.48)	.56 (.50)	2.25	.134
BLOCKSH	.53 (.50)	.61 (.49)	2.25	.134

Where:

- ACEREG is a continuous variable showing proportionate compliance with the audit committee characteristics required in regulations: majority of independent directors, non executive directors, size of at least three directors, inclusion of a financial expert on the committee, and frequent meetings – Maximum score is 1;
- ACEAUD is a continuous variable showing proportionate compliance with audit committee characteristics identified as highly useful by external auditors in indicating audit committee effectiveness – maximum score 1;
- SIZE natural log of sales;
- LEV is a dummy variable coded 1 if directors hold over 5% of outstanding shares, 0 otherwise;
- DUAL natural log of debt to equity;
- DIRSH is a dummy variable coded 1 if there is a significant (>5%) outside shareholder who is not affiliated with the board, 0 otherwise;
- BLOCKSH is a dummy variable coded 1 if Chairman of the board is CEO, 0 otherwise;

TABLE 4
Pearson Correlations

	Audit risk	SIZE	DIRSH	LEV	BLOCKSH	DUAL	ACEREG	ACE AUD
SIZE	-.094	1.000						
DIRSH	.202*	-.279**	1.000					
LEV	.080	.419**	.017	1.000				
BLOCKSH	.084	.025	.185*	-.018	1.000			
DUAL	.044	-.011	.213*	.109	-.010	1.000		
ACEREG	-.035	.292**	-.251**	-.143	.144	-.111	1.000	
ACEAUD	-.186*	.189*	-.140	-.046	.169*	-.101	.497**	1.000

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed)

Where:

TRAD is a continuous variable showing proportionate compliance with the typical audit committee characteristics required in legislation: majority of independent directors, non executive directors, size of at least three directors, inclusion of a financial expert on the committee, and frequent meetings – Maximum score is 1;

ACEAUD is a continuous variable showing proportionate compliance with audit committee characteristics identified as highly useful by external auditors in indicating audit committee effectiveness – maximum score 1;

SIZE natural log of sales;

LEV natural log of debt to equity;

DUAL is a dummy variable coded 1 if Chairman of the board is CEO, 0 otherwise;

DIRSH is a dummy variable coded 1 if directors hold over 5% of outstanding shares, 0 otherwise; and

BLOCKSH is a dummy variable coded 1 if there is a significant (>5%) outside shareholder who is not affiliated with the board, 0 otherwise;

TABLE 5**Logit Regression Model – Hypothesis 1 – REGULATED**

Variables	Predicted sign	Coefficient	S.E.	Z	p (2 tailed)
Constant	n/a	0.933	1.661	0.56	.574
ACEREG	-	0.539	0.851	0.63	.526
SIZE	-	-0.108	0.088	-1.23	.218
DIRSH	?	.0719	0.389	1.85	.064
LEV	?	.0142	0.097	1.45	.145
BLOCKSH	-	0.224	0.371	0.61	.544
DUAL	+	0.001	0.509	.002	.997

Where:

ACEREG is a continuous variable showing proportionate compliance with the audit committee characteristics required in regulations: majority of independent directors, non executive directors, size of at least three directors, inclusion of a financial expert on the committee, and frequent meetings – Maximum score is 1;

SIZE natural log of sales;

DIRSH is a dummy variable coded 1 if directors hold over 5% of outstanding shares, 0 otherwise;

LEV natural log of debt to equity;

BLOCKSH is a dummy variable coded 1 if there is a significant (>5%) outside shareholder who is not affiliated with the board, 0 otherwise; and

DUAL is a dummy variable coded 1 if Chairman of the board is CEO, 0 otherwise;

The pseudo R², the goodness of fit of the model is 4.5%.

TABLE 6

Logit Regression Model - Hypothesis 2 – ACEAUD

Variables	Predicted sign	Coefficient	S.E.	Z	p (2 tailed)
Constant	n/a	1.271	1.698	0.75	.454
ACEAUD	-	-1.265	0.660	-1.92	.055
SIZE	-	-0.062	0.085	-0.725	.468
DIRSH	?	0.618	0.387	1.597	.110
LEV	?	0.107	0.094	1.136	.256
BLOCKSH	-	0.417	0.379	1.097	.272
DUAL	+	0.078	0.514	-0.152	.879

Where:

ACEAUD is a continuous variable showing proportionate compliance with audit committee characteristics identified as highly useful by external auditors in indicating audit committee effectiveness – maximum score 1;

SIZE natural log of sales;

DIRSH is a dummy variable coded 1 if directors hold over 5% of outstanding shares, 0 otherwise;

LEV natural log of debt to equity;

BLOCKSH is a dummy variable coded 1 if there is a significant (>5%) outside shareholder who is not affiliated with the board, 0 otherwise;

DUAL is a dummy variable coded 1 if Chairman of the board is CEO, 0 otherwise;

The pseudo R^2 , the goodness of fit of the model is 6.2%.