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AUDIT COMMITTEE EFFECTIVENESS: A SYNTHESIS OF THE EMPIRICAL AUDIT COMMITTEE LITERATURE

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1.0 INTRODUCTION

The empirical audit committee literature is both diverse and expansive, with rapid growth in recent years based on increased concerns about corporate governance and the quality of financial reporting. Our objective in this paper is to synthesize empirical literature on audit committee effectiveness to guide future thinking and research on audit committees. To organize our review, we focus on four components that we believe contribute to audit committee effectiveness (ACE) – audit committee composition, authority, resources, and diligence.

Our motivation stems from the intensifying interest in audit committees and the quality of audit committee oversight. Numerous professional publications (see Exhibit 1) address audit committee performance and responsibilities in an increasingly complex global business environment where well-publicized financial reporting challenges and problems are prominent. Expectations of audit committees have increased dramatically [e.g., BRC, 1999; Burke and Guy, 2001; Grant Thornton, 1997; Levitt, 1998; NACD, 2000; Rezaee and Farmer, 1994; SEC, 1999b], with a number of high profile initiatives bringing focus to the challenge of achieving effectiveness.

For example, the *Report of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees* [BRC, 1999] and the National

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Exhibit 1

Selected Professional Literature Focusing on Audit Committees

Audit Committees: A Guide for Directors, Management, and Consultants [Burke and Guy, 2001]

Audit Committee Quarterly Updates [KPMG Audit Committee Institute, 2001]

Report of the NACD Blue Ribbon Commission on Audit Committees: A Practical Guide [NACD, 2000]

Audit Committee Briefing: Understanding the 21st Century Audit Committee and Its Governance Roles [Verschoor, 2000]

Improving Audit Committee Performance: What Works Best, 2nd Edition [PwC, 2000]

Audit Committees: Implementing the New Rules [Ernst & Young, 2000]

Audit Committees: Implementing the New Requirements for the Year 2000 [Deloitte & Touche, 2000]

New Responsibilities and Requirements for Audit Committees [Arthur Andersen, 2000]

Final Rule: Audit Committee Disclosure [Securities and Exchange Commission, 1999b]

Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees [BRC, 1999]

Audit Committees: Best Practices for Protecting Shareholder Interests [PwC, 1999]

The Audit Committee Handbook, 3rd Edition [Braiotta, 1999]

Shaping the Audit Committee Agenda [KPMG, 1999]

The Audit Committee Symposium: A Balanced Responsibility [Arthur Andersen and FEI, 1999]

Global Best Practices for Audit Committees [Arthur Andersen, 1998]

The Audit Committee: A Broader Mandate [Bacon, 1998]

The Expanded Role of the Audit Committee [Grant Thornton, 1997]

The Audit Committee: An International Perspective [Vanasco, 1994]

Improving the Effectiveness of the Audit Committee [Rittenberg and Nair, 1993]

Association of Corporate Directors' *Report of the NACD Blue Ribbon Commission on Audit Committees* [NACD, 2000] both provide numerous recommendations for improving ACE and highlight the recent surge in interest in performance quality. The SEC's new disclosure rules for audit committees [SEC, 1999b], new stock exchange listing requirements related to audit committees, and enhanced auditor requirements for communication with audit committees [e.g., AICPA, 1999] also provide important examples of efforts to improve ACE.

In addition, a host of authors and organizations have issued publications on "best practices" for audit committees [e.g., Arthur Andersen, 2000; Burke and Guy, 2001; PwC, 2000; Verschoor, 2000]. Most recently, the Sarbanes-Oxley Act [2002] tightened the definition of audit committee member independence and required the external auditor to report directly to the audit committee. The major stock exchanges in the U.S. have proposed changes to their governance-related listing requirements, partly to enhance the independence and expertise of audit committees.[1] In all cases, reform efforts focus on identifying and controlling the various dimensions of ACE to strengthen oversight of financial reporting, internal control, risk management, and auditing processes.

In the next section, we provide background on the audit committee and its role in corporate governance. In section three, we provide a formal definition of ACE and a discussion of ACE determinants to guide the subsequent literature synthesis (in section four) and discussion of future research directions (in section five).

2.0 AUDIT COMMITTEE BACKGROUND

Boards of directors assume an important role in corporate governance. Due to the separation of corporate management and ownership, boards exist to protect the interests of the shareholders. Agency theory suggests that shareholders require protection because management (agents) may not always act in the interests of the corporation's owners (principals) [Fama, 1980; Fama and Jensen, 1983; Jensen and Meckling, 1976]. To deal with this agency problem, the board assumes an oversight role that typically involves monitoring the CEO and other top executives, approving the corporation's strategy, and monitoring the control system.

Given its diverse responsibilities, the board of directors delegates some of its oversight to the audit committee and other committees of the board. Many publications prescribe three broad areas of audit committee oversight: (1) financial reporting, (2) internal controls to address key risks, and (3) auditor activity [e.g., Arthur Andersen, 1998; BRC, 1999; Burke and Guy, 2001; Grant Thornton, 1997; KPMG, 1999; NACD, 2000; PwC, 1999; Rittenberg and Nair, 1993]. Numerous studies and professional publications provide detailed lists of

[1] This background and the discussion of the extant empirical literature focus primarily on the U.S. audit committee setting. As discussed later, we encourage additional research to explore the wide range of financial systems, corporate governance mechanisms, and audit committee practices around the world.

suggested duties within these three broad areas, and recent regulation [Sarbanes-Oxley, 2002] specifically prescribes certain audit committee functions.[2]

Both the professional and the research literature [e.g., Beasley et al., 1999; BRC, 1999; Lublin and MacDonald, 1998; NACD, 2000] raise questions about ACE in recent high-profile financial fraud cases. For example, the NACD [2000, p. vii] states, "with each new wave of [financial irregularities] the cry for more effective audit committees as an important part of the financial control system becomes even more urgent." Such concern has led to recent regulation of the audit committee function in a number of areas, including independence, composition, expertise, disclosure of activities, discussion of financial reporting quality, and materiality assessment [e.g., BRC, 1999; Sarbanes-Oxley, 2002; SEC, 1999a; SEC, 1999b]. In addition, the major U.S. stock exchanges currently are proposing audit committee-related changes to their listing requirements. These proposals include provisions to strengthen audit committee independence and oversight of financial reporting.

However, the audit committee's ability to achieve effective oversight is inherently limited given the nature of the function. Audit committees only meet periodically, usually deal with complex but limited second-hand information, and include members with less knowledge of the company's operations, controls, and reporting than management. Despite these limitations, stakeholders expect audit committees to provide effective oversight that protects their varied interests.

3.0 AUDIT COMMITTEE EFFECTIVENESS (ACE)

3.1 Definition and Determinants of ACE

ACE has been defined in many ways and in many contexts [e.g., NACD, 2000; PwC, 1999; Rittenberg and Nair, 1993].[3] We offer the following definition of an effective audit committee as a starting point for our synthesis of the ACE literature:

> *An effective audit committee has qualified members with the authority and resources to protect stakeholder interests by ensuring reliable financial reporting, internal controls, and risk management through its diligent oversight efforts.*

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[2] Specific duties often include reviewing financial statements and related disclosures, discussing various financial reporting items with management and the external auditors, reviewing reports of internal and external auditors regarding internal control issues, overseeing the scope of the internal and external audit activities, and meeting privately with the internal and external auditors.

[3] For example, the NACD [2000, p. 1] stated that the effective audit committee is one that "adds value to the board and the corporation." Kalbers and Fogarty [1993, p. 27] defined audit committee effectiveness "as the competency with which the audit committee carries out its specified oversight responsibilities." Rittenberg and Nair [1993] defined an effective audit committee as one that fulfills its responsibilities. PwC [1999, p. 3] stated that, "to be effective, an audit committee must be able to oversee the company's financial responsibilities without overstepping its responsibilities by becoming too involved in operational issues."

This definition highlights the ultimate goal of audit committee service (i.e., protection of stakeholder interests) as well as the manner in which the audit committee achieves this goal (i.e., the use of qualified members with the authority and resources to provide diligent oversight). Thus, we adopt a definition that considers the input, process, and output dimensions of ACE. In addition, we extend the traditional focus on shareholders' interests (given the audit committee's basic fiduciary responsibility assigned by the board of directors) to assert that ACE should extend to a wide variety of stakeholders.

We use this definition, the extant audit committee literature, and the team effectiveness literature to develop a taxonomy for organizing the extant empirical ACE literature.[4] This development is limited to the extent that the empirical literature focuses almost exclusively on individual audit committee members and their characteristics (e.g., financial expertise, independence), although audit committees are supposed to function as groups. As noted later, there are numerous research opportunities involving the optimal mix of audit committee members and the way individual audit committee members work together to achieve committee effectiveness.

After considering the fundamental determinants of ACE, four dimensions emerge:

- Composition – expertise, independence, integrity, objectivity
- Authority – responsibilities, influence (derived from full board of directors, federal law, and exchange listing requirements)
- Resources – adequate number of members; access to management, external auditors, and internal auditors
- Diligence – incentive, motivation, perseverance.

As Figure 1 indicates, we assert that audit committee composition, authority, and resources are the basic inputs needed to achieve effectiveness. For example, if an audit committee has independent and honest members with adequate financial expertise, the authority to act, and timely access to necessary information, then it theoretically has a strong foundation for pursuing effectiveness. Upon this foundation of inputs lies the primary process factor needed to achieve ACE – diligence. Audit committees that have strong composition, power, and resources still need the will to act and to expend effort in order to be effective.

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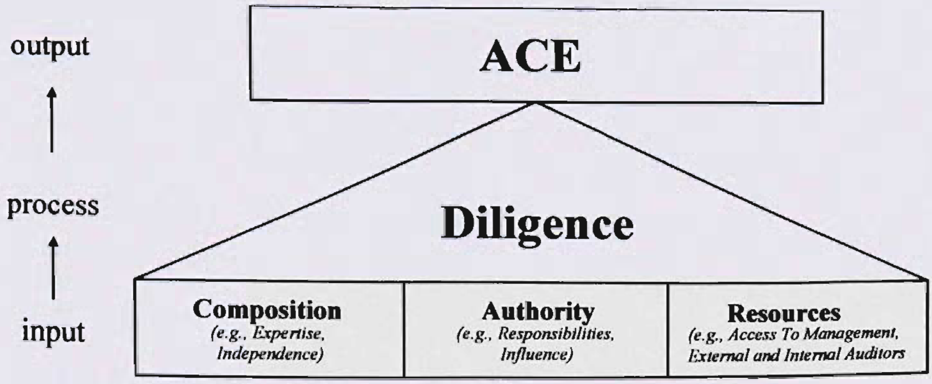
[4] For example, Guzzo and Shea [1992] synthesized the psychology literature on characteristics of effective teams and included the following elements – group composition, autonomy, nature of the task (related to effort level), and motivation/accountability. From a professional perspective, Ridley and Roth [see Fabrizius 1998] cited five elements of audit committee effectiveness – independence, training and resources, regular meetings, review of the assessment process, and unrestricted access to auditors. Braiotta [1999, p. 6] focused on committee size and proper delegation of responsibility and authority as contributors to effectiveness, while Rittenberg and Nair [1993, p. 2] concluded that the "key to audit committee effectiveness is [audit committee member] background information and training." Similarly, McMullen and Raghunandan [1996, p. 79] described the need for audit committees to be "independent, informed and vigilant" in order to be effective.

Figure 1

Determinants of Audit Committee Effectiveness (ACE)



3.2 Composition

The major U.S. stock exchanges require that audit committees be composed of at least three independent, financially literate directors, one of whom must have accounting or related financial-management expertise. Each stock exchange provides a definition of independence and makes it clear that a simple "insider/outsider" dichotomization is inadequate. The ultimate objective of such stock exchange requirements is to enable audit committees to make judgments that are in the best interests of shareholders (i.e., independence is required so as to promote objectivity on the part of audit committee members). The exchanges currently are in process of further strengthening their audit committee-related listing requirements. For example, the NYSE has proposed tighter independence requirements and more expansive audit committee duties, such as reviewing financial press releases and communications with analysts. Similarly, AMEX and NASDAQ have proposed tighter independence and financial expertise requirements.

Team (group) issues also are relevant when considering audit committee composition. For example, a number of leadership issues emerge when considering how audit committees function. While the audit committee chair often assumes a leadership role, other leaders and dominant personalities can emerge in a way that impacts ACE. For example, a member with a dominant personality, but limited financial oversight ability, could monopolize meeting time and prevent the audit committee from functioning effectively. In such a case, the audit committee chair would need to firmly bring the audit committee back to its primary tasks. Alternatively, some audit committees may rely too heavily on one financial expert such that the other committee members add little value or fail to address issues themselves.

3.3 Authority

The audit committee derives its authority from the full board of directors, federal law, and exchange listing requirements. For example, the Sarbanes-Oxley Act [2002] requires public company audit committees to be "directly responsible for the appointment, compensation, and oversight of the work" of the external auditor. The Act also states that audit committees have the authority to hire outside counsel or other necessary advisors and requires external auditors to discuss a number of issues with the audit committee.

We view authority as a function of the audit committee's *responsibilities* and *influence*. The Public Oversight Board noted "in too many instances the audit committees do not perform their duties adequately and in many cases do not understand their responsibilities" [1993, p. 50]. To address this problem, many groups provide guidance designed to help audit committees understand their responsibilities and to pursue ACE [e.g., Burke and Guy, 2001; Cadbury Committee, 1992; MacDonald Commission, 1987; NACD, 2000; Treadway Commission, 1987].

The audit committee charter has become an increasingly important document for helping audit committee members focus on their specific responsibilities and for helping stakeholders assess the role and responsibilities of the audit committee [KPMG, 2000; SEC, 1999b]. Companies listed on NYSE, AMEX, and NASDAQ now are required to include the audit committee charter in their proxy statement at least once every three years.

Audit committee authority (influence) also depends on the audit committee's relationships with management, external and internal auditors, and the board as a whole. For example, external audit standards [e.g., AICPA, 2000] provide audit committees with great authority because they require auditors to communicate with audit committees on issues including detected fraud and illegal acts, disagreements with management, and materiality.

3.4 Resources

The resource component of ACE highlights that effective oversight is contingent upon the audit committee having adequate resources to do its job. The NACD [2000, p. 13] discussed three keys to an effective audit committee oversight process – "sufficient resources, meetings, and relationships." We posit that the resources needed by audit committees to achieve ACE include an adequate number of committee members to generate substantive discussion and to consider emerging issues, as well as access to management, external auditors, internal auditors, the full board, and legal counsel.

With respect to audit committee size, the NACD's Blue Ribbon Commission on Audit Committees [NACD, 2000] recommended that between three and six members comprise an audit committee. The BRC [1999, p. 12] recommended and major U.S. stock exchanges now require audit committees "comprised of a minimum of three directors."

In terms of access to other corporate governance groups, it is difficult to overstate the importance of easy access to forthright information from management, external auditors, internal auditors, and legal counsel. ACE is much more likely in environments where audit committees have access to accurate, timely and complete updates from management and auditors on changes in significant accounting and auditing regulations, changes in the company's core businesses, and current trends in corporate governance [Beasley et al., 1999; NACD, 2000].

3.5 Diligence

As noted earlier, composition, authority, and resources represent the three primary inputs to ACE, while diligence is the process factor that is needed to achieve ACE (see Figure 1). Similarly, Kalbers and Fogarty [1993] highlighted that the audit committee member's will to act is arguably the most important ACE attribute. Audit committees must be diligent in working to serve the best interests of stakeholders. Diligence refers to the willingness of committee members to work together as needed to prepare, ask questions, and pursue answers when dealing with management, external auditors, internal auditors, and other relevant constituents.

The accounting literature includes numerous calls for audit committee diligence [e.g., Beasley et al., 1999; BRC, 1999; Horton et al., 2000; Sommer, 1991]. For example, the BRC [1999] recommended that audit committees meet at least quarterly, discuss financial reporting quality with the external auditor, and provide up-to-date charters detailing committee responsibilities. Similarly, the NACD [2000] emphasized the importance of diligence when it suggested that audit committees have four half-day meetings each year.

4.0 SYNTHESIS OF THE EXTANT AUDIT COMMITTEE LITERATURE

We believe that the four-component ACE description above provides a basis for evaluating the extant empirical audit committee literature. Accordingly, we synthesize the literature by evaluating research contributions related to the composition, authority, resources, and diligence of audit committees and their members. Such a synthesis of the literature should facilitate an understanding of the empirical audit committee literature and provide a structured means for identifying future research needs and opportunities.[5]

4.1 Composition

One of the most common variables in the audit committee composition literature is member independence. This area includes studies that focus solely

[5] Our literature review focuses on published empirical studies in accounting and does not attempt to integrate the vast non-empirical (qualitative) literature involving audit committees. In addition, we do not review the extensive literature on audit committee existence or formation [e.g., Beasley, 1996; Dechow et al., 1996; Eichenseher and Shields, 1985; McMullen, 1996; Pincus et al., 1989; Wild, 1996]. Given current requirements in the U.S., audit committee existence is assumed.

on inside and outside directors [e.g., Collier and Gregory, 1999; Menon and Williams, 1994] and studies that consider "grey" area directors who are not insiders but still have ties to management or the corporation [e.g., Carcello and Neal, 2000; Vafeas, 2001].

A number of independence studies [e.g., Abbott and Parker, 2000; Archambeault and DeZoort, 2001; Carcello and Neal, 2000; Raghunandan et al., 2001; Scarbrough et al., 1998] focus on the impact of independent audit committees on the audit function. For example, Abbott and Parker [2000] found that audit committees without any insider members were more likely to use industry specialist external auditors. This may reflect such audit committees' desire to enhance audit quality. Archambeault and DeZoort [2001] found that companies with "suspicious auditor switches" (changed auditors after disclosure of a reportable event, after receiving a modified audit opinion, or after other recent auditor switches) had a smaller percentage of independent directors on the audit committee than did companies without suspicious auditor switches. Both Raghunandan et al. [2001] and Scarbrough et al. [1998] reported survey results indicating that audit committees composed only of independent directors were more likely to have stronger relationships with internal auditors than were audit committees with one or more insiders.

Other studies highlight the link between audit committee member independence and fraudulent financial reporting or the informativeness / quality of earnings. Abbott et al. [2000] found that companies with audit committees composed of independent directors were less likely to be sanctioned by the SEC for fraudulent or misleading financial reporting. Similarly, Beasley et al. [2000] found that fraud companies had less independent audit committees than no-fraud industry benchmarks. McMullen and Raghunandan [1996] found that companies with reporting problems were less likely to have audit committees composed solely of outside directors. Klein [2002b] found that audit committee independence was negatively associated with abnormal accruals and that reductions in audit committee independence were associated with large increases in abnormal accruals.

Other studies relate audit committee independence to governance and company variables. Beasley and Salterio [2001] found that voluntary increases in the number of outside audit committee members were associated with board size, board independence, and the separation of the CEO and board chair roles. Klein [2002a] found that audit committee independence was positively associated with board size and board independence and negatively associated with growth opportunities and firms with accounting losses.

The independence literature extends beyond simple dichotomization (where directors are either "insiders" or "outsiders") to consider directors with various non-management relationships with the company. Since Vicknair et al. [1993] highlighted the potential grey area director/member issue, a number of studies have expanded their study of audit committee member independence to include grey area directors. For example, Carcello and Neal [2000] studied financially distressed companies and found a negative association between the percentage of affiliated (insiders or grey) directors on the audit committee and the likelihood of receiving a going concern opinion. Vafeas [2001] used a relatively broad approach to defining grey directors in his study of audit committee appointments. Using an independence measure that screened directors who were consultants, bank officers, lawyers, relatives of management, or otherwise had any economic link to the company, he found that new audit committee appointees were more independent than a control group of non-audit committee directors.

The audit committee composition literature involving member expertise developed initially with a number of surveys and archival studies [e.g., Beasley and Salterio, 2001; DeZoort, 1997; GAO, 1991; Kalbers, 1992a, 1992b; Lee and Stone, 1997]. The relatively large number of studies in this area suggests the importance of audit committee member expertise (and its underlying dimensions) as a necessary component of ACE. The results also indicate great variation in expertise within and among audit committees, and that many members lack adequate experience and expertise in relevant oversight areas.

From the survey literature, a number of studies have focused on audit committee members' perceptions of their own expertise. For example, the GAO [1991] found that approximately half of the 40 surveyed audit committee chairs from large U.S. banks perceived their audit committee had no members with expertise in assigned accounting, auditing, banking, and legal oversight domains. DeZoort [1997] found that audit committee members believed that *all* audit committee members should have sufficient expertise in oversight areas related to accounting, auditing, and the law.

Other studies reveal other stakeholders' opinions about audit committee member expertise. The Raghunandan et al. [2001] survey of chief internal auditors (CIAs) revealed perceptions that audit committees with at least one member possessing an accounting or finance background were more likely: (1) to have longer meetings with CIAs, (2) to provide private access to CIAs, and (3) to review internal audit proposals and results. Kalbers [1992a, 1992b] surveyed external auditors and internal auditors and found both groups had significantly lower opinions of audit committee members' expertise in oversight areas than did participating audit committee members.

In addition to the survey literature, the archival literature addresses a wide variety of research questions involving member expertise. Archambeault and DeZoort [2001] found that companies with suspicious auditor switches had fewer audit committee members with experience in accounting, auditing, or finance than their non-switching counterparts. Beasley and Salterio [2001] studied Canadian boards and found that voluntary increases in audit committee members' collective financial reporting and audit committee knowledge and experience were related to board size, proportion of outsiders on the board, and separation of board chair and CEO/president. Lee and Stone [1997] studied 100 U.S. multinational companies and described a mismatch between audit committees' stated responsibilities and the levels of instrumental experience (defined as skills related to accounting, auditing, and control issues) among members. McMullen and Raghunandan [1996] found that companies with financial reporting problems were less likely to have CPAs on the audit committee.

Table 1
Composition Studies: Audit Committee Member Independence

Study	Method	Companies/ Subjects	Domain	Results
Klein [2002a]	Archival	803 firm-years on S&P 500	Financial reporting	Audit committee independence was positively associated with board size and board independence and negatively associated with growth opportunities and firms with losses.
Klein [2002b]	Archival	692 firm-years on S&P 500	Financial reporting	Audit committee independence was negatively associated with abnormal accruals, and reductions in audit committee independence were associated with large increases in abnormal accruals.
Archambeault and DeZoort [2001]	Archival	30 cos with suspicious auditor switches	Auditor switching	Companies that made suspicious auditor switches had a smaller percentage of independent audit committee members than matched non-switching counterparts.
Beasley and Salterio [2001]	Archival	627 publicly-traded Canadian cos	Voluntary improvements in audit committee composition	Voluntary increases in number of outside audit committee members was positively related to board size, proportion of outsiders on the board, and separation of board chair and CEO/president.
Raghunandan et al. [2001]	Survey	114 chief internal auditors (CIAs)	Access to internal auditors	Audit committees with only independent directors and at least one member with an accounting or finance background were more likely to have longer meetings with CIAs, to provide private access to CIAs, and to review internal audit proposals and results.
Vafeas [2001]	Archival	262 non-executive AC members	Audit committee member selection	New audit committee members generally had fewer years of service on the board, served on fewer board committees, and were more independent than the control group of other non-audit committee directors. Audit committee appointments were not significantly related to stock ownership and the number of other directorships held.

Table 1 – (Continued)
Composition Studies: Audit Committee Member Independence

Study	Method	Companies/ Subjects	Domain	Results
Abbott et al. [2000]	Archival	78 pairs of fraud and no-fraud cos	Fraudulent financial reporting	Companies with audit committees composed of independent directors were less likely to be sanctioned by the SEC for fraudulent or misleading financial reporting.
Abbot and Parker [2001]	Archival	500 NYSE, AMEX, or NASDAQ cos	Auditor selection	Companies with audit committees that did not include employee members were more likely to use specialist auditors.
Beasley et al. [2000]	Archival	66 fraud cos in three industry groups	Fraudulent financial reporting	Fraud companies in technology, healthcare, and financial services industries had less independent audit committees than the industry benchmarks. In addition, fraud companies had a lower percentage of audit committees composed of all outside directors than did no-fraud companies.
Carcello and Neal [2000]	Archival	223 financially distressed cos	Audit (going concern opinion)	The greater the percentage of affiliated (inside or grey) directors on the audit committee, the lower the probability that a financially distressed firm will receive a going concern opinion from the auditor.
Collier and Gregory [1999]	Survey and Archival	141 U.K cos	Audit committee meeting activity	Presence of insiders on the audit committee was negatively related to the level of annual audit committee activity (number of meetings and duration of meetings).

Table 1 – (Continued)
Composition Studies: Audit Committee Member Independence

Study	Method	Companies/ Subjects	Domain	Results
Scarborough et al. [1998]	Survey	72 chief internal auditors (CIAs) from Canada	Internal audit access	Audit committees consisting solely of non-employee directors were more likely to (1) meet frequently with the CIA and (2) review internal audit programs and results of internal audits than were audit committees comprised of one or more insiders.
McMullen and Raghunandam [1996]	Archival	51 cos with reporting problems	Financial reporting problems	Companies with financial reporting problems were less likely to have audit committees composed entirely of outside directors.
Menon and Williams [1994]	Archival	200 randomly selected OTC cos	Board reliance on the audit committee	Audit committee independence is a proxy for the board's reliance on the audit committee. As the proportion of outside directors on the board increases, firms are more likely to exclude insiders from the audit committee.
Vicknair et al. [1993]	Archival	100 NYSE cos	Audit committee member independence	A significant presence of "grey" area directors was noted on the audit committees of the sample companies. Specifically, interlocking directorships and other related party transactions constituted the most prevalent sources of independence questions.

Despite the inherent challenge of accessing audit committee member subjects, experimental research involving member expertise is emerging to supplement the extant survey and archival literature. As with the literature involving auditor expertise, the experimental literature involving audit committee member expertise started with tests for experience effects. For example, DeZoort [1998] evaluated how general domain and task-specific experience affect audit committee members' internal control judgments. His findings indicated that committee members with experience made internal control judgments more like criterion group auditors than did members without experience. In addition, members with experience made more consistent judgments and had higher self-insight and consensus than did the members without experience.

Beyond studies of experience, the experimental literature is starting to evolve to consider other dimensions of expertise (e.g., knowledge and ability), with an emphasis on studying audit committee member affiliation in auditor-management disputes. DeZoort and Salterio [2001] conducted an experiment examining the effects of experience and knowledge on audit committee member affiliation in an auditor-management dispute case. Their results revealed that independent director experience and audit knowledge were positively associated with audit committee member support for an auditor in a "substance over form" dispute. Conversely, concurrent experience as a board director and a senior member of management was positively associated with support for management. Financial accounting knowledge and problem-solving ability were not significantly related to support for either the auditor or management.

McDaniel et al. [2002] conducted an experiment using audit firm managers and executive MBA graduates to assess differences in the way financial experts and financial literates evaluate financial reporting quality. They found that experts tended to focus more on recurring, less-prominent issues, while literates focused more on nonrecurring, prominent issues. The authors conclude that efforts to enhance audit committee financial expertise may influence audit committees' assessments of financial reporting quality.

Several consistent patterns emerge from the literature on audit committee composition. Audit committee independence is associated with (a) audit committees engaging higher quality auditors, interacting more with internal auditors, and protecting the external auditor from client pressure; and (b) a reduced incidence of financial reporting problems. Thus, the literature indicates significant benefits associated with audit committee independence.

In addition, audit committee experience/expertise is perceived to be a critical component of ACE, yet many parties have concerns with audit committee members' expertise levels. Audit committee experience/expertise is associated with factors including (a) greater interaction with internal auditors, (b) reduced incidence of financial reporting problems, and (c) greater support for auditors in auditor-management disagreements. The benefits of audit committee member experience/expertise are very similar to those described for independence above.

There are several limitations of the extant research on audit committee composition. First, evaluations of member independence or expertise largely are based on publicly available proxies (e.g., prior job titles, certifications,

Table 2
Composition Studies: Audit Committee Member Expertise

Study	Method	Companies/ Subjects	Domain	Results
McDaniel et al. [2002]	Experiment	20 audit managers and 18 executive MBA graduates	Financial reporting quality	When evaluating financial reporting quality, financial experts tended to focus more on recurring, less-prominent issues, while financial literates focused more on nonrecurring, prominent issues.
Archambeault and DeZoort [2001]	Archival	30 cos with suspicious auditor switches	Auditor switching	Companies that made suspicious auditor switches had fewer audit committee members with experience in accounting, auditing, or finance than matched non-switching companies.
Beasley and Salterio [2001]	Archival	627 publicly-traded Canadian cos	Voluntary improvements in audit committee composition	Voluntary increases in the breadth of outside audit committee members' collective financial reporting and audit committee knowledge and experience were positively related to board size, proportion of outsiders on the board, and separation of board chair and CEO/president.
DeZoort and Salterio [2001]	Survey	68 Canadian AC members	Financial reporting dispute	Independent director experience and audit knowledge were associated with audit committee member support for an auditor who advocates a "substance over form" approach in a dispute with client management.
Raghunandan et al. [2001]	Survey	114 chief internal auditors (CIAs)	Internal audit access	Audit committees with at least one member with an accounting or finance background were more likely to have longer meetings with CIAs, provide private access to CIAs, and review internal audit proposals and results.

Table 2 – (Continued)
Composition Studies: Audit Committee Member Expertise

Study	Method	Companies/ Subjects	Domain	Results
DeZoort [1998]	Experiment	87 AC members from NYSE, AMEX, and NASDAQ cos	Internal control evaluation	Audit committee members with auditing and internal control evaluation experience made internal control judgments more like experts than members who lacked such experience.
DeZoort [1997]	Survey	112 AC members from NYSE, AMEX, and NASDAQ cos	Audit committee responsibilities	Audit committee members recognized the importance of having expertise in accounting, auditing, and law, with some members admitting they lacked sufficient expertise in these areas. Internal control evaluation was consistently ranked as the most important oversight responsibility.
Lee and Stone [1997]	Archival	100 U.S. multinational cos	Audit committee responsibilities	Results indicate a mismatch between stated audit committee responsibilities and the level of audit committee member "instrumental" experience (related to accounting, auditing, and control issues).
McMullen and Raghunandan [1996]	Archival	51 cos with financial reporting problems	Financial reporting problems	Companies with financial reporting problems were less likely to have CPAs on the audit committee
Kalbers [1992a]	Survey	50 external auditors and 52 AC members	Audit committee responsibilities	External auditors had significantly lower opinions of audit committee members' expertise in oversight areas than did audit committee members.

Table 2 – (Continued)
Composition Studies: Audit Committee Member Expertise

Study	Method	Companies/ Subjects	Domain	Results
Kalbers [1992b]	Survey	61 chief internal auditors and 52 AC members	Audit committee responsibilities	Internal auditors had significantly lower opinions of audit committee members' expertise in oversight areas than did audit committee members.
GAO [1991]	Survey	40 AC chairs from U.S. banks	Bank oversight	Approximately half of the audit committee chairs indicated that their committee lacked members with expertise in assigned oversight areas related to accounting, auditing, banking, and the law.

etc.), rather than on more complete assessments of independent thinking and true expertise in finance, accounting, or other relevant domains. Second, dimensions of composition such as integrity and objectivity have not been explored. Finally, research to date has left team/group issues faced by audit committees virtually unaddressed.

Going forward, we believe that it is critical to enhance the richness of measures of audit committee member independence, expertise, integrity, and objectivity. In addition, group issues represent a fruitful area of research. Specific avenues for future research are offered in the concluding section of the paper.

4.2 Authority

A number of studies highlight the authority dimension of ACE. This area of the literature reflects strong emphasis on audit committee oversight responsibilities and focuses heavily on survey methods. In general, the findings indicate a great deal of variation in both perceived and stated responsibilities [e.g., Abdolmohammadi and Levy, 1992; Coopers & Lybrand, 1995; DeZoort, 1997; Kalbers, 1992a] and the need to better understand responsibilities to improve ACE [e.g., Rittenberg and Nair, 1993].

Coopers & Lybrand [1995] provided evidence suggesting that the scope of audit committee activity had expanded considerably over the two decades prior to the study. The survey results also revealed that most of the sampled audit committees conducted a wide range of oversight duties. DeZoort [1997] surveyed audit committee members' perceptions of their responsibilities in areas related to financial reporting, auditing, and overall corporate governance. Members consistently ranked internal control evaluation as the most important oversight area, with financial statement review and internal auditor/external auditor evaluation considered highly important. Lee and Stone [1997] indicate a mismatch between stated audit committee responsibilities and the level of audit committee member instrumental experience (i.e., skills in accounting, auditing, and control issues).

A number of studies move beyond evaluating specific audit committee responsibilities. Haka and Chalos [1990] surveyed audit committee chairs, management, external auditors, and internal auditors about their perceptions of agency conflict. Their findings support the existence of agency conflict between audit committees and management in areas related to financial disclosure and discretionary accounting procedures. Audit committee chairs' opinions about issues affecting accounting choices also differed from opinions provided by external auditors and internal auditors.

Kalbers and Fogarty [1993] surveyed audit committee members from 90 corporations to investigate the relation between audit committee power and ACE. The results of their analysis indicated that effectiveness included oversight of financial reporting, external auditors and internal control. Audit committee power within the organization came from a combination of written authority and the clear support of top management.

Table 3
Authority Studies

Study	Method	Companies/ Subjects	Domain	Results
DeZoort [1997]	Survey	112 AC members, from NYSE, AMEX, and NASDAQ cos	Financial reporting, auditing, and corporate governance	Audit committee members appreciated the importance of having expertise in accounting, auditing, and law, although some members admitted to a lack of sufficient expertise in these areas. Internal control evaluation was consistently ranked as the most important oversight responsibility.
Lee and Stone [1997]	Archival	100 U.S. multinational cos	Financial reporting, auditing, and corporate governance	Results indicated a mismatch between stated AC responsibilities and the level of audit committee member instrumental experience (i.e., skills in accounting, auditing, and control issues).
Coopers & Lybrand [1995]	Survey	Members from 250 ACs	Audit committee responsibilities	The scope of audit committee activity expanded considerably over the two decades prior to the study, and most of the sampled audit committees conducted a wide range of oversight duties.
Kalbers and Fogarty [1993]	Survey	EAs, IAs, and CFOs from 90 U.S. cos	Audit committee and power	Audit committee effectiveness included oversight of financial reporting, external auditors and internal control. Audit committee power within the organization came from a combination of written authority and the clear support of top management.
Rittenberg and Nair [1993]	Survey	62 AC members, 94 CPAs, and 42 IA directors	Audit committee characteristics	Many members recognized that they needed to better understand their specific responsibilities.

Table 3 – (Continued)
Authority Studies

Study	Method	Companies/ Subjects	Domain	Results
Abdolmohammadi and Levy [1992]	Survey	69 AC members	Audit committee responsibilities	Although audit committee members had varied perceptions of their responsibilities, several broad areas emerged, including oversight, relationship with external auditors, relationship with internal auditors, and financial disclosure.
Kalbers [1992a]	Survey	50 external auditors and 52 AC members	Audit committee responsibilites	Audit committee members and auditors disagreed with the suggestion that the audit committee has very little authority, although audit committee members disagreed more than auditors.
Haka and Chalos [1990]	Survey	External auditors, internal auditors, CEOs, and AC chairs from Fortune 500 cos	Financial reporting	Management and audit committee chairs had significant differences in perceptions about financial statement disclosure and accounting procedure choice.

A few themes are evident in this area of the literature. First, audit committee responsibilities are diverse and appear to be expanding. Second, key areas for audit committee oversight typically include oversight of financial reporting, auditing, and controls. Finally, audit committee authority is related to written authority and management support.

This literature has several limitations. First, no research appears to have addressed the ultimate source of the audit committee's authority – the board of directors – or factors associated with variations in such authority. Second, the association between ACE and audit committee authority is relatively unexamined.

Going forward, we believe that it is important to track the expansion of specific audit committee responsibilities, whether due to legislation, regulation, or market forces. We also encourage research on the degree of board delegation to the audit committee (and variations in such delegation), as well as research exploring the relation between ACE and audit committee authority.

4.3 Resources

Research involving the resource component of ACE has focused on support from the external and internal audit functions, and on the size of the audit committee. A number of studies [e.g., Cohen and Hanno, 2000; Knapp, 1987, 1991; Schroeder et al., 1986] highlight the importance of the external auditor in pursuing ACE. Knapp [1987] found that the use of a Big 8 audit firm was associated with increased audit committee support for the auditor in auditor-management disagreements. This finding is consistent with the notion that audit quality and auditor credibility are associated with audit firm size. A follow-up study [Knapp, 1991] revealed that audit committee members perceived Big 8 firms to be more likely to discover material errors than local firms. In addition, members believed that length of auditor tenure was positively related to audit quality in early engagement years, but negatively related to audit quality in later years.

More recently, Cohen and Hanno [2000] found that external auditors made less favorable audit planning judgments in cases where the corporate governance structure included an audit committee that lacked technical experience and regular access to internal and external auditors without top management present. In addition, Cohen et al. [2002] interviewed practicing auditors and found that auditors viewed corporate governance as centered around management, rather than the board. The auditors viewed corporate governance considerations as particularly important in client acceptance decisions and in international settings, and many of the auditors viewed audit committees as weak and ineffective.

Our review of the resource literature also highlights the specific importance of the internal audit function in achieving ACE. For example, Raghunandan et al. [2001] link audit committee member independence and expertise to influence with internal auditors via private access to chief internal auditors, amount of meeting time with chief internal auditors, and ability to review internal audit activities and results. KPMG's Audit Committee Institute [2001] evaluated audit committee members' perceptions about effective use of the internal audit function. In a series of surveys, the Institute found a great deal of variation in the nature and extent of audit committees' reviews of reports developed by internal auditors. In addition, audit committee members tended to agree that internal auditors are "well equipped" to identify material weaknesses in internal controls. The results in Beasley et al. [2000] indicated that fraud companies in technology, healthcare, and financial services industries had less internal audit support than no-fraud industry benchmarks. Raghunandan and McHugh [1994] found that audit committee involvement in the hiring and firing of the chief internal auditor was associated with the number of meetings with the internal audit head. Finally, the results in DeZoort et al. [2000] revealed that internal audit directors believe structured communications programs between internal auditors and audit committees could improve the quality of corporate governance.

Beyond focus on auditors as resources for the audit committee, Archambeault and DeZoort [2001] evaluated the impact of audit committee size on suspicious auditor switching. They found that companies with suspicious auditor switches had smaller audit committees than companies without suspicious auditor switches.

The overriding conclusion from the audit committee resource literature is that support from the external and internal auditors is vital to ACE. Higher quality external auditors are associated with increased audit committee support for the auditor in auditor-management disagreements, and external auditors appear to focus on ACE-related factors when assessing risk or accepting new clients. Several studies suggest the unique importance of internal audit support and interaction in promoting ACE, including the association between internal audit support and reduced incidence of financial statement fraud.

A key limitation of this area of research is that two arguably critical audit committee resources – information and outside advisors – have not been directly addressed. Interaction with auditors is a proxy for the quality of information provided to the audit committee, but it is not a perfect proxy. We encourage research that examines the quality of the audit committee's information set and how this affects ACE. In addition, with the ever-increasing responsibilities placed on audit committees, many are arguing that audit committees should engage outside experts to assist them (much as compensation committees typically engage compensation and benefits consultants). Research exploring the advantages and disadvantages of such an approach is warranted, as is work on the Sarbanes-Oxley [2002] provision that specifically grants audit committees the authority to hire such advisors.

4.4 Diligence

While a number of studies appear in this area, they tend to focus narrowly on the most common proxy for audit committee diligence: the number of audit committee meetings per year. To the extent that actual diligence is difficult to measure, the relative lack of variation in approach is understandable. A few studies also consider other proxies for diligence, such as voluntary audit committee disclosures.

Table 4
Resource Studies

Study	Method	Companies/ Subjects	Domain	Results
Cohen et al. [2002]	Interview	36 auditors	External auditing	Auditors viewed corporate governance as centered around management, rather than the board. Auditors viewed corporate governance considerations as particularly important in client acceptance decisions and in international settings. Finally, many of the auditors viewed audit committees as weak and ineffective.
Archambeault and DeZoort [2001]	Archival	30 cos with suspicious auditor switches	Auditor switching	Companies that made suspicious auditor switches had smaller audit committees than matched companies without suspicious auditor switches.
Raghunandan et al. [2001]	Survey	114 chief internal auditors (CIAs)	Internal audit	Audit committees with only independent members and at least one member with an accounting or finance background were more likely to have longer meetings with CIAs, private access to CIAs, and review internal audit proposals and results.
Beasley et al. [2000]	Archival	66 fraud cos in three industries	Fraudulent financial reporting	Fraud companies in technology, healthcare, and financial services industries had less internal audit support than industry benchmarks.
Cohen and Hanno [2000]	Experiment	96 external auditors	Auditor retention and audit planning	Auditor planning judgments were affected by the strength of the corporate governance structure. Companies with audit committees that lacked resources and technical experience were more likely to receive unfavorable audit planning judgments from auditors.
DeZoort et al. [2000]	Survey	18 internal audit directors	Audit committee member training	Internal audit directors suggested that structured communications programs between internal auditors and audit committees could improve the quality of corporate governance.

Table 4 – (Continued)
Resource Studies

Study	Method	Companies/ Subjects	Domain	Results
Raghunandan and McHugh [1994]	Survey	426 chief internal auditors	Internal audit	Audit committees that were involved in chief internal auditor hiring/firing decisions met more often with the chief internal auditor and were perceived to have greater ability to get management to act on auditing findings.
Knapp [1991]	Experiment	122 AC members from cos in Texas	External audit quality	Audit committee members perceived that the quality of audit service provided is significantly related to auditor size and auditor tenure. Exposure to different size audit firms moderated the audit size effect. The perceived positive effects of auditor tenure in early engagement years became negative in subsequent years.
Knapp [1987]	Experiment	179 AC members	Auditor-client disagreement on subsequent event disclosure and materiality level of proposed adjustment	Big 8 audit firm use was associated with increased support for the auditor in auditor-management disagreements. In addition, members were less likely to support the auditor when the members were not corporate managers, when the auditee was in strong financial condition, and when objective professional standards were absent.
Schroeder et al. [1986]	Survey	81 Fortune 500 company AC chairs and 41 Big 8 firm partners	External audit quality	Audit committee chairs perceived audit team factors (e.g., the amount of partner and manager attention on the audit) to be more important than audit firm factors (e.g., relative fee size) when it came to audit quality.

Several studies using the meeting frequency proxy deal with fraudulent financial reporting. Beasley et al. [2000] found that audit committees of fraud companies in the technology and healthcare industries met less often than did audit committees in comparable companies without reported fraud. Their study indicated that fraud companies generally only met once per year while no-fraud companies met two or three times each year. However, when reporting this difference, the authors (p. 450) noted that even the no-fraud companies' two or three meetings per year were "still below the NACD [2000] suggestion." Similarly, the results in Abbott et al. [2000] indicated that firms with audit committees that met at least twice per year were less likely to be sanctioned by the SEC for financial reporting problems. Finally, McMullen and Raghunandan [1996] found that companies with reporting problems had less frequent audit committee meetings.

Some studies link the number of meetings with external auditor selection. Abbott and Parker [2000] studied auditor selection for 500 companies and found that firms with audit committees that met at least twice per year were more likely to use specialist auditors. Archambeault and DeZoort [2001] found that companies making suspicious auditor switches held fewer audit committee meetings than companies without suspicious auditor switches.

The literature involving meeting frequency also extends to consider interactions with other audit committee and company variables. For example, Menon and Williams [1994] studied 200 companies and found that the number of audit committee meetings increased as the percentage of outside directors increased. In addition, meeting frequency was associated with firm size, suggesting positive associations among company size, monitoring complexity, and the need for audit committee meetings. Similarly, Collier and Gregory [1999] used two measures of audit committee activity (i.e., number and duration of meetings) in their study of U.K. companies. Their results indicated that the presence of a dominant CEO and the inclusion of insiders on the audit committee were negatively related to the level of activity, while leverage and the presence of a Big 6 auditor were positively associated with the level of activity.

A few published studies have used different proxies for diligence. Kalbers and Fogarty [1993] measured chief financial officers', chief internal auditors', and external audit partners' perceptions of audit committee diligence, defined as the level of preparation, vigilance, independence, and level of activity of the audit committee chair and other members. Their LISREL analysis revealed a significant positive relationship between diligence and perceived ACE.

Alternatively, Turpin and DeZoort [1998] evaluated voluntary disclosure of an audit committee report in annual reports and found significant positive associations between voluntary disclosure of audit committee reports and company size, proportion of outside directors, leverage, and trade on a major stock exchange. However, their results also indicated that management, not the audit committee, tended to drive the decision for such voluntary audit committee disclosure. In addition Carcello et al. [2002] analyzed voluntary audit committee disclosures under the new disclosure rules implemented in 2001. They found voluntary disclosure of audit committee activities to be more common for depository institutions, larger companies, NYSE-listed companies, and companies with more independent audit committees.

Table 5
Diligence Studies

Study	Method	Companies/ Subjects	Domain	Results
Carcello et al. [2002]	Archival	150 public companies on NYSE, NASDAQ, or AMEX	Audit committee disclosure	Voluntary disclosure of audit committee activities was more common for depository institutions, larger companies, NYSE-listed companies, and companies with more independent audit committees.
Archambeault and DeZoort [2001]	Archival	30 cos with suspicious auditor switches	Auditor switching	Companies that made suspicious auditor switches held fewer audit committee meetings than matched companies without suspicious auditor switches.
Abbott et al. [2000]	Archival	78 fraud and no-frauc cos	Fraudulent financial reporting	Firms with audit committees that met at least twice per year were less likely to be sanctioned by the SEC for fraudulent or misleading financial reporting.
Abbott and Parker [2000]	Archival	500 NYSE, AMEX, and NASDAQ cos	Auditor selection	Firms with audit committees that met at least twice per year were more likely to use specialist auditors.
Beasley et al. [2000]	Archival	66 fraud cos in three industries	Fraudulent financial reporting	Fraud companies in the technology and healthcare industries held fewer audit committees meetings than industry benchmarks.
Collier and Gregory [1999]	Survey and Archival	141 U.K. cos	Meeting activity	Presence of a dominant CEO and insiders on the audit committee were negatively related to the level of annual audit committee activity (number of meetings and duration of meetings). Presence of a Big 6 auditor and leverage were positively associated with the level of annual audit committee activity.

Table 5 – (Continued)
Diligence Studies

Study	Method	Companies/ Subject	Domain	Results
Turpin and DeZoort [1998]	Archival	33 cos disclosing an AC report	Audit committee report disclosure	Results indicated significant positive associations between voluntary audit committee report disclosure in annual reports and company size, proportion of outside directors, leverage, and trade on a major stock exchange.
McMullen and Raghunandan [1996]	Archival	51 cos with financial reporting problems	Financial reporting	Companies with reporting problems were less likely to have frequent audit committee meetings.
Menon and Williams [1994]	Archival	200 randomly selected OTC cos	Board reliance on the audit commmittee	Audit committee meeting frequency was positively associated with firm size.
Kalbers and Fogarty [1993]	Survey	External auditors, internal audits, and CFOs from 90 U.S. cos	Audit committee effectiveness and power	When evaluating dimension of power related to ACE, the will to act was perceived to be the most important audit committee member attribute affecting effectiveness.

The audit committee diligence literature clearly demonstrates the importance of having an adequate number of meetings each year. Greater meeting frequency is associated with a reduced incidence of financial reporting problems and with greater external audit quality. Several factors, including board independence and company size, are associated with meeting frequency. In terms of other diligence research, one study documents a relation between assessed audit committee diligence and perceived ACE, and others have related voluntary audit committee disclosures to such characteristics as director independence and company size.

The primary limitation of this research area is that actual diligence is not observable by researchers, so various proxies must be used. While the number of meetings provides some signal regarding effort, factors such as audit committee motivation and incentives have received very little attention. We encourage research on sources of audit committee member motivation, as well as studies examining the effect of different audit committee member compensation schemes. As Kalbers and Fogarty [1993, p. 44] highlighted "...audit committee members must bring a *desire* to carry out their duties." Factors potentially affecting this desire have not been adequately examined. For example, researchers could address the possible motivational effects of audit committee stock ownership and the impact of penalties (litigation, reputation damage, etc.) for poor audit committee performance.

5.0 FUTURE RESEARCH DIRECTIONS

The preceding review indicates that each of the four factors contributing to ACE has been examined to some degree, but significant opportunities exist in each area. Before offering more explicit suggestions for future research in each area, we pose a fundamental research question: "Can the audit committee ever hope to meet the expectations placed on it by various stakeholders and actually achieve ACE given its current structure (e.g., part-time, limited resources)?" Addressing this question requires consideration of the upper limits of audit committee performance and changes in stakeholder expectations. While it may be argued that audit committees are the last line of defense when it comes to financial reporting governance, this expectation may be inconsistent with their current structure. We encourage research on this fundamental issue, including new insights on other possible structures for the audit committee that would enhance ACE.

The sections below highlight specific research opportunities within each of the four ACE components. We also offer additional research questions, as well as some thoughts on research methods.

5.1 Composition

First, we believe that it is important to enhance the richness of audit committee composition measures. For example, additional work should use more complete and specific assessments of audit committee member financial expertise, governance expertise, and independent thinking to identify the factors most associated with ACE and to evaluate the types of experience, knowledge, and abilities needed by audit committee members. For example, research could address whether overall audit committee experience and current audit committee tenure affect overall ACE. Studies that include such variables could help to address questions about the need for audit committee member rotation.

Second, with recent recommendations and requirements related to member independence, financial expertise, and financial literacy, additional research is needed to assess changes in ACE as a result of the new requirements. Interest should focus on whether the new requirements result in largely cosmetic changes or whether they appear to be associated with increased ACE.

Third, we highlight the need to push audit committee research beyond individual-based studies to consider issues at the team level. While practical constraints (e.g., accessing adequate numbers of subjects, accessing members working in their committees) are prevalent, certain methods (e.g., field studies) provide opportunities for progress on several questions. For example, future research is needed to evaluate what mix of audit committee member backgrounds best promotes ACE. Numerous questions remain about whether audit committees should be composed primarily of accounting experts or of members with a mix of finance, accounting, and auditing competence. In addition, our review of the literature indicates that there is relatively little research on group variables (e.g., committee member interaction and teamwork, group process loss and gain, member dominance) that can affect ACE. The team aspect of audit committees is essentially unexplored, yet considerable literature in organizational behavior and psychology [e.g., see Guzzo and Shea, 1992] could help to guide this research.

Finally, we encourage research on the ability of public companies to attract audit committee members in the current environment. Of particular interest is whether the ability to attract audit committee members varies with company characteristics such as size, industry, and proxies for agency costs.

5.2 Authority

First, we believe that additional research is needed to track the expansion of audit committee responsibilities, including, for example, oversight of the IT/IS domain, international accounting and auditing issues, and the corporation's relationship to the external audit firm. The IT/IS area provides a good example of such an emerging area because some are calling for the audit committee to expand its responsibilities in this area. KPMG's Audit Committee Institute [2002] found that a majority (63%) of 700 audit committee members and senior management members surveyed believe that "the board and/or audit committee needs to improve their oversight of their company's information security." The NACD [2001] highlighted the need to consider audit committee responsibility over IT/IS domains and whether members are competent to provide effective oversight in this area. Similarly, Horton et al. [2000, p. 3] noted that audit committees should "insist that systems and their users provide adequate management control and accountability balanced against the needs of the organization, and require that information be protected from unauthorized or unintended modification, destruction, disclosure, or other endangerment." The rapid rate of growth and change in IT/IS, and relative ambiguity in audit committee responsibilities and capabilities in the area justify future study.

Second, we encourage research on the ultimate source of the audit committee's authority, the board of directors. Specifically, we recommend research that investigates how and why the board's degree of reliance on the audit committee varies and how this variation is associated with ACE. Finally, we highlight the need for more authority research focusing on the relationships and interfaces among audit committees and external auditors, internal auditors, management, and legal counsel given the required dependencies among groups. Such research could expand current understanding of how the audit committee's authority is affected by its relationships with other participants in the governance process.

5.3 Resources

First, we highlight the need for research on factors that are associated with the quality of information provided to the audit committee and how information quality affects ACE. Research specifically addressing information flow to the audit committee could provide important insights on how to develop better information systems for audit committees.

Second, we suggest the need for research on the audit committee's use of outside advisors in the pursuit of ACE. Specifically, such research should evaluate the extent that audit committees use outside advisors and the types of support provided by such advisors. In addition, these resource studies could test whether there is an association between ACE and advisor usage (or the type of advisor), and whether any evidence of causal links exists.

Third, additional research is needed to better understand the relationships among the audit committee, internal auditors, and external auditors. The audit committee needs external and internal auditors to stay up-to-date on emerging accounting issues and changes, as well as on certain company-specific issues. For example, relevant and reliable information about technical accounting issues is essential for dealing with auditor-management disagreements. While the experimental literature has started to address ACE in such disputes [e.g., DeZoort and Salterio, 2001; Knapp, 1987], more research is needed to understand audit committee interaction with and reliance on auditors, management, and other stakeholders (e.g., legal counsel, other directors). In addition, we suggest research on the dynamics of typical audit committee-auditor interactions and relationships, with specific focus on the impact of new regulations.

5.4 Diligence

The relative paucity of audit committee diligence research (beyond the meeting frequency proxy) is probably due in large part to the methodological challenges associated with measuring and assessing the construct. Diligence is extremely difficult to observe directly, so innovative methods are needed for progress in the area. Clearly, many opportunities for further research remain.

First, we suggest that future studies consider alternative proxies for diligence or incentives when direct measurement is not possible. For example, empirical research is needed to assess whether ACE is affected by incentive variables such as audit committee member stock holdings or member compensation amount (e.g., base director stipend, base audit committee stipend, meeting fees) and type (e.g., cash, stock). Fundamentally, we need to address what makes audit committee members vigilant and willing to ask important questions that challenge management, internal auditors, external auditors, and other audit committee members. This stream of research also could focus on alternative forms of accountability (e.g., justification, feedback) and their impact on member and committee performance, as well as on the risks / penalties associated with audit committee service. For example, it is important to understand such factors as litigation risk, reputation damage, possible loss of future board opportunities, etc. and their relation to audit committee member motivation.

Second, we suggest the need to focus on process variables such as setting the committee agenda, evaluating and updating the charter, considering the committee's responsibilities in the context of other committees' responsibilities, and gathering relevant and reliable information from management, external auditors, and internal auditors. Each of these variables is a potentially important component of diligence and could be useful in establishing correlational or causal links to ACE.

5.5 Other Issues

One of the limitations of the ACE framework used in this paper is the likely overlap and interaction among the four formative components. Additional research is needed to explore such issues. For example, understanding of ACE could improve considerably from studies of how composition variables (e.g., independence, expertise) interact with authority variables (e.g., degree of board reliance on the audit committee) and resource variables (e.g., external and internal auditor support). Future research also should examine the extent to which stakeholders associate the quantity and quality of audit committee disclosures with committee competence, authority, and/or diligence.

We also highlight the need to assess the generalizability of research findings to date. For example, future research is needed to assess audit committee performance in international and multinational settings. Specific issues of interest include (a) how U.S.-based findings related to ACE components apply in international and multinational settings, (b) whether cultural and economic differences affect the components of ACE, and (c) whether desired member skill sets, resources, and diligence differ across country and culture. We also encourage future ACE research that extends beyond publicly-traded companies to evaluate the role of the audit committee in private companies and other organizations. Research could address the actual and perceived benefits of audit committees in these settings, as well as auditors' focus on the audit committee in assessing risk in such organizations.

Finally, we emphasize the need to consider alternative research methods to triangulate the literature and provide new theoretical and practical insights to enhance ACE. Our review indicates the relative dominance of archival and survey methods in audit committee studies to date. Psychology-based experimental research involving audit committee member judgment and decision-making is less common, presumably because of the inherent challenges in accessing directors. Analytical modeling and experimental markets (economics) have yet to emerge in the audit committee literature, although they represent viable methodological complements. For example, analytical modeling could be useful in developing theory related to audit committee members' incentives under different reward (compensation) and penalty (legal liability) schemes. Alternatively, experimental markets lend themselves to the use of alternative subject groups (e.g., students) in tightly controlled laboratory settings. Such experiments could provide useful insights into the impact of incentives and information quality and flow on ACE.

Ultimately, while the extant ACE literature provides many key insights, our framework and synthesis of the literature highlight numerous opportunities for improved understanding in the area. Given recent regulatory developments, ACE research should continue to be of interest to academics, professionals, and regulators. Researchers should continually monitor regulatory and professional developments to identify research projects that may directly contribute to the national dialogue on corporate governance and financial reporting.

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Knapp conducted an experiment to investigate factors that could influence audit committee member support for the external auditor in auditor-management disputes. He hypothesized that members would be more likely to support the auditor when they were corporate managers, when a Big 8 auditor was used, when the dispute was related to objective accounting standards, and when the auditee was in poor financial condition. Using a repeated measures design involving 179 audit committee members from California companies, the experiment involved auditor-management disagreements on subsequent event disclosure and materiality related to a proposed adjustment. The results revealed overall support for auditors in the disputes, although support was diminished when the members were not corporate managers, when the auditee was in strong financial condition, and when objective professional standards were absent.

2. Kalbers, L. P. and T. J. Fogarty. 1993. Audit committee effectiveness: An empirical investigation of the contribution of power. *Auditing: A Journal of Practice & Theory* 12 (Spring): 24-49.

Kalbers and Fogarty investigated the relation between ACE and audit committee power. They hypothesized that audit committee effectiveness is a function of the types and extent of audit committee power. Using LISREL to assess the results of a survey involving audit committees members from 90 U.S. corporations, they found that effectiveness included oversight of financial reporting, external auditors and internal control. In addition, the results indicated that audit committee power within the organization came from a combination of written authority and the clear support of top management.

3. DeZoort, F. T. 1998. An analysis of experience effects on audit committee members' judgments. *Accounting, Organizations and Society* 23 (January): 1-22.

DeZoort examined whether experience affects audit committee members' oversight judgments. A sample of 87 audit committee members completed an internal control oversight task to evaluate whether experience facilitated comparability with a criterion group of external auditors. The results indicated that both general domain and task specific experience made a significant difference in audit committee members' internal control assessments. Members with experience made internal control judgments more like auditors than did members without experience. In addition, experienced audit committee members made more consistent judgments, had higher self-insight, higher consensus, and higher technical content levels for additional items provided than did the members without experience.

4. Carcello, J. V. and T. L. Neal. 2000. Audit committee composition and auditor reporting. *The Accounting Review* 75 (October): 453-467.

Carcello and Neal evaluated the relation between audit committee composition and the likelihood of receiving a going concern opinion. Using a sample of 223 financially distressed companies from 1994, they found a negative association between the percentage of affiliated (inside and grey) members on the committee and the likelihood of receiving a going concern opinion from the external auditor.

5. Klein, A. 2002a. Economic determinants of audit committee independence. *The Accounting Review* 77 (April): 435-452.

Klein explored factors associated with variations in audit committee independence. Using a sample of 803 firm-years on the S&P 500, she found that audit committee independence was positively associated with board size and board independence and negatively associated with growth opportunities and firms with losses. The results suggest a negative relation between audit committee independence and the value relevance of accounting earnings.

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