The Effects of Audit Committee Ties and Industry Expertise on Investor Judgments

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ABSTRACT: Despite regulations mandating audit committee economic independence, the CEO may still influence audit committee members’ objectivity through social ties (e.g., belonging to the same country club) or professional ties (e.g., having served on boards together). Additionally, prior archival research finds that audit committee industry expertise enhances financial reporting quality. Nonetheless, information about ties and industry expertise are not currently publicly disclosed in regulatory filings. In an experiment with 342 reasonably informed investors, we find, as hypothesized, that ties (professional or social) and industry expertise affect assessments of audit committee independence and competence. Using planned contrast tests, we also find that investors assess audit committees with no ties and industry expertise (social ties and no industry expertise) as the most (least) effective and also result in the highest (lowest) likelihood of investing. Further, the potential negative effects of social ties on investor’s judgments are muted when there is industry expertise present, while the presence of no ties appears to decrease negative effects on investor judgments due to a lack of industry expertise. This study provides important baseline evidence supporting the relevance of audit committee ties and industry expertise information to investors and thus suggests the value of increased disclosures to investors of such information to enhance their ability to make more informed investment decisions.

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INTRODUCTION

Prior research suggests that it is important to distinguish between the “substance” and the “form” of the independence of board committees (Carcello, Hermanson, and Ye 2011a; Carcello, Neal, Palmrose, and Scholz 2011b; Cohen, Krishnamoorthy, and Wright 2008). That is, boards and subcommittees may appear to be independent, but, in fact, they may not be substantively objective. That is, members of the audit committee are not permitted to have any material economic affiliation with the company or its management and yet they often have social (e.g., belonging to the same country club) or professional (e.g., having served on boards together) ties or associations with the CEO or other members of top management that may impair audit committee members’ objectivity (Westphal and Stern 2006; Cohen et al. 2008; Guedj and Barnea 2007).

Social or professional ties are potentially problematic as demonstrated by Carcello et al. (2011b) who report that companies are more likely to have restatements when the CEO has influence over the nominations committee to appoint members to the audit committee who have social or professional ties with the CEO. A recent survey of investors found that a close relationship between the CEO and a board member is the single most significant factor that impedes the replacement of an underperforming director (PricewaterhouseCoopers 2014). Further, Cohen, Gaynor, Krishnamoorthy, and Wright (2011) find that auditors are more willing to stand firm in disputes with management if they perceive an audit committee to be substantively independent as opposed to an audit committee that is under management’s influence. Because of the potential negative impact of a lack of substantive audit committee independence, some argue that social and professional ties should be more fully disclosed in
proxy statements and other regulatory filings to alert users of the financial statements (Cain, Loewenstein, and Moore 2005; Lerner and Tetlock 1999; Simonson and Nye 1992).

In addition to objectivity, another important audit committee characteristic that is likely to impact the committee’s effectiveness is the competence of its members. In this vein, audit committee industry expertise has been documented to be important in enhancing financial reporting quality. For instance, Cohen, Hoitash, Krishnamoorthy and Wright (2014) find that the industry expertise of audit committees is positively associated with financial restatements and discretionary accruals. However, similar to the lack of disclosure of ties between audit committees and management, the disclosure of industry expertise is not mandated. Disclosure of industry expertise could send a signal that board members who may have ties with management are appointed to the board because of their expertise, and not merely because of social or professional ties with management. Accordingly, this study investigates the impact that knowledge about audit committees’ social or professional ties with the CEO and about industry expertise have on investors’ judgments regarding the independence, competence, and overall effectiveness of the audit committee and, consequently, then on their investment decisions.

Prior archival research has shown that social ties between the CEO and audit committee members impair financial reporting quality (Bruynseels and Cardinaels 2014; Carcello et al. 2011b); however, it is unclear whether professional ties enhance or harm reporting quality.¹ For example, professional ties may potentially have positive effects since these ties provide a basis for a better working relationship in a professional setting. Thus, professional ties could lead to

¹ Bruynseels and Cardinaels (2014) distinguish between two types of social ties: “friendship ties” and “advice networks”. The former relates to non-professional associations (e.g., joint memberships in leisure clubs and charities), and the latter to similar employment and education backgrounds. They posit and find that friendship ties have dysfunctional effects on reporting quality and auditor oversight due to close personal relationships and a lack of independence, while advice networks do not have a negative impact.
greater trust and confidence which in turn could result in audit committee members who are more willing to give honest and thoughtful feedback to management (Beasley, Carcello, Hermanson and Neal 2009). However, professional ties could be detrimental if such prior relationships impede the exercise of sound judgment due to familiarity and/or a close relationship with management. Finally, the Bruynseels and Cardinaels (2014) study used an archival approach and hence is limited to studying the association between audit committee ties and financial reporting quality; in contrast, our study uses a controlled experiment and thus provides an opportunity to make causal inferences. The use of an experimental approach complements archival work in that in an experiment we can explicitly control the nature of ties, while archival research must rely on currently mandated disclosures which are incomplete with respect to disclosure about ties between audit committee members and management (e.g., currently there is no regulatory requirement to disclose social ties between the audit committee member and the management). As a result, archival studies measure professional ties and social ties in a number of different ways and at times combine ties into a single measure, thus, confounding potential differences (Bruynseels and Cardinaels 2014; Chidambaran et al. 2010; Westphal 1999). We are also able to control for other potential confounding factors such as company size, industry, growth, and profitability.

We conduct a 3 x 2 between-participants full-factorial experiment with 342 reasonably informed investors in which we vary the disclosure regarding the type of ties between the audit committee and the CEO (no ties, professional ties, and social ties) and the explicit mention (mention, no mention) of industry expertise of the audit committee. Relying on Source Credibility Theory (Birnbaum and Stegner 1979), we hypothesize that investors will assess higher audit committee independence when there are no ties between the audit committee
members and the CEO than when there are professional or social ties. Further, investors will assess higher audit committee independence when there are professional ties than social ties, since members with professional ties are more likely to want to preserve their professional reputation and social ties are more likely to lead to a closer, personal allegiance to the CEO than professional ties (Westphal 1999). We further posit that investors will assess audit committee members with industry expertise as more competent than those without industry expertise. Finally, we hypothesize that investors will indicate the highest (lowest) level of overall audit committee effectiveness and likelihood of investment when the audit committee has no ties to the CEO and has industry expertise (social ties to the CEO and no industry expertise). The experimental results are consistent with our expectations. Further, we also explore whether the presence of industry expertise will influence investors’ assessments of audit committee effectiveness and investment decisions when social ties are present. We find that with industry expertise, despite social ties, the audit committee is perceived as effective as when there are no ties but lacking such expertise. This result could arise because investors view such individuals as possessing the knowledge to objectively question management if contentious issues arise. Conversely, we also find when exploring the effect on investors’ assessments of audit committee effectiveness and investment decisions of the intermediary condition of no ties and no industry expertise that no ties appears to diminish the negative effects of an audit committee not having industry expertise.

The findings provide a number of important contributions. From a public policy perspective, our results suggest that knowledge about ties between the audit committee and the CEO and about the industry expertise of the committee are relevant to investors in assessing the effectiveness of the committee and in making investment judgments. Since this information is
not currently fully disclosed in publicly available documents, regulators and boards should consider proposals to require or at a minimum encourage these additional disclosures about the audit committee to investors.

In addition, this study directly builds on and extends the study by Bruynseels and Cardinaels (2014). First, Bruynseels and Cardinaels use an archival approach and hence their research is limited to examining the association between audit committee ties and financial reporting quality. In contrast, our study employs a controlled experiment and thus provides an opportunity to make causal inferences about the effects of ties on investor judgments. Second, we extend the Bruynseels and Cardinaels study by examining the effect of ties on assessments of audit committee effectiveness and most importantly on the ultimate investment decision. Third, we manipulate the industry expertise of the audit committee to evaluate if the presence or absence of this expertise attenuates or accentuates the effect of ties on investors’ judgments. This is important because we document that independence and expertise are complex factors that collectively affect investor judgments and decisions. We also build on the research of Rose, Rose, Norman and Mazza (2014) who found that the existence and disclosure of “friendship ties” increased board members’ willingness to approve cuts in R&D expenditures that would allow CEOs to achieve a bonus. We extend Rose et al. (2014) by expanding the notion of ties beyond that of friendship ties and we examine how the joint disclosure of such ties and industry expertise affects investors’ assessment of audit committee independence, competence, overall effectiveness, and investment decisions.

The remainder of the paper is organized into four sections. The next section provides an overview of prior research and presents the hypotheses. This section is followed by a description
of the research method and presentation of the results, respectively. The final section discusses the major findings and their implications for future research and public policy.

THEORY AND RESEARCH HYPOTHESES

This study examines the effect of audit committee independence and industry expertise on investors’ assessments of the effectiveness of the committee and on investment decisions. To place the current research in context, the impact on investors of auditor independence and expertise has been examined in previous studies. Prior research has found that investors place significant reliance on these auditor characteristics. For instance, Krishnamurthy, Zhou, and Zhou (2006) find that during the indictment period for Andersen, abnormal returns were significantly more negative when the market perceived the auditor's independence to be threatened. Further, several prior studies have reported the value of industry knowledge for auditors in enhancing financial reporting quality (e.g., Romanus et al. 2008; Reichelt and Wang 2010) and investor reactions (e.g., Knechel, Naiker, and Pacheco 2007).

In contrast, the focus of the current study is on the audit committee, another important monitor of financial reporting quality. This is the first study to our knowledge that has examined the impact of audit committee ties and industry expertise of audit committee members on investors’ judgments and investment decisions. Further, auditor independence in prior research is linked to economic ties to the company, while our focus is on social or professional ties to management.

Source Credibility Theory

In the psychology and the judgment and decision-making literatures, the perceived credibility of an information source has been found to be a major determinant of the
effectiveness of a communication (McGarry and Hendrick 1974). Generally, Source Credibility Theory posits that individuals evaluate an information source’s credibility based on three constructs: source bias, source expertise, and judge bias (Birnbaum and Stegner 1979). As an application of this theory, we look to the role of the audit committee in monitoring financial reporting credibility.

Since 2000, SEC rules (SEC 2000) have required that the audit committee include a report in the proxy statement indicating whether the committee has reviewed and discussed the audited financial reports with management and the auditors of the company, and if the audit committee has received disclosures from the auditors with respect to their independence. The SEC rules also require that the report from the audit committee explicitly state if the committee has recommended to the board of directors that the audited financial statements be included in the company’s Form 10-K filings with the SEC. These requirements emphasize the crucial role played by the audit committee in informing investors that the financial information provided by management and audited by the company’s independent accountants has passed scrutiny and oversight by the audit committee and hence can be relied upon by stakeholders.

Consistent with Source Credibility Theory, prior accounting research has documented that investors pay attention to the source of information and are sensitive to incentives that may potentially bias information (e.g., Hirst et al. 1995). Specifically, we predict that social and professional ties between the CEO and the audit committee will negatively impact assessments of audit committee independence, and that industry expertise of the audit committee will

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2 Individuals use credibility as a source cue and as a cognitive heuristic to formulate judgments (Chaiken and Maheswaran 1994), to determine attitudes and attitude changes (Petty and Cacioppo 1986) and to make decisions (Birnbaum and Mellers 1983). The importance of credibility as a heuristic has been observed in psychology (see Hovland, Janis and Kelley 1953 and Anderson 1971 for seminal work) and in accounting with respect to auditors (see, for example, Hirst 1994; Reimers and Fennema 1999), financial analysts (Hirst, Koonce and Simko 1995) and investors (see for example, Mercer 2004; Hirst, Koonce, and Miller 1999; Mercer 2005).
positively impact assessments of audit committee competence. Source Credibility Theory (Birnbaum and Stenger 1979) predicts that both independence and competence will, in turn, affect assessments of overall audit committee effectiveness.3 In the sections that follow, the above predictions are further developed as specific hypotheses.

**Independence**

**The Impact Of Social And Professional Ties Between Management And Corporate Governance Parties On Financial Reporting Quality**

The board of directors of a listed company is charged with the responsibility of ensuring that designated “independent” directors meet the definition of “independence” as set forth by the SEC and the stock exchanges. In defining “independence”, Section 10C(a)(3) of the Securities Exchange Act of 1934 requires stock exchanges to consider all relevant factors including a director’s source of compensation from the company and any other affiliation with the company or its affiliate/subsidiary that could impair the director’s ability to act in an independent manner (SEC 2012).4

While regulations prohibit material economic ties between management and the board when determining whether a member is considered to have “independent” status, the existence of other types of ties between the CEO and audit committee members occurs frequently and is not prohibited. For instance, Beasley, Carcello, Hermanson and Lapides (2000) find that

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3 Unlike other settings (e.g., political affiliation of the decision maker or judge), investor bias is less relevant in the context of the current study. One area where investor’s bias may come into play is if they are investing for social responsibility purposes (Simnett, Vanstraalen and Chua2009; Barnea, Heinkel and Kraus 2013), but the context of the case used in the study does not appear to have consequences for socially responsible investing. Accordingly, we do not manipulate investor bias in this study and its effects are randomized.

4 For instance, the director independence standards of Applied Industrial Technologies, a NYSE company, states: “For a director to be considered independent, the Board of Directors must determine that the director does not have a material relationship with Applied, either directly or as a partner, shareholder, or officer of an organization that has a relationship with Applied. In each case, the Board will broadly consider all relevant facts and circumstances, including the director’s commercial, industrial, banking, consulting, legal, accounting, charitable, and familial relationships.” (Applied Industrial Technologies 2013).
approximately one-third of audit committee members interviewed stated they had personal ties to management or other board members at the time they were nominated for membership to the board. Further, Westphal and Stern (2006) report that CEOs routinely recommend their friends for membership to boards.

As noted, prior research suggests that it is important to distinguish between the “substance” and “form” of the independence of board committees (Carcello et al. 2011a, b; Cohen et al. 2008). Social or personal ties are potentially problematic as evidenced by the findings by Carcello et al. (2011b) that companies are more likely to have restatements when the CEO has influence through social or professional ties over the nominations committee that selected audit committee members. Further, a recent survey reveals that investors view a close relationship between the CEO and board members as an impediment to the effective composition and functioning of the board (PricewaterhouseCoopers 2014).

Research (Chidambaram, Kedia and Prabhala 2010; Dey and Liu 2011) addresses the extent to which professional or social networks influence board decision making, and Rose et al. (2014) investigate the impact of disclosure of “friendship” ties (i.e., whether an audit committee member is a friend of the CEO) on investors’ evaluation of the appropriateness of real earnings management through a specific operating decision (altering of R&D expenditures). They find that the existence and disclosure of “friendship” ties increased board member’s willingness to approve cuts in R&D expenditures that would allow CEOs to achieve a bonus. Further, they report that potential investors (MBA students) are more willing to approve the decision to cut R&D expenditures if friendship ties are disclosed. However, that study did not examine how investors perceive the impact of friendship ties on assessments of audit committee effectiveness, nor did it examine the effect of disclosure of the industry expertise of audit committees.
Moreover, the Rose et al. study did not draw a distinction between social and professional ties. Thus, we are not aware of any research that examines how investor knowledge of ties (social, professional or none) that audit committee members have with management affects investor’s judgments regarding the effectiveness of the audit committee nor the effect of such information on ultimate stock investment decisions, the focus of the current study.

Recent research has also focused on how social and professional ties affect management’s and board’s decisions. For example, relying on managerial power theory, Hoitash (2011) reports that in companies in which compensation committees have social ties to management, management’s compensation is higher than in cases where no social ties exist. This finding suggests that even in instances where regulation requires compliance with formal economic independence requirements, management may circumvent these regulations by using their influence to have friends and colleagues appointed to important committees of the board that result in rewarding management with compensation that exceeds what their performance warrants (Bebchuck and Fried 2004). Further, managerial power theory (Bebchuck and Fried 2004) suggests that managers will use their power to help place allies and friends on the board who will accede to management’s wishes even though the board complies with all regulatory requirements concerning expertise and independence. Finally, Bruynseels and Cardinaels (2014) report that financial reporting quality is negatively affected by social ties but not by professional ties.

Thus, the potential exists that financial reporting quality may be compromised if the board, and especially the audit committee, is populated with friends with social ties who may be aligned with management’s interests or with individuals with close professional ties. For example, Hwang and Kim (2009) find a positive association between the existence of social ties
between the CEO and members of the audit committee and the level of earnings management. Specifically, they report that the greater the social ties between management and the audit committee, the greater the magnitude of abnormal accruals.

**Impact of Social and Professional Ties on Assessments of Independence**

We expect that ties will influence investors’ judgments about audit committee independence, given that perceptions of a source’s bias are influenced by the source’s interests (Walster, Aronson and Abrahams 1966) and incentives (Birnbaum and Stegner 1979). First, an audit committee that has members with ties to management may not engage in active questioning at meetings, an action that Gendron, Bédard and Gosselin (2004) state is an essential characteristic of an effective audit committee. Second, if management and audit committee members are connected through ties, management may have more power in negotiations with auditors over financial statement issues, since the audit committee may be more likely to side with management rather than the auditor if a dispute arises. In fact, Cohen et al. (2011) report that auditors are less willing to be as insistent in a financial reporting dispute when they believe the audit committee is under the influence of management than when the committee is substantively independent. Consequently, using Source Credibility Theory, when considering the potential for source bias, it is likely that investors will perceive any ties (social or professional) to management negatively when assessing audit committee independence as compared to where there are no ties. This expectation leads to the following hypothesis.

**H1a:** Investors will assess audit committees with members who have no ties to the CEO to be more independent than audit committees with members who have either social ties or professional ties to the CEO.

Investors are, nonetheless, expected to distinguish between the type of ties (social or professional) that audit committee members have with management when evaluating audit
committee independence. Professional ties may offer potential benefits, since management and audit committee members may develop a business relationship, leading to trust and confidence and a good working rapport where members may be willing to be candid (Bruynseels and Cardinaels 2014; Beasley, Carcello, Hermanson and Neal 2009; Hoitash 2011). Moreover, as noted, Bruynseels and Cardinaels (2014) found no negative association between ties through an “advice network”, analogous to professional ties, and measures of financial reporting quality. Hence, audit committee members who have professional ties may be perceived by investors as being appointed because of their professional reputation and, thus, may be perceived to be more independent and thereby less likely to improperly acquiesce to management than those with social ties. Preserving their professional reputation to serve on other boards in the future will be paramount. On the other hand, social ties have the potential to negatively impact the perceived independence of an audit committee member, and social ties are more likely to induce closer bonding and allegiance than professional ties (Westphal 1999; Cohen et al. 2008). Thus, investors are likely to assess audit committee members with social ties to management to be less independent than those with professional ties, as posited in the following hypothesis.

**H1b:** Investors will assess audit committees with members who have professional ties to the CEO to be more independent than audit committees with members who have social ties to the CEO.

**Competence**

**Impact of Industry Expertise on Assessments of Competence**

As discussed, in addition to independence, the credibility of a source is also dependent on competence. Source Credibility Theory predicts that investors will value the competence of audit committee members possessing various types of expertise, including financial and industry expertise. Sarbanes-Oxley mandates disclosure about the
presence of a financial expert on the audit committee or an explanation of why such expertise is not present, and research has documented that markets react favorably to the appointment of a financial expert on the audit committee (e.g., DeFond, Hann and Hu 2005).

Unlike financial expertise, industry expertise is not mandated by the SEC or related regulations and there is no requirement that industry expertise on the audit committee be disclosed to investors; yet research has found that this form of expertise is associated with higher financial reporting quality (Cohen et al. 2014). Specifically, using archival data from 2001-2007, Cohen et al. (2014) find that audit committee members with industry expertise add incremental value in enhancing financial reporting quality over those with strictly accounting expertise.

Industry expertise is important because the accuracy of accounting estimates (e.g., warranties) is dependent upon a strong knowledge of a company’s business operations and the industry in which it operates (e.g., warranty obligations, product portfolio, inventory obsolescence, expected warranty costs). Further, the ability to effectively assess a company’s business health and strategy may affect the accuracy of going concern judgments and these judgments are crucial to the assumptions and estimates that underlie financial reporting. Appropriate internal controls are also linked to the nature of a company’s business operations within its industry setting (Arens, Elder, and Beasley 2015). Finally, prior research also finds that application of specific accounting standards and practices such as those related to revenue recognition may require industry knowledge (Beasley et al. 2000, 2010). In all, the value of audit committee industry
expertise is perhaps best exemplified in an interview study conducted by Cohen et al. (2010) as reflected by the following statement by an experienced audit partner:

Audit committee members usually try to replicate what the management or the auditors have done rather than bring a new perspective, which is a business perspective that says that given what I see is going on in the industry or . . . that I make of this business, should we be . . . putting more reserves or should we be following this capitalisation policy. ...you need less technical knowledge for it, but more business savviness.

It is clear from SEC documents that both the SEC and other stakeholders view industry expertise to be an important attribute for audit committee members (SEC 2003). Thus, from a Source Credibility Theory perspective, industry expertise of the audit committee relates to a source’s competence and will be favorably valued by investors. However, this presumption has yet to be empirically examined and forms the basis for the hypothesis below.

H2: Investors will assess audit committees with members who have industry expertise to be more competent than audit committees with members without industry expertise.

Audit Committee Effectiveness (Contrast Tests)

Source Credibility Theory predicts that both independence and competence (source bias and source competence) jointly influence the overall perceived credibility and overall effectiveness of a source such as the audit committee. As expected, prior research has found that sources that are high on both independence and competence are perceived as more credible than those that are weak on either or both of these dimensions (Schulman and Worrall 1970; Warren 1969; Whittaker and Meade 1968). In all, we posit a contrast test (boundary conditions) where audit committees with members who have no ties to the CEO (no source bias) and who also have industry expertise (presence of source competence) will likely be viewed by investors as the most effective, while audit committees with members who have both social ties to the CEO and no industry expertise would be seen as the least effective.
Of particular importance in understanding the attributes that are likely to impact the perceived effectiveness of the audit committee are situations where the baseline competency of the source is expected to be reasonably high such as the case of audit committee members. *De facto*, SEC regulations require that all members of the audit committee of public companies are financially literate, with at least one member designated as a financial expert, thus providing a “floor” with respect to the competence of the audit committee. Further, the unique, overriding monitoring role of the audit committee is also expected to lead shareholders to also focus heavily on independence.

We do not predict any interactions of the effects on investors’ assessment of audit committee effectiveness for the intermediary conditions where either independence or competence varies, e.g., higher independence and lower competence versus lower independence and higher competence, since our overriding framework, Source Credibility Theory, does not posit a greater effect of one over the other. However, as will be discussed in the additional analysis section, we explore differences in these conditions to examine the manner in which investors appear to make trade-offs between audit committee independence and competence. These expectations lead to the following contrast hypothesis.

H3: Investors’ will assess the overall effectiveness of the audit committee to be the highest (lowest) when the audit committee has no ties to the CEO and has industry expertise (social ties to the CEO and has no industry expertise).

**Path Model**

In sum, as depicted in the path model in Figure 1, our hypotheses suggest that assessments of audit committee independence and competence positively impact audit committee effectiveness, which in turn, affects the assessed credibility of financial reports and ultimately investors’ investment decisions. Based on the archival findings of Bruynseels and Cardinaels (2014) on financial reporting quality, we expect that assessments of the effectiveness of
monitoring provided by audit committees will affect the perceived credibility of financial reports. When participants assess audit committee effectiveness in monitoring the accuracy of financial reports to be high (low), this is likely to lead them to assess financial reports as more (less) credible (i.e., level of information risk), hence increasing (decreasing) the likelihood of investing in the company. These links are grounded in Source Credibility Theory (Birnbaum and Stegner 1979).

**Investment Decisions**

Beyond investor assessments of the effectiveness of audit committees, it is important to understand if social and professional ties and industry expertise are of sufficient concern that they have a “decision effect” and ultimately impact investment decisions. Similar to investor assessments of audit committee effectiveness, we predict a contrast test that both audit committee independence and competence will jointly affect investment decisions. Specifically, Source Credibility Theory would predict that, ceteris paribus, investors will view the absence of any ties (no source bias) and the presence of industry expertise (a high level of source competence) as the most favorable with respect to their decision to invest. Conversely, Source Credibility Theory predicts that the presence of social ties and the absence of industry expertise will be viewed as the least favorable set of factors with respect to their investment decision. These expectations lead to the final hypothesis.

H4: Investors’ will be most (least) likely to invest in companies when audit committee members have no ties and have industry expertise (social ties and no industry expertise).

A summary of our hypotheses are presented in Table 1.
**METHOD**

**Design**

To test our hypotheses, we use a 3 x 2 full-factorial, between-participants experiment. Ties between audit committee members and the CEO are manipulated to reflect either no ties or ties. Specifically, in the ties conditions two (out of three) members of the audit committee are either socially connected to the CEO (SOC TIES) or serve with the CEO on the boards of other companies (PROF TIES). In the third condition, none of the audit committee members have either social or professional ties with the CEO (NO TIES).

The second factor, industry expertise, is manipulated at two levels: industry expertise mentioned; or not mentioned. In the industry expertise mentioned (IND EXP) condition, participants are told that the audit committee chair and one other member of the audit committee (i.e., 2 of 3 members) have extensive industry experience serving on boards and audit committees of other public companies in the same industry. In the other condition (NO IND EXP), no mention was made about the industry expertise of the audit committee members. In all conditions the audit committee is comprised of three members, with the committee complying

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5 For this manipulation, the audit committee could potentially be portrayed as having a minority (1 out of 3), majority (2 out of 3), or all (3 out of 3) members of the committee with social or professional ties to the CEO. Depicting all member of the committee with social or professional ties could result in a manipulation that is unusually strong, thus creating a potential demand effect that would bias results in favor of the intended manipulation. Depicting a minority of members with social or professional ties could send a signal that the majority (2 out of 3) with no such ties could mute the potential effect of such ties between the lone audit committee member and the CEO, resulting in an overly diluted effect of social or professional ties on the audit committee taken as a whole. For these reasons, and to avoid the polar conditions of minority or all members with social or professional ties, we chose to portray the audit committee as having a majority of members with social or professional ties to the CEO. Future studies could examine different thresholds (e.g., minority or all) to study its effect on investors’ judgments and decisions.

6 In designing the experiment, we chose orthogonal separation of social and professional ties in order to isolate, as best as possible, the distinct effects of professional and social ties. While this orthogonal separation may not always hold in practice, such separation affords an opportunity to strengthen internal validity and test the relative impact of each type of tie—a test that is not feasible when using empirical data in archival settings.
with current regulatory requirements (i.e., all members are financially literate and do not have financial or business ties to the company, and one member is designated as a financial expert).

The order of the information on audit committee member independence and competence is held constant across conditions. Given limited participant time, this information is presented in summary form rather than the often lengthy disclosures contained in proxy statements. This practice is consistent with prior experimental studies (e.g., Rose et al. 2014; Cohen et al. 2011).

**Participants**

Given the context of our study, it is important for participants to understand the role of the audit committee and have experience in making investment decisions. Further, we ask participants to make judgments requiring a high level of integrative knowledge (assess the effectiveness of the audit committee and make an investment decision). Elliott, Hodge, Kennedy, and Pronk (2007) and Elliott, Jackson, Peecher and White (2014) find that advanced M.B.A. students with good knowledge of accounting, finance, and financial statement analysis are good surrogates for reasonably informed investors. Thus, we sought individuals who possess a similar level of knowledge.

Participants were 342 business professionals in the southeastern region of the United States. To obtain a sufficient number of reasonably informed participants for all of the experimental conditions it was necessary to enlist the professionals at three settings: two continuing professional education conferences; and one alumni-related business meeting.7 Our

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7 Demographic data on participants (e.g., work experience, investment experience, etc.) did not statistically differ across experimental conditions or between the two conference settings at which data were gathered. However, differences were noted between those attending the business meeting versus those at the CPE conferences for work experience (mean = 10.24 years versus 16.31) and investment experience (mean = 4.88 versus 10.66). When these variables are included as covariates in our models, only work experience is significant with respect to competence judgments. Thus, we include work experience as a covariate in our ANCOVA to test H2.
participants had extensive professional experience (94.1% reported having a professional certification, e.g., CPA, work experience averaging 15.9 years). Importantly, about two-thirds (66.9%) had significant personal investing experience with an average of 10.2 years. Of those participants who indicated “0” years of personal investing experience, the average number of years of work experience was 8.0 years, which implies that these participants most likely had, at a minimum, experience in choosing among retirement investment alternatives. Removal of these participants from the sample does not qualitatively change our conclusions.

**Procedure**

Conference data were collected at the beginning of either the first or second day of a two-day continuing professional education program. The focus of the conference programs was on current issues in professional accounting and did not address the topic examined in this study. Participants’ packets were placed at each seat prior to participants entering the conference room and included an instrument for one of the conditions sorted in random order. One of the researchers attended the conferences and provided a short introduction requesting attendees to voluntarily participate in a study that addressed an important accounting-related issue. Participants were then instructed to complete the instrument during the day and return it to the conference organizers. They were further instructed to complete the instrument independently without consulting with others, since the focus of the study was to capture individual judgments. Conference attendees were also informed that a raffle would be conducted after the conclusion of the conference whereby a total of seven iPads would be distributed. Participants returned their completed packets in a sealed envelope to the conference organizers. Data at the business meeting were collected with similar procedures except that the instrument was completed at the
conclusion of the business meeting and participants were offered a chance to enter in a drawing for one of several Amazon gift cards.

Instrument packets also included a brief statement that their involvement entailed completion of a case that required a hypothetical investment decision. Further, background information informed them that the company operated in the financial services industry, which was competitive. Excluding the past recession, the company was able to maintain steady growth. To emphasize the importance of audit committee member industry expertise, the background information indicated that this industry has specialized, unique accounting and regulatory requirements. Participants were also told that the management team was stable in recent years, had a good reputation, and faced similar incentives as others in the industry with compensation based on salary and performance metrics tied to earnings forecasts. Further, they were provided with current and prior year (unaudited) first quarter financial information which indicated a 17% increase in EPS from the prior year. Finally, they were told that the company had exceeded the consensus analyst forecast for the quarter of $2.69 by a narrow margin, since the reported quarterly earnings was $2.70. This scenario was intended to create an environment that suggested incentives for management to report earnings that are sufficient to meet analysts’ forecasts.

Depending on the condition, participants were provided with information about the three members of the company’s audit committee that varied according to the type of ties (either no ties, social ties, or professional ties) two of the members had with the company’s CEO (see Exhibit 1 for a description of the audit committee member descriptions); the third member had no ties to the CEO and was invariant across experimental conditions. Prior research has operationalized professional ties and social ties in a number of different ways (Chidambaran et
Social ties have been captured in the prior literature as a situation in which the board member and a member of top management have been students at the same undergraduate institution, sit on the boards of the same non-profit, or belong to the same social club (Cohen, Frazzini and Malloy 2008, 2009). Given that prior archival research focuses on the importance of a shared educational institution (Dey and Liu 2011), we chose to operationalize social ties as going to the same graduate university and remaining in contact as friends in the years since graduation. As Chidambaran et al. (2010 5) state, “the important component of educational ties, the one that matters the most, relate to cultural origins from belonging to similar institutions and sharing similar alumni networks”.

To capture the effect of industry expertise, we either explicitly stated that the audit committee chair and another member of the audit committee had extensive experience serving on the boards and audit committees of other public companies including two other companies in the same industry (i.e., in the financial services industry), or we omitted that statement. Serving on boards in a similar industry can enhance the knowledge of the audit committee member in fulfilling his or her role (Cohen et al. 2014). Finally, the case indicated that the audit committee met all of the requirements of the SEC and the Sarbanes-Oxley Act. Thus, the audit committee was independent in “form” and had at least one member with financial expertise.

**Dependent Variables, Manipulation Checks, and Demographic Data**

After reading the case facts, participants were asked, using the constructs from Source Credibility Theory of bias and competence, to assess the extent to which the audit committee: (1) was “truly independent (unbiased) of the company’s CEO in ensuring the accuracy of financial reporting”, and (2) “had the requisite competence (i.e., sufficient ability and knowledge) to ensure accurate financial reporting.” These measures were collected on 11-point scales where
the endpoints were labeled “0 - Not At All Independent (No Competence)” and “10 – Extremely Independent (Very High Competence)”. Participants were then asked to assess how effective the audit committee will be in ensuring the accuracy of financial reporting as well as the credibility of the financial reports. These measures were collected on 11-point scales whereby the endpoints were labeled “0 – Not At All Effective (No Credibility)” and “10 – Extremely Effective (Very High Credibility)”. The final two questions in this section of the instrument asked the participants to indicate how likely it is that they would consider the company as a potential investment and how attractive the company is as an investment. Responses were collected on 11-point scales whereby the endpoints were labeled “0 – Not At All Likely (Attractive)” and “10 – Extremely Likely (Attractive)”. Since these two measures reflect investment judgments and are highly correlated (Pearson correlation= 0.877, p < 0.001), we collapsed (summed) them into a single variable.⁸

Participants were then asked to place this portion of the instrument in an envelope provided and then proceed to the final set of questions, where we gathered manipulation check and other demographic data related to work and investment experience. In addition, conference participants completed a postcard with contact information in order to register for the iPad raffle; the postcard was separated from their responses on the instrument to preserve anonymity.

RESULTS

Manipulation Checks

Manipulation checks were conducted to ensure that participants understood our manipulations as intended. Thus, participants were asked if they were told that the CEO had

⁸ Cronbach’s alpha for the items is 0.935.
social ties with certain members of the audit committee and if they were told that the CEO had
professional ties with certain members of the audit committee. We found that overall, 95% of
participants responded correctly with respect to their condition, with no statistical difference in
the percentage of those who answered correctly across conditions (F = 1.01, p = 0.366). Since
the results do not qualitatively change with those participants who failed the manipulation checks
excluded from the analyses, to enhance the power of the analyses all participants are included in
our tests of the hypotheses. With respect to industry expertise, we asked participants to indicate
on an 11-point scale audit committee “knowledge of the business and the industry”; we found
that those in the NO IND EXP conditions perceived the audit committee was less knowledgeable
(mean 5.11) than those in the IND EXP conditions (mean 7.51, p < 0.001), indicating that our
manipulation was successful.

Test of Hypotheses

Panel A of Table 2 provides descriptive statistics for each experimental condition for the
dependent variables tested in Hypotheses 1 through 3: independence; competence; and
effectiveness. H1a predicts that investors will assess audit committees with members who have
no ties to the CEO to be more independent than audit committees with members who have either
social or professional ties to the CEO, while H1b examines whether investors will assess those
with professional ties to be more independent than those with social ties.

To examine H1a and H1b, Panel A of Table 3 reports the results of a two-way ANOVA
with ties and industry expertise as our independent variables and independence as our dependent
variable. The ANOVA results indicate that the effect of ties on participants’ assessments of the

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9 Endpoints were labeled “0 – No Knowledge” and “10 – Very High Knowledge.”

10 We also ran a MANCOVA (untabulated) with the three independent variables tested and work experience (the
only covariate found to be significant with respect to competence). The results of the MANCOVA are consistent
audit committee’s independence is statistically significant \((p < 0.001)\). \(^{11}\) Further, we examine the mean independence score of the NO TIES condition (mean 8.00) to that of the PROF TIES and SOC TIES conditions, collapsed (TIES) (mean = 4.79). Independent t-tests show that the mean independence score for NO TIES is significantly greater than the mean score for TIES \((t = 14.22, p < 0.001)\). We also compare the mean independence score for NO TIES to the PROF TIES and SOC TIES conditions separately and find that in both cases the mean for NO TIES is significantly greater \((PROF \ TIES, t = 9.79, p < 0.001; SOC \ TIES, t = 13.52, p < 0.001)\). Thus, H1a is supported.

To examine H1b, we compare the independence scores for the PROF TIES conditions (mean 5.36) and SOC TIES (mean 4.27) conditions and find them to be significantly different in the expected direction \((t = 3.44, p < 0.001)\). Thus, H1b is also supported.

H2 predicts that investors will assess audit committees with members who have industry expertise to be more competent than audit committees with members without industry expertise. To examine this hypothesis we performed a two-way ANCOVA with ties and industry expertise as our independent variables, competence as our dependent variable, and work experience of the participants as a covariate. The results of the ANCOVA are reported in Table 3, Panel B, and show that the effect of IND EXP is significant \((p < 0.001)\). \(^{12}\) In addition, we conducted independent t-tests for the means in the “NO IND EXP” (mean 7.66) and “IND EXP” (mean 6.48) (across the ties conditions), as well as within each of the ties conditions. Overall, we find that the mean competence score for those in the IND EXP conditions is significantly greater than

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\(^{11}\) The ANOVA also reports a significant main effect for industry expertise \((p = 0.053)\) and an insignificant interaction term \((p = 0.440)\).

\(^{12}\) The ANOVA also reports a marginally significant main effect for ties \((p = 0.072)\) and an insignificant interaction term \((p = 0.117)\).
that of the NO IND EXP conditions (t = 5.51, p < 0.001). For NO TIES, PROF TIES, and SOC TIES, we also find the mean competence score for the respective IND EXP conditions is significantly greater than in the NO IND EXP conditions (NO TIES, t = 1.68, p = 0.048; PROF TIES, t = 2.88, p = 0.035; SOC TIES, t = 2.35, p = 0.011). Thus, H2 is supported.

H3 predicts that investors will assess the overall effectiveness of the audit committees to be the highest (lowest) when members have no ties and industry expertise (social ties and no industry expertise). To test this hypothesis, we first compare the upper boundary condition by comparing the NO TIES-IND EXP condition to all other conditions (except the SOC TIES-NO IND EXP condition where we expect the lowest effectiveness score) using contrast tests. In Table 3, Panel C, we report that the mean effectiveness for the NO TIES-IND EXP (mean 7.41) is significantly greater than the mean effectiveness of the other (NO TIES-NO IND EXP, PROF TIES-NO IND EXP, PROF TIES-IND EXP, SOC TIES-IND EXP) conditions (mean 6.55, untabulated, t = 2.61, p = 0.007).

Second, we examine the lower boundary condition in which we compare the SOC TIES-NO IND EXP condition to all other conditions (except the NO TIES-IND EXP condition where we expect the highest effectiveness score) using contrast tests. We find that the mean effectiveness for the SOC TIES-NO IND EXP (mean 5.10) is significantly lower than the mean effectiveness of the other (NO TIES-NO IND EXP, PROF TIES-NO IND EXP, PROF TIES-IND EXP, SOC TIES-IND EXP) conditions (mean 6.55, untabulated, t = 4.26, p < 0.001). In all, H3 is thus supported.

In line with H3 above, H4 predicts that investors will be the most (least) likely to invest when members have no ties and industry expertise (social ties and no expertise). To test this hypothesis, we first compare the upper boundary condition by comparing the NO TIES-IND EXP condition to all other conditions (except the SOC TIES-NO IND EXP condition where we expect the lowest effectiveness score) using contrast tests. In Table 3, Panel C, we report that the mean effectiveness for the NO TIES-IND EXP (mean 7.41) is significantly greater than the mean effectiveness of the other (NO TIES-NO IND EXP, PROF TIES-NO IND EXP, PROF TIES-IND EXP, SOC TIES-IND EXP) conditions (mean 6.55, untabulated, t = 2.61, p = 0.007).

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Second, we examine the lower boundary condition in which we compare the SOC TIES-NO IND EXP condition to all other conditions (except the NO TIES-IND EXP condition where we expect the highest effectiveness score) using contrast tests. We find that the mean effectiveness for the SOC TIES-NO IND EXP (mean 5.10) is significantly lower than the mean effectiveness of the other (NO TIES-NO IND EXP, PROF TIES-NO IND EXP, PROF TIES-IND EXP, SOC TIES-IND EXP) conditions (mean 6.55, untabulated, t = 4.26, p < 0.001). In all, H3 is thus supported.
EXP condition to all other conditions (except the SOC TIES-NO IND EXP condition where we expect the least favorable investment decision) using contrast tests. The results of this independent t-test are reported in Table 3, Panel D. As predicted, we find that the mean investment decision (sum of investment likelihood and investment attractiveness) for the NO TIES-IND EXP (mean 13.00) is significantly greater than the mean investment decision score of the other (NO TIES-NO IND EXP, PROF TIES-NO IND EXP, PROF TIES-IND EXP, SOC TIES-IND EXP) conditions (mean 11.65, untabulated, t = 1.94, p = 0.030).

Second, we examine the lower boundary condition in which we compare the SOC TIES-NO IND EXP condition to all other conditions (except the NO TIES-IND EXP condition where we expect the highest investment decision score) using contrast tests. We find that the mean investment decision score for the SOC TIES-NO IND EXP (mean 9.16) is significantly lower than the mean investment scores of the other (NO TIES-NO IND EXP, PROF TIES-NO IND EXP, PROF TIES-IND EXP, SOC TIES-IND EXP) conditions (mean 11.65, untabulated, t = 3.85, p < 0.001). These results support H4.

Additional Analyses
Judgments in Intermediary Conditions

H3 and H4 are contrast tests that directly examine the boundary conditions wherein we expect the highest and lowest assessment of audit committee effectiveness and investment decisions based on Source Credibility Theory. As discussed, it is unclear from Source Credibility Theory which factor will dominate an investor’s judgments and decisions regarding how they will assess the intermediary conditions wherein both competence and independence may be positively and/or negatively affected. For instance, does the presence of industry expertise influence investor’s judgments as a result of concerns associated with an audit committee member who has social or professional ties with management? Evidence on potential investor
trade-offs between competence and independence is important, since ties are currently allowed, present, and not always publicly disclosed, yet we posit this information will be considered by investors to be relevant in evaluating audit committee effectiveness and in making investment decisions.  

In untabulated results we find no statistical differences in the mean effectiveness for the SOC TIES-IND EXP (mean 6.23) condition versus the NO TIES-NO IND EXP condition (mean, 6.75, t = 1.09, p = 0.285, two tailed) and the PROF TIES-NO IND EXP condition (mean 5.79, t = 0.69, p = 0.491, two tailed) condition. Results also indicate no statistical differences in the mean level of investment in the SOC TIES-IND EXP (mean 11.33) condition versus the NO TIES-NO IND EXP condition (mean, 12.13, t = 0.74, p = 0.463, two tailed) and the PROF TIES-NO IND EXP condition (mean 11.50, t = 0.12, p = 0.904, two tailed). These findings indicate that the presence of industry expertise appears to reduce the negative effect of ties on investors’ assessments of audit committee effectiveness and investment decisions. One explanation for this result is that investors may perceive the appointment of the member was due to industry expertise (competence) and not just having social or professional ties with the CEO.  

Given the results of H1a and H1b regarding the strong negative effect of social ties on investors’ assessments of audit committee independence, in an exploratory fashion we compare the assessments made in the SOC TIES- IND EXP condition to that of the SOC TIES-No IND EXP condition to see if industry expertise can bolster perceived effectiveness and likelihood to invest even when social ties are present. We find using two tailed tests that effectiveness is significantly higher (p=.027) and the likelihood to invest is marginally higher (p=.058) for the

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13 While, as noted, disclosures of professional and social ties are not required to be publicly reported, they are potentially observable by investors due to the availability of network databases such as BoardEx.
SOC TIES- IND EXP condition than for the SOC TIES-No IND EXP condition. These results suggest that industry expertise reduces some of the perceived weaknesses associated with social ties.

We also compare the PROF TIES-IND EXP condition to the NO TIES-NO IND EXP condition. Untabulated results indicate that the mean effectiveness of the audit committee in the PROF TIES-IND EXP condition (mean 6.70) is not significantly different from the NO TIES-NO IND EXP condition (mean 6.75, t = 0.16, p = 0.875). Similarly, with respect to the investment decision, we find that the PROF TIES-IND EXP condition (mean 11.33) is not significantly different to that in the NO TIES-NO IND EXP condition (mean 12.13, t = 1.28, p = 0.203, two-tailed). Analogous to findings relating to social ties, these results indicate that the presence of industry expertise attenuates the negative effects of professional ties on assessments of audit committee effectiveness and investment decisions. In all, the findings suggest while the predicted boundary conditions (NO TIES-IND EXP and SOCIAL TIES-NO IND EXP) are supported, the potential negative effects of ties are reduced by the presence of industry expertise, while the presence of no ties also appears to reduce the effect of the lack of industry expertise.

Collectively, these results are consistent with the tenets of Source Credibility Theory where both source bias and competence are important.

Path Model Findings

Figure 1 reports the results of our path model, which includes the financial reporting credibility and investment decision variables ($\chi^2=402.56$, p=0.001; CFI= 73.1%; IFI=74.9%; TLI=53.9%). We use the path model to consider the relationships among the exogenous and endogenous variables for our full sample where we include all of our six main experimental conditions. We posit that the presence of PROF and SOC TIES directly affects perceptions of
audit committee independence, which in turn affects perceptions of audit committee effectiveness. Further, we posit that audit committee IND EXP affects perceptions of audit competence, which in turn affects perceptions of audit committee effectiveness. As indicated in the model findings, the links between audit committee effectiveness, financial reporting credibility, and investment decision are significant (p < 0.001), as are all paths in the model (p < 0.001). The path model results also confirm H1a, H1b, and H2. That is, ties (industry expertise) have a negative (positive) effect on perceptions of independence (competence), and the negative effect of social ties is greater than the negative effect of professional ties.

**DISCUSSION AND CONCLUSIONS**

The audit committee plays a vital monitoring role in overseeing financial reporting quality. This role is highlighted to investors in the committee’s report included in the proxy statement each year and in the Sarbanes-Oxley Act (2002). Thus, the audit committee is an important source of information to investors about the credibility of the financial statements. Source Credibility Theory predicts both a source’s bias and competence will influence the degree to which a receiver of information will rely on that information. Drawing on this theory, we employ an experimental design to investigate how knowledge of ties (social, professional and no ties) between audit committee members and the CEO and knowledge of the industry expertise (mentioned, not mentioned) of audit committee members affects investors’ assessments of the overall effectiveness of the audit committee and investment decisions. The results indicate ties (industry expertise) negatively (positively) effect assessments of audit committee independence (competence), and the negative effect of social ties is greater than the negative effect of professional ties. Further, audit committees with no ties and with industry expertise (social ties
and no industry expertise) were viewed as the most (least) effective, and subsequently led to the highest (lowest) investment decisions.

In exploratory analysis we also find that industry expertise appears to reduce the negative perceptions of social and professional ties. For instance, audit members who have industry expertise and have social ties are viewed as both more independent and effective than those who have social ties and no industry expertise. This result may be because investors perceive that the audit committee member with social ties and industry expertise is appointed for that individual’s expertise. Thus, the audit committee member is “bringing something to the table” and social ties are not viewed as detrimental as members appointed solely for their social ties with management (Beasley et al. 2009).

This study makes a number of important contributions that also have implications for public policy, corporate governance, and future research. First, by using a controlled experimental approach motivated by Source Credibility theory’s constructs of source bias and source competence, we are able to document the importance of disclosure of ties and industry expertise on investors’ judgments and decisions. Prior archival research has focused on associations and on the effect of ties on financial reporting quality. We complement the archival research by focusing on individual investors’ investment judgments and decisions. The results of the study suggest that the SEC and boards may wish to consider encouraging companies to provide additional disclosures regarding the presence or absence of ties (both social and professional) between management and audit committee members as well as the extent of industry expertise of audit committees. The costs and benefits of providing such information will need to be evaluated more thoroughly but the costs of disclosure appear relatively low compared with the potential benefits that such information can provide to investors. Increased disclosures
about ties will provide greater transparency for investors to assess whether the audit committee has the independence along with the competence to effectively monitor the financial reporting process as intended by current regulations. These disclosures could be self-reported by companies subject to regulatory review much like current reporting of financial literacy and financial expertise.

Relatedly, the results have implications for the nominations and governance committees of companies in terms of appointment of board members and staffing the audit committee. For instance, if investors view certain types of ties (e.g., social ties) to be detrimental to audit committee independence and effectiveness, boards should consider the judgments of investors in their appointment decisions of members, since members who satisfy the regulatory definition of independence may nevertheless not be perceived as independent by investors, e.g., those who have social ties but no industry expertise. In this sense, a focus on underlying ties could enable boards to appoint members that better reflect the “substance” of independence and competence, rather than simply complying with the “form” of regulations in place. Interestingly, our findings suggest that the concern over “form” versus “substance” of independence appears to be mitigated by the presence of industry expertise.

Our results on the importance of disclosing industry expertise is also very important. Prior archival research (Carcello et al. 2011a) has typically focused on financial expertise of audit committees but a recent archival study by Cohen et al. (2014) documents the importance of the industry expertise of audit committee members over and beyond just financial expertise to enhance financial reporting quality. This is the first study to examine whether knowledge of the industry expertise affects the judgments and decisions of individual investors. Industry expertise for audit committees is important because there are many unique industry issues such as
impairment of goodwill or inventory obsolescence. The results of our study suggest that investors do integrate knowledge of industry expertise of audit committees in investment judgments and decisions.

The results concerning the effects of industry expertise also have implications for activist investor groups (Bogle 2005) in that they may wish to examine not only the substance of the independence of audit committee members but also the type of expertise that audit committee members bring to the table. It appears that industry expertise is a valued component of an audit committee’s toolkit (Cohen et al. 2014). Boards thus should seriously consider searching out potential audit committee members who also possess industry expertise as our study triangulates the results of Cohen et al. (2014) on the importance of this form of expertise on financial reporting quality. Thus, our results suggest that nominating committees may weigh both the industry expertise as well as the ties with management of potential audit committee members.

As in all studies, limitations exist. First, in our study, we examined different types of ties as independent of each other. In practice, professional ties could lead to social ties and vice-versa. We made this choice to provide important baseline evidence of the relative effects of social versus professional ties. A future study could evaluate how having both types of ties affects investors’ evaluation of overall effectiveness of the audit committee. Further, there are a number of ways to represent social (military service versus educational background) and professional ties (prior board service in the same industry versus in different industries). Future research is needed to determine if various types of associations affect investor judgments differentially. We also manipulate one type of industry expertise, i.e., extensive experience serving on the boards and audit committees of other public companies including two other companies in the same industry. A future study could examine if this expertise is perceived
differently if manifested in different roles such as an audit committee member who has served (serving) as a CEO or CFO in another company in the industry.

In this study we provided the information about ties to investors. A future study could examine the extent to which investors choose to obtain information on social and professional ties between audit committee members and management and how they weigh that information when making judgments and decisions. For example, an experimental economics-based study could have investors pay for this type of information and see how this affects the subsequent quality of the

To sum up, this study provides initial evidence on how knowledge of social and professional ties and about the industry expertise of audit committees affects investors’ assessments of the effectiveness of the audit committee in monitoring the financial reporting process and their investment decisions. We extend prior research that suggests that strictly looking at economic independence of the audit committee, as now required in regulations, is insufficient in evaluating the effectiveness of audit committees and subsequent decisions that investors will make (Tian et al. 2011). We highlight the complex and diverse nature of potential ties between management and corporate governance parties such as the audit committee. Collectively, the findings demonstrate that the disclosure of audit committee social and professional ties and industry expertise has a pronounced impact on investor judgments, highlighting the important public policy and research issue of whether or not to require public dissemination of such information.
The Board of Directors of T.P. Reynolds consists of 12 individuals with the majority of directors considered independent in accordance with current regulations. The CEO is also the chair of the board.

Consistent with the requirements of the SEC and the Sarbanes-Oxley Act, the audit committee at T.P. Reynolds meets regularly, with all members financially literate (i.e., able to understand financial reports), none having financial or business ties to the company, and one member designated as a “financial expert.” The Audit Committee (AC) has adopted a formal, written charter that is similar to other firms in the industry. According to the AC charter, members are appointed to the audit committee by the board based on the recommendation of the nominations committee.

<table>
<thead>
<tr>
<th>No Industry Expertise</th>
<th>No Ties Conditions</th>
<th>Professional Ties Conditions</th>
<th>Social Ties Conditions</th>
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<tr>
<td></td>
<td>• The members of the audit committee have no professional ties with the CEO as they have not worked together nor have they served on any board together.</td>
<td>• The audit committee chair and another member of the audit committee have extensive experience serving on boards that are in different industries (i.e., not in the financial services industry). Chris Perkins, the CEO of LGFS, also serves on two boards with these two audit committee members for over 15 years.</td>
<td>• The audit committee chair and another member of the committee were classmates in graduate school with Chris Perkins, the CEO of LGFS, at a well-regarded university and have stayed in social contact with each other on a regular basis since graduation over 15 years ago.</td>
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<tr>
<td></td>
<td>• In addition, audit committee members do not have any social ties with the CEO. For instance, they have not been classmates who graduated together from a university and stayed in contact on a regular basis over many years.</td>
<td>• Although they served on the same boards in different industries (i.e., not in the financial services industry), the two members have no social ties with Chris Perkins as they have not, for instance, been classmates who graduated together from a university and stayed in contact on a regular basis over many years.</td>
<td>• These two audit committee members have no professional ties with the CEO of LGFS, as they have not worked together nor have they served together on other boards.</td>
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<td></td>
<td>• The third member of the audit committee has no current or prior social or professional ties to the CEO.</td>
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<td>• The third member of the audit committee has no current or prior social or professional ties to the CEO.</td>
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<tr>
<th>Industry Expertise</th>
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<td></td>
<td>• The audit committee chair and another member of the audit committee have extensive experience serving on boards that are in the same industry (i.e., in the financial services industry). Chris Perkins, the CEO of LGFS, also serves on two boards with these two audit committee members for over 15 years. <em>The last two bullet points are the same as above.</em></td>
<td>• The audit committee chair and another member of the audit committee have extensive experience serving on boards that are in the same industry (i.e., in the financial services industry). Chris Perkins, the CEO of LGFS, also serves on two boards with these two audit committee members for over 15 years.</td>
<td>• The audit committee chair and another member of the audit committee have extensive experience serving on boards that are in the same industry (i.e., in the financial services industry).</td>
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This figure shows the empirical results of a path analysis that simultaneously tests our manipulated and measured variables across all experimental conditions. For each of the TIES conditions, the respective condition is coded as a dummy variable (i.e., “1” and the other two conditions are coded as a “0”). INDUSTRY EXPERTISE is coded as a dummy variable (i.e., “0” NO INDUSTRY EXPERTISE) and “1” for the PRESENCE OF INDUSTRY EXPERTISE). For each link, the standardized estimate (p-value) is shown. The model has a Chi-square =402.56 (p=0.001). Overall goodness of fit measures include the Comparative Fit Index (73.1%), the Incremental Fit Index (74.9%) and the Tucker-Lewis index (53.9%).
Table 1
Research Hypotheses

<table>
<thead>
<tr>
<th>Number</th>
<th>Testeda</th>
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<tr>
<td><strong>Independence</strong></td>
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<tr>
<td>H1a</td>
<td>Investors will assess audit committees with members who have no ties to the CEO to be more independent than audit committees with members who have either social ties or professional ties to the CEO.</td>
</tr>
<tr>
<td>H1b</td>
<td>Investors will assess audit committees with members who have professional ties to the CEO to be more independent than audit committees with members who have social ties to the CEO.</td>
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<tr>
<td><strong>Competence</strong></td>
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<tr>
<td>H2</td>
<td>Investors will assess audit committees with members who have industry expertise to be more competent than audit committees with members without industry expertise.</td>
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<tr>
<td><strong>Effectiveness</strong></td>
<td></td>
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<tr>
<td>H3</td>
<td>Investors’ will assess the overall effectiveness of the audit committee to be the highest (lowest) when the audit committee has no ties to the CEO and has industry expertise (social ties to the CEO and has no industry expertise).</td>
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<tr>
<td><strong>Investment Decision</strong></td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>Investors’ will be most (least) likely to invest in companies when audit committee members have no ties and have industry expertise (social ties and no industry expertise).</td>
</tr>
</tbody>
</table>

aN TIES represents the condition in which no ties are present between the CEO and audit committee members. PROF TIES and SOC TIES represent the conditions wherein professional ties or social ties are present between the CEO and audit committee members. (NO) IND EXP represent the conditions in which the audit committee has members (without) with industries expertise.

b“All other conditions” excludes the lower (TIES - NO IND EXP) and upper (NO TIES - IND EXP) conditions in these comparisons. Restated, comparisons in which NO TIES - IND EXP is expected to be greater than all other conditions, excludes the TIES - IND EXP condition. The comparisons is which TIES - NO IND EXP is expected to be less than all other conditions, excludes the NO TIES - IND EXP condition.
### Table 2
**Descriptive Statistics**

Panel A: Mean (Standard Deviation) of Independence, Competence, and Effectiveness Scores\(^a\)

<table>
<thead>
<tr>
<th></th>
<th>NO TIES</th>
<th>PROF TIES</th>
<th>SOC TIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO IND EXP</td>
<td>7.91 (1.67)</td>
<td>5.71 (2.37)</td>
<td>4.08 (2.52)</td>
</tr>
<tr>
<td></td>
<td>N=81</td>
<td>N=28</td>
<td>N=98</td>
</tr>
<tr>
<td>IND EXP</td>
<td>8.24 (1.55)</td>
<td>5.24 (2.32)</td>
<td>5.09 (2.24)</td>
</tr>
<tr>
<td></td>
<td>N=29</td>
<td>N=84</td>
<td>N=22</td>
</tr>
<tr>
<td><strong>Competence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO IND EXP</td>
<td>6.98 (1.92)</td>
<td>6.29 (2.48)</td>
<td>6.13 (2.43)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND EXP</td>
<td>7.66 (1.72)</td>
<td>7.71 (1.52)</td>
<td>7.46 (2.15)</td>
</tr>
<tr>
<td><strong>Effectiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO IND EXP</td>
<td>6.75 (2.06)</td>
<td>5.79 (2.50)</td>
<td>5.10 (2.35)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND EXP</td>
<td>7.41 (1.94)</td>
<td>6.70 (2.06)</td>
<td>6.23 (2.00)</td>
</tr>
</tbody>
</table>

Panel B: Mean (Standard Deviation) of Financial Reporting Credibility Scores and Investment Decision \(^b\)

<table>
<thead>
<tr>
<th></th>
<th>NO TIES</th>
<th>PROF TIES</th>
<th>SOC TIES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Financial Report Credibility</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO IND EXP</td>
<td>6.91 (1.84)</td>
<td>6.36 (2.31)</td>
<td>5.43 (2.16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND EXP</td>
<td>7.57 (1.67)</td>
<td>6.48 (1.95)</td>
<td>5.91 (2.23)</td>
</tr>
<tr>
<td><strong>Investment Decision</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO IND EXP</td>
<td>12.13 (3.61)</td>
<td>11.50 (3.05)</td>
<td>9.16 (4.95)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND EXP</td>
<td>13.00 (3.34)</td>
<td>11.33 (4.30)</td>
<td>11.33 (4.51)</td>
</tr>
</tbody>
</table>

\(^a\) Independence (Competence) response is on an 11-point scale with endpoints labeled “0 – Not at All Independent (No Competence)”

\(^b\) Investment Decision is the sum of two variables: Investment Likelihood and Investment Attractiveness. Responses are on 11-point scales whereby the endpoints were labeled “0 – Not At All Likely (Attractive)” and “10 – Extremely Likely (Attractive)”.
Table 3
Tests of Hypotheses 1 through 3 – Independence, Competence, and Effectiveness

Panel A: Results of Two-Way ANOVA and Independent T-tests examining the Effects of Ties and Industry Expertise on Independence (H1a and H1b)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>658.71</td>
<td>1</td>
<td>658.71</td>
<td>133.46</td>
<td>0.000</td>
</tr>
<tr>
<td>Industry Expertise</td>
<td>803.22</td>
<td>1</td>
<td>803.22</td>
<td>3.76</td>
<td>0.053</td>
</tr>
<tr>
<td>Ties x Industry Expertise</td>
<td>18.54</td>
<td>1</td>
<td>18.54</td>
<td>0.60</td>
<td>0.440</td>
</tr>
<tr>
<td>Error</td>
<td>1,668.25</td>
<td>338</td>
<td>4.94</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Paired Comparisons -- Independence

<table>
<thead>
<tr>
<th></th>
<th>t-test</th>
<th>p-valuea</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: NO TIES &gt; TIES (PROF OR SOC)</td>
<td>14.22</td>
<td>0.001</td>
</tr>
<tr>
<td>H1a: NO TIES &gt; PROF TIES</td>
<td>9.79</td>
<td>0.001</td>
</tr>
<tr>
<td>H1a: NO TIES &gt; SOC TIES</td>
<td>13.52</td>
<td>0.001</td>
</tr>
<tr>
<td>H1b: PROF TIES &gt; SOC TIES</td>
<td>3.44</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Note: The Means (s.d.) for NO TIES, TIES, PROF TIES and SOC TIES conditions are 8.00 (1.64), 4.79 (2.47), 5.36 (2.33), and 4.27 (2.49), respectively.

Panel B: Results of Two-Way ANCOVA and Independent T-tests examining the Effects of Ties and Industry Expertise on Competence (H2)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
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<th>MS</th>
<th>F-Statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>13.39</td>
<td>1</td>
<td>13.39</td>
<td>3.26</td>
<td>0.072</td>
</tr>
<tr>
<td>Industry Expertise</td>
<td>76.50</td>
<td>1</td>
<td>76.50</td>
<td>18.60</td>
<td>0.000</td>
</tr>
<tr>
<td>Ties x Industry Expertise</td>
<td>10.18</td>
<td>1</td>
<td>10.18</td>
<td>2.47</td>
<td>0.117</td>
</tr>
<tr>
<td>Work Experience</td>
<td>14.70</td>
<td>1</td>
<td>14.70</td>
<td>3.57</td>
<td>0.060</td>
</tr>
<tr>
<td>Error</td>
<td>1,378.15</td>
<td>335</td>
<td>4.11</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Paired Comparisons -- Competence

<table>
<thead>
<tr>
<th></th>
<th>t-test</th>
<th>p-valuea</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2: IND EXP &gt; NO IND EXP</td>
<td>5.51</td>
<td>0.001</td>
</tr>
<tr>
<td>H2: NO TIES-IND EXP &gt; NO TIES-NO IND EXP</td>
<td>1.68</td>
<td>0.048</td>
</tr>
<tr>
<td>H2: PROF TIES-IND EXP &gt; PROF TIES-NO IND EXP</td>
<td>2.88</td>
<td>0.035</td>
</tr>
<tr>
<td>H2: SOC TIES-IND EXP &gt; SOC TIES-NO IND EXP</td>
<td>2.35</td>
<td>0.011</td>
</tr>
</tbody>
</table>

Note: The Means (s.d.) for NO EXP and EXP are 7.66 (1.67) and 6.48 (2.28), respectively.
Panel C: Results of Two-Way ANOVA and Independent T-tests examining the Effects of Ties and Industry Expertise on Audit Committee Effectiveness (H3)

<table>
<thead>
<tr>
<th>Source</th>
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<th>F-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>83.06</td>
<td>1</td>
<td>83.06</td>
<td>17.53</td>
<td>0.000</td>
</tr>
<tr>
<td>Industry Expertise</td>
<td>62.96</td>
<td>1</td>
<td>62.96</td>
<td>13.29</td>
<td>0.000</td>
</tr>
<tr>
<td>Ties x Industry Expertise</td>
<td>7.40</td>
<td>1</td>
<td>7.40</td>
<td>1.56</td>
<td>0.212</td>
</tr>
<tr>
<td>Error</td>
<td>1,601.33</td>
<td>338</td>
<td>4.74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Planned Comparisons -- Effectiveness

Contrast Weights | t-test | p-value

H3: Upper Boundary

NO TIES–IND EXP > NO TIES–NO IND EXP / PROF TIES–IND EXP / PROF TIES–NO IND EXP / SOC TIES–IND EXP

Contrast Weights | t-test | p-value

+4, -1, -1, -1, -1 | 4.49 | 0.001

H3: Lower Boundary

SOC TIES–NO IND EXP < NO TIES–NO IND EXP / PROF TIES–IND EXP / PROF TIES–NO IND EXP / SOC TIES–IND EXP

Contrast Weights | t-test | p-value

-4, +1, +1, +1, +1 | 5.06 | 0.001

Panel D: Results of Two-Way ANOVA and Independent T-tests examining the Effects of Ties and Industry Expertise on Investment Decisions (H4)

<table>
<thead>
<tr>
<th>Source</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F-statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ties</td>
<td>257.10</td>
<td>1</td>
<td>257.10</td>
<td>13.31</td>
<td>0.000</td>
</tr>
<tr>
<td>Industry Expertise</td>
<td>97.14</td>
<td>1</td>
<td>97.14</td>
<td>5.03</td>
<td>0.026</td>
</tr>
<tr>
<td>Ties x Industry Expertise</td>
<td>9.16</td>
<td>1</td>
<td>9.16</td>
<td>0.47</td>
<td>0.491</td>
</tr>
<tr>
<td>Error</td>
<td>6,471.39</td>
<td>335</td>
<td>19.32</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Planned Comparisons – Investment Decision

Contrast Weights | t-test | p-value

H4: Upper Boundary

NO TIES–IND EXP > NO TIES–NO IND EXP / PROF TIES–IND EXP / PROF TIES–NO IND EXP / SOC TIES–IND EXP

Contrast Weights | t-test | p-value

+4, -1, -1, -1, -1 | 2.61 | 0.007

H4: Lower Boundary

SOC TIES–NO IND EXP < NO TIES–NO IND EXP / PROF TIES–IND EXP / PROF TIES–NO IND EXP / SOC TIES–IND EXP

Contrast Weights | t-test | p-value

-4, +1, +1, +1, +1 | 4.26 | 0.001

* One-tailed.
REFERENCES


PricewaterhouseCoopers. 2014. Investor perspectives: How investors are shaping boards today…and into the future. (October).


