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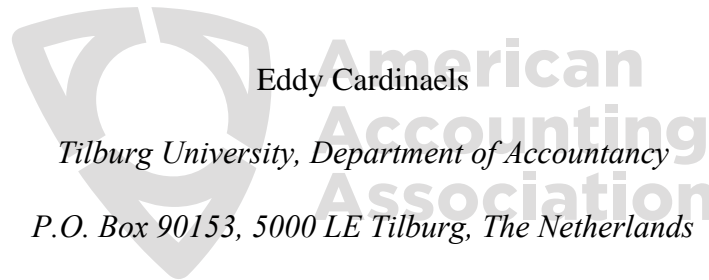
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The Audit Committee: Management Watchdog or Personal Friend of the CEO?

Liesbeth Bruynseels*

KU Leuven, Department of Accountancy, Finance and Insurance

Naamsestraat 69, 3000 Leuven, Belgium



Eddy Cardinaels

Tilburg University, Department of Accountancy

P.O. Box 90153, 5000 LE Tilburg, The Netherlands

KU Leuven, Department of Accountancy, Finance and Insurance

Naamsestraat 69, 3000 Leuven, Belgium

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* Corresponding author. Tel: +32 16 373723, Fax: +32 16 326683, E-mail: Liesbeth.Bruynseels@kuleuven.be. We want to thank two anonymous referees and John Harry Evans III (Senior Editor) for their helpful suggestions. We further would like to thank Maggie Abernethy, Jan Bouwens, Stephen Brown, Mark DeFond, Ronen Gal-Or, Stephan Hollander, Laurence van Lent, Inder Khurana, Robert Knechel, Frank Moers, Steve Salterio, Tobias Svanström, Ann Vanstraelen, David Veenman, Arnt Verriest, Marleen Willekens, and seminar participants at Tilburg University, Maastricht University, London School of Economics, KU Leuven, The University of Mannheim, the European Accounting Association conference (Rome 2011), the International Symposium on Audit Research conference (Tokyo 2012), and the auditing section midyear meeting (New Orleans 2013) for their helpful comments and suggestions. We also thank Ward Jans for his assistance in programming and data collection.

The Audit Committee: Management Watchdog or Personal Friend of the CEO?

Abstract: To ensure that audit committees provide sufficient oversight over the auditing process and quality of financial reporting, legislators have imposed stricter requirements on the independence of audit committee members. Although many audit committees appear to be “fully” independent, anecdotal evidence suggests that CEOs often appoint directors from their social networks. Based on a 2004 to 2008 sample of U.S.-listed companies after the Sarbanes-Oxley Act, we find that these social ties have a negative effect on variables that proxy for oversight quality. In particular, we find that firms whose audit committees have “friendship” ties to the CEO purchase fewer audit services and engage more in earnings management. Auditors are also less likely to issue going-concern opinions or to report internal control weaknesses when friendship ties are present. On the other hand, social ties formed through “advice networks” do not seem to hamper the quality of audit committee oversight.

Keywords: Social ties, financial reporting quality, audit committee, monitoring

Data Availability: All data are publicly available from sources identified in the text.

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I. INTRODUCTION

Recent corporate financial scandals, such as Enron, Worldcom, and Tyco, have caused shareholders, investors, and the public to lose confidence in many of the parties involved in the financial reporting process. In an attempt to restore trust and to improve the quality of financial reporting, many legislative and corporate reforms have increased the responsibilities and tasks of the audit committee, which serves as the watchdog for financial reporting quality and the audit process (Blue Ribbon Committee 1999; NYSE 2004; Sarbanes-Oxley Act [SOX] 2002).

The new regulations require each audit committee member to be independent, as independent directors are assumed to discipline management more effectively. Yet audit committee members who are fully independent according to SOX can still be connected to executives in many ways. The executive and audit committee members may serve together as directors on the board of another company, they may have worked together in the past as directors or employees, or they may have earned their MBA from the same university. Other connections may be formed outside these professional networks, such as those between committee members and executives playing in the same golf club, working for the same charity, attending meetings for the same business club, and so on. Such connections may enable the CEO to appoint directors who are “friendly” to his or her reporting policies (Wysocki 2010; Beasley et al. 2009). This friendliness may endanger an audit committee’s primary task to offer sufficient oversight over the reporting quality and audits of the financial statements. This study explores (1) the extent and type of social ties observed between CEOs and audit-committee members, and (2) whether such ties reduce the quality of audit committee monitoring.

We use a large dataset of U.S.-listed companies and focus on the 2004 to 2008 post-SOX period during which all audit committee members must be independent. We construct several

indices of CEO–audit committee member connectedness using the BoardEx database from Management Diagnostics Limited. We distinguish between fully independent audit committees and firms whose audit committee members have social ties with the CEO through either employment (e.g., shared current directorships or past employment or directorships at other firms), past education (e.g., graduating from the same school), or other non-professional activities, including shared memberships in leisure clubs, charities, country clubs, or other non-profit institutions. We label ties established through non-professional activities as “friendship” ties because these ties are less visible and often originate from the CEO’s personal network.

We then relate these ties measures to common output variables used in prior research to proxy for the oversight quality of the audit committee (Beasley et al. 2009). Anecdotal evidence suggests that the key issues raised during audit committee meetings are the accuracy of financial reporting and the quality of the audits (Gendron et al. 2004; Vera-Munoz 2005). Accordingly, we focus on the firm’s level of earnings management, using the method of Ball and Shivakumar (2006) and the level of audit effort, as proxied by the audit fee (Abbott et al. 2003; Vera-Munoz 2005). Also critical to oversight quality is whether audit committees can sufficiently mitigate management pressure on auditors when disputes arise about an auditor’s reporting intentions (DeZoort and Salterio 2001; Knapp 1987; Rose et al. 2008). We therefore focus on the issuance of going-concern opinions in distressed firms (Carcello and Neal 2000), the disclosure of internal control weaknesses in SOX 404 reports (Chan et al. 2008; Naiker and Sharma 2009) and the extent to which CEOs discourage the reporting of such weaknesses (Chan et al. 2008).

We observe social ties between the CEO and audit committee members in 39 percent of the companies in our sample. In those companies where social ties are present, about 42 percent of audit committee members are connected, mostly through employment ties. We find that social

ties between CEOs and the audit committee may reduce the quality of the audit committee's oversight. This negative effect is particularly evident when CEOs and audit committee members share friendship ties. Consistent with weak monitoring, such firms exhibit lower financial reporting quality in the form of more earnings management and lower levels of audit effort as proxied by lower audit fees. Consistent with weak oversight of the audit process, auditors are also less likely to issue going concern opinions for firms in distress when friendship ties are present. Moreover, fewer internal control weaknesses are disclosed in the SOX 404 reports. This presumably occurs because audit committees with friendship ties to the CEO offer the auditor less support when he or she disagrees with management over the type of internal control report to issue. Further analysis indeed shows that firms with friendship ties are more likely to subsequently amend initially clean reports because of weak internal controls. On the other hand, professional and educational ties do not produce these negative effects on oversight quality.

Our paper makes several contributions to the literature. First, since the passage of SOX, there has been a renewed interest in the composition of audit committees. Recent studies have shown that audit committee members with legal expertise or industry-specific knowledge can improve financial reporting quality (Krishnan et al. 2011a; Cohen et al. 2012a). Our evidence explores the other side of the coin. Specifically, the need to comply with SOX independence requirements has resulted in some appointments of "independent" directors who are socially connected to the CEO (Krishnan et al. 2011b). The consequences of such social connections, however, are not well understood. Prior to this study, Beasley et al. (2009) offered anecdotal evidence that audit committee members are sometimes selected for their names rather than for their substance. Our study shows that even after the passage of SOX, social connections between CEOs and audit committee members are prevalent and may reduce audit committee effectiveness.

Second, prior studies on social ties mainly focus on the board in general. Evidence shows that social ties can sometimes be beneficial for companies that have a high need for advisory services, such as when they engage in mergers or acquisitions (Schmidt 2008). This study focuses on the audit committee, which is designed to fulfill important oversight duties and must consist of independent members only. A recent paper by Westphal and Graebner (2010) argues that too few studies have focused on how CEOs try to control important governance bodies that are designed to monitor management. We respond to this call for research by showing that in the audit committee context where monitoring is pivotal, social connections play an important role and can be detrimental for oversight quality. Although such audit committees appear to be independent to the outside world, they may offer little or no monitoring. Specifically, we show that social ties that suggest that a CEO has appointed members from his or her personal network of friends reduce the audit committee's effectiveness. Distinguishing between different types of ties is thus clearly important and relying on aggregate measures of connectedness (Hwang and Kim 2009; Krishnan et al. 2011b) or on professional ties only (Hoitash 2011), as prior studies have done, may not always be appropriate.

Third, our findings are important to legislators, stock exchange commissions, and others who regard the independence of audit committee members as the linchpin of audit effectiveness. Our results indicate that firms may try to circumvent tougher legislation through social ties. Studies such as ours that investigate independence beyond its traditional definitions can deliver insights as to when audit committees might serve the interests of management, rather than question management's financial policy choices (Stefaniak et al. 2012). Further, calls from the Public Company Accounting Oversight Board (PCAOB) in release No. 2011-008 for auditors to rely more on the information provided by the audit committee may not always be warranted. Our

evidence on internal control deficiencies and going concern opinions suggests that audit committees do not always support the auditor in important matters where disagreements with management can arise. Consequently, when friendship ties are present, a too strong reliance on audit committees may substantially increase audit risk.

II. LITERATURE REVIEW

Audit Committee Independence after SOX

Audit committees perform the task of overseeing the integrity of a firm's financial statements (Levitt 2000). Independence is widely regarded as crucial to performing such oversight (Levitt 2000; Klein 2002a; Carcello and Neal 2000). Since the passage of SOX in 2002, audit committees should be composed solely of independent directors, who are defined by SOX as audit committee members with no financial or family ties to the CEO or the firm. The listing requirements of the NYSE and NASDAQ mirror this mandate and, urged by the Investor Responsibility Research Center (IRRC), maintain even stricter definitions of independence.¹

Nevertheless, audit committee members can be linked to executive directors in many other ways. CEOs often appoint directors from their informal social networks (Finkelstein and Hambrick 1996; Beasley et al. 2009). Although such directors are independent according to SOX or other listing requirements, they are still closely connected to the CEO. Beasley et al. (2009), use interviews with 42 individuals serving on audit committees of U.S.-listed companies to show that even after the passage of SOX, members of audit committees are frequently drawn from the CEO's social network. About 40 percent of the interviewees acknowledged having significant previous contact with the executive team, and 33 percent admitted to having personal ties to

¹ IRRC defines as *not* independent any director who is a former employee of the firm or one of its subsidiaries; a customer, service provider, or supplier to the company; a recipient of charitable funds; an interlocking or designated director; or a family member of a director or executive.

management or other committee members (Beasley et al. 2009, 82). The statements of some interviewees suggest that they have strong connections with executives of the firm:

The CFO suggested that I join the board. The CFO is a personal friend. (NASDAQ audit committee member)

I was friendly with the CEO of the company. Our kids were in the same schools and our wives were friends. My friend became the CEO and had to rebuild the board. I was asked to join the board. (NYSE audit committee member)

Often my involvement starts because of some relationship I have with a large investor or a senior executive. (NASDAQ audit committee member)

Beasley et al. (2009) suggest that although many companies want audit committees that offer extensive monitoring, some audit committees serve only a ceremonial role. Some interviewees indicate that their audit committee is only minimally involved in the crucial task of setting and reviewing accounting policies (Beasley et al. 2009, 94)². They are consulted only when concurrence with management policies is needed. However, Beasley et al. (2009) offer no direct evidence that the social ties between a CEO and members of the audit committee affect the audit committee's decision to adopt an active monitoring role versus a passive ceremonial role. Using a large sample of U.S.-listed firms and using a series of common output variables that proxy for oversight quality, we explore whether such ties can lead to a passive audit committee.

The Impact of Social Ties in Audit Committees

If seemingly independent audit committees are socially tied to the CEO, then they cannot be considered truly independent. Managerial hegemony theory suggests that managers will sometimes select cronies and colleagues who will not curtail their actions (Cohen et al. 2008). Indeed, indirect evidence suggests that the influence of CEOs in director selection can curtail

² Interviewees even admitted that companies sometimes appointed directors for their form rather than their ability to monitor (Beasley et al. 2009, 80). Some auditors share this point of view, indicating that they do not feel supported by the audit committee in disputes with management (Cohen et al. 2010).

more effective monitoring. Powerful CEOs are more likely to attract directors who are demographically similar to them (Westphal and Zajac 1995). Such connected directors seem to be influenced by the CEO, as CEOs in such firms receive more generous compensation packages (Westphal and Zajac 1995). Furthermore, Carcello et al. (2011a) find that fully independent audit committees that include a financial expert have fewer financial restatements, but only when the CEO is not involved in the selection of audit committee members.

Using a small sample of Fortune 100 firms, Hwang and Kim (2009) present evidence that firms in which at least one director has two or more social ties to the CEO award excess CEO compensation. This indicates that social ties are negatively associated with the quality of the board. However, Hwang and Kim (2009) rely on aggregated measures of connectedness, whereby more ties, regardless of their nature, always lead to increased affinity for similar others. Studies in accounting also examine the impact of social connections on earnings management (Krishnan et al. 2011b; Hoitash 2011). These studies also focus on the board in general, where independence is not required, and produce mixed evidence on the effect of social ties. In contrast we focus on the audit committee, in which independence is mandated (Westphal and Graebner 2011). We also argue that distinguishing among different types of ties is important.

The Nature and Strength of Social Ties

Research on social ties suggests that different types of networks are activated in different situations (Carroll and Teo 1996; Gibbons 2004; Saint-Charles and Mangeau 2009). We assume that the type of network through which social ties are formed and the strength of connectedness or friendship within these networks can influence the effectiveness of an audit committee's monitoring. The BoardEx data allows us to distinguish among social ties formed through employment, education, or other social activities, as defined above.

Carroll and Teo (1996), Gibbons (2004), and Saint-Charles and Mangeau (2009), distinguish between “advice networks” and “friendship networks.” Advice networks consist of specialists or experts consulted for their expertise and competence in work-related matters. This network often consists of interpersonal links with members of other companies or members who share similar views or expertise based on their education (Carroll and Teo 1996; Krackhardt 1990). According to Gibbons (2004), such a network operates first of all as a device for controlling system-wide information flow, such as the monitoring of financial information. Friendship networks consist of connected people, or friends, who are members of the same leisure clubs, societies, charitable organizations, and so on (Carroll and Teo 1996). More controversial information, which is less likely to travel through advice networks, is more often discussed in these friendship networks (Gibbons 2004). Intimacy among friends facilitates discussion of controversial issues and can encourage acceptance of these issues among members. It can also lead to feelings of reciprocity toward the person in charge (Gibbons 2004; Plickert et al. 2007). A CEO with more friendship ties may thus be more able to discuss controversial issues, such as aggressive accounting choices, and may assemble an audit committee sympathetic to these policies.

Westphal and Khanna (2003) suggest that the *strength* of ties is also important for CEOs who want to maintain autonomy over the final decision-making process. Prior research has shown that strong ties tend to be associated with memberships in voluntary associations, such as leisure clubs, societies, or charities. These ties create strong bonds between people, as the ties continue over a long period of one’s life and often attract people with similar demographic characteristics, such as age, religion, or status (McPherson et al. 2001). Social ties based on occupation or education are less likely to create strong bonds in terms of close friendships (McPherson et al. 2001; Carroll and Teo 1996; Louch 2000; Verbrugge 1977). Therefore, CEOs who wish to

control the quality of financial reporting may be more likely to draw audit committee members from their friendship network than from their advisory network.

Consistent with the above reasoning, we designate social ties formed between a CEO and the audit committee members through such activities as membership in voluntary associations, including leisure clubs, charity organizations, country clubs, etc. as “friendship network” ties. We designate ties from education and employment as “advice network” ties. Although both types of ties build connectedness, friendship ties may pose a greater threat to effective monitoring than advice network ties. Friendship ties can lead to audit committee members who are less critical of the CEO’s financial reporting policies and who are less likely to rock the boat during conflicts between management and the auditor (Dezoort and Salterio 2001; Dezoort et al. 2008).

Hypotheses

Assuming more ties lead to less independence, we first explore whether an increase in social ties between the CEO and audit committee members leads to reduced oversight quality:

H1: As the proportion of social ties between the CEO and audit committee members increases, the quality of the audit committee’s oversight will decrease.

Second, assuming that CEOs access different kinds of networks when they prefer to have a lenient audit committee, we predict that the type of social tie also matters to oversight quality.

H2: The quality of the audit committee’s oversight will decrease more for social ties based on friendship networks than for social ties based on advice networks.

To test the hypotheses, we focus on common proxies for oversight quality such as earnings management (e.g. Klein 2002b) and audit effort, as measured by the level of audit fees (e.g.

Engel et al. 2010). In addition, we examine two circumstances in which audit committees must resist management's pressures to influence auditors' reporting behavior. Specifically, we focus on the issuance of going-concern opinions (Carcello and Neal, 2000) and disclosure of internal control weaknesses (Naiker and Sharma 2009).

III. DATA DESCRIPTION

Sample

We start with the 18,214 firm-years for which social ties data were available from BoardEx on January 2010 for the fiscal years 2004–2008. Excluding 2,387 firms that do not have full data in Compustat and removing 3,728 financial firms (SIC codes 6000–6999) reduces our sample to 12,099 firm-years. We also exclude observations for which we cannot unambiguously identify the CEO at the fiscal year-end, have no audit committee or have fewer than three directors on the board. This leaves a sample of 11,963 firm-years from 2,826 different companies. To minimize the impact of extreme values, we winsorize each of the continuous variables used in the regressions at the top and bottom 1 percent.

We conduct our earnings management test on a sample of 10,734 firm-year observations that have complete information in Compustat. We conduct our audit effort test using a sample of 11,004 firm-years that have audit fee information available in Audit Analytics, as well as all the necessary financial information in Compustat. For our analysis of going-concern opinions, we select those firms that are subject to financial difficulties. Following prior studies (e.g., Reynolds and Francis 2000; DeFond et al. 2002; Lim and Tan 2008), we define financially distressed firms as firms that report either negative earnings or negative operating cash flows during the current fiscal year. A total of 3,219 firm-years meet these criteria and have the necessary data available in Compustat, of which 169 observations involve going-concern opinions issued.

Finally, for our internal control deficiencies test, we obtain auditor internal control opinions from Audit Analytics for firms with financial year-end dates on or after November 15, 2004.³ This yields a sample of 7,451 firm-years with internal control opinions and sufficient information available in Compustat. Of these firm-years, 679 reported material internal control weaknesses. To test if the auditor receives less support when he or she disagrees with management over the internal control report to issue, we also explore the failure of identifying internal controls in the initial SOX 404 (Chan et al. 2008). We use the subset of firms with internal control deficiency reports and designate those reports in which the auditor subsequently made an amendment to an initially clean internal control report as a failure to identify material weaknesses. To give firms ample time to amend their initial report, we exclude fiscal year 2008 from this analysis. This leaves a final sample of 625 firm-years with reported internal control deficiencies, of which 78 are amended reports. Table 1 reports the distribution of sample firms by year and industry.

[Include Table 1 about here]

CEO-Audit Committee Social Ties

We obtain background information on employment history, education history, and other non-professional activities of all CEOs and the audit committee members who are in the office at the fiscal year-end for all the 2004 to 2008 publicly listed companies covered by Boardex on January 2010. With respect to employment history, BoardEx reports all past and present positions held, including the name(s) of the organization(s) and the job title(s). We also have access to information on current and previous board positions held, as well as the roles that individuals assumed on each board such as independent director, financial expert, and board

³ Accelerated filers with public float of \$75 million or more and financial year-end dates on or after November 15, 2004 are required to file SOX 404 reports.

committee membership. In addition, we obtain information on the educational background of each individual, including institutions attended, degrees earned, and dates of graduation. A unique feature of BoardEx is the disclosure of an individual's membership in other non-professional activities, such as charities, leisure clubs, country clubs, etc.

Similar to Fracassi and Tate (2012, 158, 162), we define three types of social ties measures that capture CEO-audit committee connections in the form of past or present employment, education, or non-professional activities. Present employment ties arise when the CEO and audit committee member both serve as an external director in another company. Past employment ties reflect overlapping prior employment or directorships in any firm, excluding the firm for which we measure social ties. An educational tie requires two individuals to have graduated from the same institution (Cohen et al. 2008b, 2010b; Schmidt 2008). Finally, ties established through other activities occur when individuals share a present or past membership in the same charity, leisure club, country club or other non-profit association.⁴ In our sample, directors have other activity ties to the CEO through 1,863 distinct voluntary associations. Similar to Fracassi and Tate (2012, 162), we manually collected background information on the 94 voluntary associations that account for at least 10 CEO-audit committee member ties. This analysis shows that the majority of other activity ties between CEO and the audit committee are formed through memberships of exclusive country clubs, charities or leisure clubs (respectively, 23.4 percent, 20.2 percent, and 9.6 percent). Other connections are formed through industry associations or

⁴For other activities, we do not use a date restriction, because BoardEx does not always disclose a start or end date for these appointments. Most of these appointments such as membership in golf clubs, charity organizations, and country clubs are long-lasting (McPherson et al. 2001), meaning that we likely capture the fact that two persons have overlapping tenures. Our primary tests do not impose a date restriction on educational activities. However when we rerun all analyses with the requirement that individuals graduated from the same institution within two years of each other as in Cohen et al. (2010b) and Schmidt (2008) to capture the strongest possible educational tie, the proportion of educational ties drops from 0.04 to 0.005 in Panel A of Table 2. The results of subsequent analyses remain unchanged, except that we now find weak evidence that educational ties reduce absolute abnormal accruals (EDUC, coeff.=-0.035, p=0.09).

representation bodies with limited membership (26.6 percent) or through the networks of trustees, councils, or supervisors of either regional non-profit institutions (14.9 percent), or federal institutions and research institutes (5.3 percent)⁵. To test H1, we use an aggregate measure (*ALLTIES*), which is the proportion of audit committee members who have at least one connection to the CEO, irrespective of the type of tie. To test H2, we count within each category the proportion of audit committee members who have at least one connection to the CEO based on this type of tie (*EMPLOY*, *EDUC*, *OTHERACT*). Table 2 presents the summary statistics.

[Include Table 2 about here]

Panel A of Table 2 is based on our initial sample of 11,963 firm-years. First, we determine the average proportion of tied directors per year. On average, 17 percent of audit committee members share ties with their CEOs. This percentage remains stable over our sample period. On average in 39 percent of all firm-year observations the audit committee includes at least one socially connected director. Panel B of Table 2 considers only those companies in which social ties are present. We find that when social ties are present, on average 42 percent of audit committee members are connected to the CEO. The majority of these ties are formed through advice networks, with 25 percent stemming from a connection through employment, 9 percent through education and 13 percent are friendship ties through other non-professional activities.

Other governance variables

Consistent with prior work on audit effectiveness (Abbott et al. 2003, 2004; Krishnan 2005; Lee et al. 2004; Klein 2002b; Carcello et al. 2002), subsequent models will control for other

⁵ Examples of voluntary associations are the Augusta National Golf Club (leisure), Chicago Symphony Orchestra (leisure), Annie E. Casey Foundation (charity), United Way of Greater Milwaukee (charity), Chicago Club (country club), Washington Roundtable (country club), Society of Petroleum Engineers (industry representation), Cleveland Clinic Foundation (trustees or councils of non-profit institutions) and National Petroleum Council (federal advisory).

corporate governance factors that may affect the quality of monitoring. We focus on CEO power and variables measuring board and audit committee effectiveness. These variables are also drawn from the bibliographic data from BoardEx. For CEO power, we use common proxies such as CEO tenure and CEO chairmanship (Core et al. 1999; Hill and Phan 1991; Hermalin and Weisbach 1998). We further use board size, audit committee size, board independence, and the number of financial experts on the audit committee as traditional governance variables for monitoring effectiveness (Abbott et al. 2003, 2004; Carcello et al. 2011a; Klein 2002b; Krishnan 2005; Lee et al. 2004).^{6 7}

IV. EMPIRICAL RESULTS

This section explores the effect of social ties on our proxies for oversight quality. We estimate all parameter estimates using the robust standard errors presented in Rogers (1993) that account for heteroscedasticity and firm clustering.

Discretionary Accruals Analysis

Empirical Model

Our empirical model is based on Klein (2002b). As a proxy for earnings management, we estimate discretionary accruals using the method of Ball and Shivakumar (2006), which controls

⁶ After SOX, all audit committees of listed companies must be independent and must include (1) at least three members, (2) only members that are independent of management, and (3) at least one member with financial expertise. Almost all firms in our sample meet these requirements. We thus cannot use the traditional variables, as used in previous studies prior to SOX, to capture the effectiveness of the audit committee (e.g., Krishnan 2005; Abbott et al. 2003, 2004; Bédard et al. 2004). Instead, we use a continuous variable to capture audit committee size, and we use the proportion of financial experts on the audit committee as a proxy for audit committee effectiveness.

⁷ We also checked whether these corporate governance variables were related to the proportion of socially connected directors or to the likelihood of having a socially dependent audit committee, whereby we control for a similar set of control variables as used in Klein (2002b). Untabulated results show that the proportion of connected directors or the likelihood of having a socially connected audit committee is positively related to CEO chairmanship (CEOCHAIR, $p < 0.001$) and marginally related to the size of the audit committee (ACSIZE, $p < 0.061$). CEOs with more power have more socially connected audit committee members on the audit committee, consistent with the theory that such CEOs are able to exercise their influence on who gets to be appointed. The results for audit committee size suggest that bigger audit committees after SOX do not necessarily improve independence because such expansion may have involved the appointment of more socially connected directors.

for the asymmetric timeliness of accruals in recognizing economic gain and loss. To obtain the discretionary accruals in a given year, we estimate the following model:

$$TACC_{i,t}/AVTA_{i,t} = \beta_0 + \beta_1[\Delta REV_{i,t}/AVTA_{i,t}] + \beta_2[PPE_{i,t}/AVTA_{i,t}] + \beta_3[CFO_{i,t}/AVTA_{i,t}] + \beta_4DCFO_{i,t} + \beta_5[(CFO_{i,t}/AVTA_{i,t}) * DCFO_{i,t}] + \varepsilon \quad (1)$$

$TACC_{i,t}$ is the total accruals for firm i in fiscal year t , calculated as income before extraordinary items minus operating cash flow; $AVTA_{i,t}$ is the average total assets for firm i in year t and year $t - 1$; $\Delta REV_{i,t}$ measures the change in revenues for firm i in fiscal year t ; $PPE_{i,t}$ is the gross property, plant, and equipment for firm i in fiscal year t ; $DCFO_{i,t}$ is a dummy variable equal to 1 if cash flow from operations is negative and 0 otherwise; and $CFO_{i,t}$ is the cash flow from operations for firm i in fiscal year t . We estimate equation (1) for each two-digit SIC code industry and year, requiring a minimum of 15 observations. Discretionary accruals ($DA_{i,t}$) are calculated as the difference between actual total accruals deflated by average total assets and the fitted values of equation (3).

We use a similar set of financial control variables as Klein (2002b), who focused on the relationship between audit committee characteristics and earnings management. Including all previously defined governance variables, we estimate the following model:

$$ADA = \beta_0 + \beta_1TIES + \beta_2CEOCHAIR + \beta_3CEOTENURE + \beta_4BOARDSIZE + \beta_5INDEP + \beta_6FINEXP + \beta_7ACSIZE + \beta_8BIG4 + \beta_9LNTA + \beta_{10}LAGMB + \beta_{11}CHANGENI + \beta_{12}LOSS + \beta_{13}LTDTA + \beta_{14}YEAR + \beta_{15}INDUSTRY + \varepsilon \quad (2)$$

where:

- ADA = the absolute value of discretionary accruals estimated with the Ball and Shivakumar (2006) model;
- $TIES$ = social ties metrics; either $ALLTIES$ or $OTHERACT$, $EMPLOY$, $EDUC$;
- $CEOCHAIR$ = an indicator variable equal to 1 if the CEO is the chair of the board

and 0 otherwise;
CEOTENURE = the number of years the CEO has been in office;
BOARDSIZE = the number of directors on the board;
INDEP = the proportion of independent directors on the board;
FINEXP = the proportion of financial experts on the audit committee;
ACSIZE = the number of directors on the audit committee;
BIG4 = an indicator variable equal to 1 for a Big 4 auditor and 0 otherwise;
LNTA = the natural log of total assets;
LAGMB = the market-to-book ratio, measured at the beginning of the fiscal year;
CHANGENI = the absolute value of change in net income between years $t - 1$ and t ;
LOSS = an indicator variable equal to 1 if the firm has two or more consecutive years of negative income and 0 otherwise;
LTDTA = long-term debt divided by last year's total assets;
YEAR = year dummies;
INDUSTRY = industry dummies.

Empirical Results

Panel A of Table 3 presents the descriptive statistics. The mean (median) value of absolute discretionary accruals (*ADA*) is 0.096 (0.05). Similar to our initial social ties sample, about 16 percent of all audit committee members have social ties with the CEO. The CEO also serves as chair of the board in about 54 percent of cases. About 74 percent of all board members are independent, and audit committees are generally composed of 3.7 members, of whom 43 percent are financial experts. About 78 percent of all firms appoint a Big 4 auditor. The untabulated correlation matrix shows that most correlations among the independent variables are less than 0.30, and no correlations are greater than 0.63. All VIF factor scores are below 2.66.

In Model 1 of Panel B of Table 3, we estimate the effect of the proportion of socially connected audit committee directors on absolute discretionary accruals and find no significant effect (*ALLTIES*, $p = 0.483$ on earnings management [H1]). However, in model 2 where we separately estimate the effect of social ties originating from employment, education, and other activities (H2), we find that ties between CEOs and audit committee members from other activities are positively associated with absolute discretionary accruals (*OTHERACT*, $p = 0.007$).

This evidence is consistent with friendship ties reducing the effectiveness of audit committee oversight. Such firms engage in more earnings management, which suggests that their financial statements are of lower quality and that the audit committee is more likely to support more aggressive accounting policies. Economically, the coefficient on *OTHERACT* of 0.023 indicates that a one standard deviation increase in *OTHERACT* is associated with an increase in absolute discretionary accruals of 0.003. Given the average absolute discretionary accruals of 0.096, the impact of a one standard deviation change in *OTHERACT* corresponds to a change of about 3 percent of the mean value.

Advice network ties stemming from education or profession, however, are negatively associated with earnings management but these results are not significant (*EDUC*, $p = 0.130$; *EMPLOY*, $p = 0.172$). In sum, consistent with theory only ties from other activities reduce financial reporting quality.⁸

Consistent with Klein (2002b), we also find that firms with larger boards are more susceptible to earnings management, which suggests that smaller boards are more effective monitors. Our results for the set of financial control variables are consistent with those of earlier research (e.g., Klein 2002b; Zhao and Chen 2008). Firms with a larger change in net income and with two or more years of consecutive losses generally have higher absolute discretionary accruals. Furthermore, we find that larger total assets and higher market-to-book ratios are associated with lower levels of earnings management.

[Include Table 3 about here]

⁸ When using the performance-adjusted Jones model presented in Kothari et al. (2005) or on the model presented in McNichols (2002) to estimate discretionary accruals, results again suggest that firms with social ties based on other activities engage more in earnings management. Our analysis of the subsample of firms with positive accruals using the method presented in Ball and Shivakumar (2006) suggests that firms with ties based on other activities have more income-increasing accruals (*OTHERACT*, $t=2.80$, $p=0.005$), indicating that such committees tolerate more aggressive accounting choices.

Audit Fee Analysis

Empirical Model

Building upon previous studies on audit fee determinants (e.g., Chaney et al. 2004; Craswell et al. 1995; DeFond et al. 2002; Higgs and Skantz 2006; Whisenant et al. 2003), we estimate the following model:

$$\begin{aligned} AUDIT\ FEE = & \beta_0 + \beta_1 TIES + \beta_2 CEOCHAIR + \beta_3 CEOTENURE + \beta_4 BOARDSIZE + \beta_5 INDEP + \\ & \beta_6 FINEXP + \beta_7 ACSIZE + \beta_8 LNTA + \beta_9 INITIAL + \beta_{10} BIG4 + \beta_{11} DA + \beta_{12} LIQ + \\ & \beta_{13} ROA + \beta_{14} LOSS + \beta_{15} INVREC + \beta_{16} BM + \beta_{17} FOROPS + \beta_{18} GROWTH + \\ & \beta_{19} NEWFIN + \beta_{20} YEAR + \beta_{21} INDUSTRY + \epsilon \end{aligned} \quad (3)$$

where:

- AUDIT FEE* = the natural log of audit fees for the fiscal year;
TIES = social ties metrics; either *ALLTIES* or *OTHERACT*, *EMPLOY*, *EDUC*;
CEOCHAIR, *CEOTENURE*, *BOARDSIZE*, *INDEP*, *FINEXP*, *ACSIZE*
= corporate governance variables as defined earlier;
LNTA = the natural log of total assets;
INITIAL = an indicator variable equal to 1 if the auditor is in the first year of engagement and 0 otherwise;
BIG4 = an indicator variable equal to 1 for a Big 4 auditor and 0 otherwise;
DA = the ratio of liabilities to assets;
LIQ = the ratio of current assets to current liabilities;
ROA = operating income to assets;
LOSS = an indicator variable equal to 1 if net income in fiscal year *t* or *t* – 1 is less than zero and 0 otherwise;
INVREC = the ratio of inventory and receivables to total assets;
BM = the book-to-market ratio at the end of the audit-fee year, calculated as common equity to market capitalization (i.e., shares outstanding times closing stock price);
FOROPS = an indicator variable equal to 1 if foreign currency gain or loss is non-zero or non-missing and 0 otherwise;
GROWTH = one year growth in sales;
NEWFIN = an indicator variable equal to 1 if the company issued either equity or debt during the fiscal year and 0 otherwise;
YEAR = year dummies;
INDUSTRY = industry dummies.

In addition to financial indicators, we again include the CEO, board, and audit committee characteristics as additional corporate governance variables.

Empirical Results

Panel A of Table 4 presents the descriptive statistics for the audit fee model. Statistics for the social ties and corporate governance variables are comparable to those of the initial sample. Untabulated correlations among the independent variables are lower than 0.64, and all VIF scores are below 3.04.

Panel B of Table 4 reports the results of the audit fee regression models. Model 1 estimates the effect of the proportion of socially connected audit committee directors on audit fees. The results show that, as the proportion of tied directors increases, the amount of audit fees a firm pays decreases (*ALLTIES*, $p = 0.045$). This finding is consistent with H1. Social ties reduce the effectiveness of audit committee monitoring, as committees purchase fewer audit services when more ties are present. Model 2 divides social ties into ties from shared employment, shared education, and shared other activities. Consistent with H2, we find that the negative effect of social ties on audit effort, reflecting a reduced demand for monitoring, can be attributed solely to social ties from other activities (*OTHERACT*, $p = 0.005$). Using the estimate of model 2, a one standard deviation increase in the value of *OTHERACT* is associated with a reduction in audit fees of about 2.88 percent or a reduction of around 25,684\$ in audit fees compared to the mean value. Advice network ties based on employment or education have no effect on the demand for audit effort (*EMPLOY*, $p = 0.933$; *EDUC*, $p = 0.971$).

Consistent with expectations of prior studies, board independence and the proportion of financial experts on the audit committee are positively related to the demand for audit effort

(*INDEP*, $p < 0.001$, *FINEXP*, $p < 0.004$). Firms whose CEOs have been in office longer also demand less audit effort (*CEOTENURE*, $p < 0.001$). Surprisingly, larger boards (*BOARDSIZE*, $p < 0.006$) are associated with higher audit fees. Larger boards might contain more experts who demand more effort or might simply demand more effort to compensate for the fact that larger boards are generally perceived as less effective monitors. The results for the remaining control variables are consistent with prior research on audit fees (e.g., Chaney et al. 2004; Craswell et al. 1995; DeFond et al. 2002; Higgs and Skantz 2006; Whisenant et al. 2003).

[Include Table 4 about here]

Going-Concern Analysis

Empirical Model

Based on prior going-concern research by DeFond et al. (2002) and Lim and Tan (2008), we run the following logistic regression to test the association between social ties and the likelihood that a distressed firm will receive a going-concern modified opinion:

$$\begin{aligned}
 GC = & \beta_0 + \beta_1 TIES + \beta_2 CEOCHAIR + \beta_3 CEOTENURE + \beta_4 BOARDSIZE + \beta_5 INDEP + \beta_6 FINEXP + \\
 & \beta_7 ACSIZE + \beta_8 BIG4 + \beta_9 PRIORGC + \beta_{10} LNTA + \beta_{11} REPLAG + \beta_{12} PB + \beta_{13} RETURN + \\
 & \beta_{14} LEV + \beta_{15} LOSS + \beta_{16} CFOTA + \beta_{17} INVM + \beta_{18} NEWFIN + \beta_{19} LIT + \beta_{20} YEAR + \varepsilon \quad (4)
 \end{aligned}$$

where:

- GC* = an indicator variable equal to 1 if the firm receives a going-concern opinion and 0 otherwise;
- TIES* = social ties metrics; either *ALLTIES* or *OTHERACT*, *EMPLOY*, *EDUC*;
- CEOCHAIR*, *CEOTENURE*, *BOARDSIZE*, *INDEP*, *FINEXP*, *ACSIZE*
= corporate governance variables as defined earlier;
- BIG 4* = an indicator variable equal to 1 for a Big 4 auditor and 0 otherwise;
- PRIORGC* = an indicator variable equal to 1 if the firm receives a going-concern opinion in the prior fiscal year and 0 otherwise;
- LNTA* = the natural log of total assets;
- REPLAG* = the square root of the number of days between the fiscal year end and

- the earnings announcement date;
- PB* = probability of bankruptcy, calculated from the Zmijewski (1984) weighted probit bankruptcy prediction model;
- RETURN* = the firm's stock return over the fiscal year;
- LEV* = the debt-to-capital ratio;
- LOSS* = an indicator variable equal to 1 if the firm reports a loss for the previous year and 0 otherwise;
- CFOTA* = operating cash flows divided by total assets;
- INVM* = cash, cash equivalents, and short-term and long-term investment securities deflated by total assets;
- NEWFIN* = an indicator variable equal to 1 if the firm issues equity or debt during the fiscal year and 0 otherwise;
- LIT* = an industry indicator variable equal to 1 if the firm is in a litigious industry (SIC codes 2833–2836, 3570–3577, 3600–3674, 5200–5961 and 7370) and 0 otherwise;
- YEAR* = year dummies.

One important task of the audit committee is to protect the independence of the auditor and strengthen the auditor's position should disputes arise with management (Carcello and Neal 2000; Dezoort and Salterio 2001). However, audit committee members who are connected to the CEO may be less supportive of the auditor in discussions with management, resulting in a lower likelihood of receiving a going-concern report. Based on this line of reasoning, we also include the various CEO, board, and audit committee characteristics that may affect monitoring quality.

Empirical Results

We restrict our sample to firms in financial distress, which yields a total sample of 3,219 firm-year observations. Panel A of Table 5 presents the descriptive statistics for the going-concern model, in which 169 (5.3 percent) of distressed firms receive a going-concern opinion from the auditor. Social ties and corporate governance statistics are generally comparable to those of previous analyses, although the proportion of tied directors is 0.143 compared to approximately 0.16 in previous analyses. There are no correlations above 0.61 and all VIF scores remain under 2.90 (untabulated).

Panel B of Table 5 reports the results of the going-concern regression models. Model 1 estimates the hypothesized relationship in H1 between the proportion of tied directors in the audit committee and the audit opinion. We find that the proportion of tied directors has no significant effect on going-concern opinions (*ALLTIES*, $p = 0.406$). However, when we decompose the social ties according to their origins in Model 2, we again find that the likelihood of a firm receiving a going-concern opinion is marginally significantly negatively related to the proportion of social ties from other activities (*OTHERACT*, $p = 0.087$). Economically, a one standard deviation increase in *OTHERACT* decreases the probability of a going-concern modified opinion by 0.41 percent (setting other model variables equal to their mean values). This represents a reduction of around 8 percent compared to the mean going-concern rate for our sample. Social ties from employment or education have no effect on the audit opinion (*EMPLOY*, $p = 0.858$; *EDUC*, $p = 0.558$). These results confirm that the audit committee is less likely to mitigate management pressure on the auditor to issue a clean opinion when its members have friendship ties to the CEO. In sum, when friendship ties are present audit committee independence seem to be sacrificed, decreasing the likelihood that a distressed firm will receive a going-concern report.

Other governance variables such as *CEOCHAIR*, *BOARDSIZE*, *CEOTENURE*, *INDEP*, *FINEXP*, and *ACSIZE* are not significant in the going-concern opinion analyses. Consistent with prior work (DeFond et al. 2002; Lim and Tan 2008; Carey and Simnett 2006; Li 2009), results from Models 1 and 2 further show that firms with prior going-concern opinions, big 4 auditors, a longer reporting lag, and a higher bankruptcy score are more likely to receive a going-concern opinion. On the other hand, larger assets, higher fiscal-year returns, higher cash-flow, and a

better cash position significantly decrease a firm's likelihood of receiving a going-concern report.

[Include Table 5 about here]

Analysis on Internal Control Deficiencies

Empirical Model

Based on a recent study by Naiker and Sharma (2009) on internal control deficiencies and the presence of former audit partners on the audit committee, we run the following model:

$$\begin{aligned}
 ICD = & \beta_0 + \beta_1 TIES + \beta_2 CEOCHAIR + \beta_3 CEOTENURE + \beta_4 BOARDSIZE + \beta_5 INDEP + \beta_6 FINEXP \\
 & + \beta_7 ACSIZE + \beta_8 INITIAL + \beta_9 BIG4 + \beta_{10} LNTA + \beta_{11} GROWTH + \beta_{12} LOSS + \beta_{13} FOROPS + \\
 & \beta_{14} GEOSEG + \beta_{15} LEVERAGE + \beta_{16} INVREC + \beta_{17} RESTRUCT + \beta_{18} LIT + \beta_{19} YEAR + \varepsilon \quad (5)
 \end{aligned}$$

where:

- ICD = an indicator variable equal to 1 if the auditor discloses one or more material weaknesses in the SOX 404 report and 0 otherwise;
- $TIES$ = social ties metrics, either $ALLTIES$ or $OTHERACT$, $EMPLOY$, $EDUC$; $CEOCHAIR$, $CEOTENURE$, $BOARDSIZE$, $INDEP$, $FINEXP$, $ACSIZE$ = corporate governance variables as defined earlier;
- $INITIAL$ = an indicator variable equal to 1 if the auditor is in the first year of engagement and 0 otherwise;
- $BIG4$ = an indicator variable equal to 1 for a big 4 auditor and 0 otherwise;
- $LNTA$ = the natural log of total assets;
- $GROWTH$ = one year growth in sales;
- $LOSS$ = an indicator variable equal to 1 if the firm reports a loss for the fiscal year and 0 otherwise;
- $FOROPS$ = an indicator variable equal to 1 if foreign currency gain or loss is non-zero or non-missing and 0 otherwise;
- $GEOSEG$ = number of geographical segments;
- $LEVERAGE$ = debt to total assets ratio;
- $INVREC$ = inventory plus receivables scaled by total assets;
- $RESTRUCT$ = an indicator variable equal to 1 if the firm was involved in a restructuring during the fiscal year and 0 otherwise;
- LIT = an industry indicator variable, as defined earlier, equal to 1 if the firm is in a litigious industry and 0 otherwise;
- $YEAR$ = year dummies.

In our analyses of internal control deficiencies (ICD), we use internal control reports issued by the auditor on or after November 15, 2004. As with going-concern opinions, we assume that audit committees with more social ties to the CEO lead to a lower incidence of reported internal control weaknesses, because such audit committees are less likely to support the auditor when management pressures the auditor to issue a clean SOX 404 report. Indeed, Naiker and Sharma (2009) suggest that fewer internal controls deficiencies may be reported when audit committees are lenient on the CEO and thus less supportive of the auditor. Alternatively, fewer internal control deficiencies may be a sign of effective oversight, as more experienced audit committee members may be better able to monitor the firm's internal control environment. We also include the governance variables that proxy for oversight quality (i.e., *CEOCHAIR*, *CEOTENURE*, *BOARDSIZE*, *INDEP*, *ACSIZE*, and *FINEXP*). Following Hoitash et al. (2009), we use the common controls for ICD and further control for litigiousness of the industry (*LIT*) and year effects (*YEAR*).

Empirical Results

Panel A of Table 6 presents the descriptive statistics. The auditor reports internal control material weaknesses for 679 firms (9.1 percent) of the 7,451 firm-years in our sample. Of these, 58 percent disclose only one weakness. The remaining 42 percent disclose multiple internal control weaknesses, ranging from 2 to 20 (untabulated). Statistics on social ties and other governance variables are similar to those of previous analyses, except that more firms are audited by a Big 4 firm (*BIG4*, mean = 0.875). Multicollinearity is not an issue: untabulated correlations among independent variables are lower than 0.61 and all VIF scores remain under 2.20.

Model 1 of panel B of Table 6 estimates the relationship between the proportion of tied audit committee directors and the likelihood that the firm reports ICD. We find weak evidence that the

likelihood of ICD is significantly associated with the proportion of tied directors (*ALLTIES*, $p = 0.100$). In Model 2, we divide social ties according to their origin. Results show a marginally negative association between social ties from other activities and the likelihood of disclosed ICD (*OTHERACT*, $p = 0.094$). Specifically, a one standard deviation increase in *OTHERACT* reduces the probability of ICD being reported by 0.66 percent (setting other model variables equal to their mean values), which is a reduction of around 7 percent compared to the mean ICD rate for our sample. Social ties from employment or education are not significantly related to disclosed ICD (*EMPLOY*, $p = 0.548$; *EDUC*, $p = 0.674$). Furthermore, consistent with Naiker and Sharma (2009) and Hoitash et al. (2009), Models 1 and 2 also show that the likelihood that ICD will be reported increases when the auditor is in the first year of engagement, when the company reports a loss for the fiscal year or has foreign operations, when the company has more geographical segments, and when leverage is high. On the other hand, companies with larger boards, more independent boards, more assets, and higher growth rates are less likely to report ICD.

[Include Table 6 about here]

The finding that firms report fewer ICD reports when ties from other activities are present may indicate a permissive environment wherein audit committee members provide little support to the auditor when conflicts arise with management over the disclosure of internal control weaknesses (Naiker and Sharma 2009). Alternatively, firms that report fewer ICD may simply have a good internal control environment. Nevertheless, the evidence on earnings management in Table 3 already shows that ties from other activities reduce the company's financial reporting quality which would be inconsistent with this alternative view. To test for corroborating evidence of a permissive environment, our subsequent analysis focuses on firms that fail to identify such internal control weaknesses in their initial report.

Failure to Identify Internal Control Deficiencies

This test focuses on the subsample of firms that have material weaknesses and distinguishes between those firms that reported ineffective internal controls in their initial SOX 404 report of the fiscal year and those firms that filed amended reports of ineffective internal controls. These latter firms initially filed clean internal control reports and subsequently amended these reports. A study by Chan et al. (2008) shows that firms with less active audit committees are indeed less likely to identify ineffective internal controls in their initial SOX 404 reviews.

Empirical model

We test the association between social ties and the likelihood that a firm will subsequently amend an initially clean internal control opinion after failing to identify ICD in the initial SOX 404 report. Controlling for the other relevant governance variables and using similar control variables as in Chan et al. (2008), we ran the following model:

$$\begin{aligned} ICAMENDED = & \beta_0 + \beta_1 TIES + \beta_2 CEOCHAIR + \beta_3 CEOTENURE + \beta_4 BOARDSIZE + \beta_5 INDEP + \\ & \beta_6 FINEXP + \beta_7 ACSIZE + \beta_8 BIG4 + \beta_9 INITIAL + \beta_{10} \#WEAKNESS + \beta_{11} LNTA + \\ & \beta_{12} MB + \beta_{13} NAF + \beta_{14} LOSS + \beta_{15} FOROPS + \beta_{16} GEOSEG + \beta_{17} UTIL + \\ & \beta_{18} YEAR + \varepsilon \end{aligned} \quad (6)$$

where:

- ICAMENDED* = an indicator variable equal to 1 if the auditor fails to report material weaknesses in his or her initial SOX 404 report and 0 otherwise;
- TIES* = social ties metrics; either *ALLTIES* or *OTHERACT*, *EMPLOY*, *EDUC*;
- CEOCHAIR*, *CEOTENURE*, *BOARDSIZE*, *INDEP*, *FINEXP*, and *ACSIZE*
= corporate governance variables as defined earlier;
- BIG4* = an indicator variable equal to 1 for a big 4 auditor and 0 otherwise;
- INITIAL* = an indicator variable equal to 1 if the auditor is in the first year of engagement and 0 otherwise;
- #WEAKNESS* = the number of material weaknesses reported in the fiscal year;
- LNTA* = the natural log of total assets;
- MB* = the market-to-book ratio;

- NAF* = the ratio of non-audit fees to total fees;
- LOSS* = an indicator variable equal to 1 if the firm reports a loss for the fiscal year and 0 otherwise;
- FOROPS* = an indicator variable equal to 1 if foreign currency gain or loss is non-zero or non-missing and 0 otherwise;
- GEOSEG* = number of geographical segments;
- UTIL* = industry indicator equal to 1 if a firm's 2-digit SIC code is 49 and 0 otherwise;
- YEAR* = year dummies.

Empirical Results

Panel A of Table 7 presents the descriptive statistics. The sample consists of all companies that reported internal control deficiencies between 2004 and 2007. Excluding 2008 from our sample period to ensure that sample firms have ample time to amend their internal control report, yields a sample of 625 firm-years with reported internal control deficiencies. Within this sample, 78 firms (i.e., 12.5 percent) amend their reports, and thus fail to identify ICD in their initial SOX 404 reports. None of the untabulated correlations between independent variables are higher than 0.55. All VIF scores are below 1.97.

Model 1 of Panel B of Table 7 shows that the likelihood that a firm will fail to identify internal control material weaknesses is positively associated with the proportion of socially connected directors in the audit committee (*ALLTIES*, $p = 0.012$). Furthermore, Model 2 shows that social ties from other activities is the main driver of this effect (*OTHERACT*, $p = 0.005$). A one standard deviation increase in *OTHERACT* increases the probability of failure to identify *ICD* by 2.35 percent (setting other model variables equal to their mean values). This represents an increase of around 19 percent of the mean amended report rate for our sample. Again, social ties from employment or education have no effect on a firm's likelihood of failing to identify internal control deficiencies (*EMPLOY*, $p = 0.442$; *EDUC*, $p = 0.382$). These results do not corroborate the alternative view that the presence of social ties lead to a better internal control

environment. On the contrary, friendship ties may create a permissive environment in which both the CEO and the audit committee prevent the disclosure of ICD.

[Include Table 7 about here]

V. ADDITIONAL ANALYSIS

Restatements

We use restatements as an additional measure of oversight quality (Srinivasan, 2005; Dao et al. 2012). We obtain restatement data from Audit Analytics and explore all restatements related to fiscal years 2004–2008, as disclosed in the SEC filings. Consistent with Dao et al. (2012), we focus on those restatements that are likely to be intentional, defined as restatements that have a negative effect on the financial statements and elicit a negative market reaction, as measured by a five-day cumulative abnormal return surrounding the announcement date. Following Cohen et al. (2012a), we include a set of common control variables based on the restatement literature. Our restatement sample consists of 11,640 firm-year observations, of which 1,470 are classified as restatements. Untabulated results show no evidence of a relationship between social ties and the likelihood of restatements.⁹ While this could be interpreted as a sign that financial reporting quality is not affected by social connections, Fracassi and Tate (2012) argue that CEOs of firms with more connected directors may simply be able to refrain from filing a restatement.

If this theory holds, restatements for companies with social connections may be more severe once they surface, if the audit committee would have provided low oversight quality. Consistent with Carcello et al. (2011a), we therefore perform an additional test on restatement firms only in which we distinguish between severe and non-severe restatements. We classify a restatement as

⁹ We further control for the other governance variables included in all prior models. Similar to Larcker et al. (2007), we also find little effects of other corporate governance variables on the likelihood of restatements. It is common that governance variables are often more strongly correlated to accruals models than to restatements

severe if it involves fraud, SEC investigations (AAERs), a change in net income or revenue of more than -10 percent, or a negative market reaction of more than -10 percent. This results in a subsample of 1,358 restating firms, for which we have the necessary controls and of which 468 restatements are classified as severe. Untabulated results provide weak evidence consistent with the view of weak oversight when friendship ties occur. Restatements of firms that have social ties based on other activities are more likely to be classified as severe (*OTHERACT*, $p=0.086$). Specifically, a one standard deviation increase in *OTHERACT* increases the probability of a severe restatement by 3.26 percent (setting other model variables equal to their mean value). This is an increase of about 10 percent compared to the mean proportion of severe restatements in our sample.

Controlling for Non-Audit Committee Ties and Characteristics of the Connected Directors

Social ties can also be formed with independent directors outside the audit committee. We therefore control for the social ties between the CEO and the independent “non-audit” committee members based on education, employment, and other activities in all our previous tests (Krishnan et al. 2011b). Untabulated results show that variables reflecting the non-audit committee ties have little explanatory power, whereas the coefficient on *OTHERACT* always remains significant in the anticipated direction (except for our ICD analysis).

To assess whether socially connected audit committee members have different skill sets, we examine differences in the level of engagement between “connected” and “unconnected” audit committee members. Specifically, we measure differences in busyness (i.e., membership in four or more boards), financial expertise, and board tenure between tied and untied directors. Results suggest that connected directors are more likely to be named as financial experts compared to the

untied directors (44.0 percent compared to 42.8 percent, $p=0.078$)¹⁰. However, tied audit committee members are also more likely to be classified as busy directors compared to untied audit committee members (41.5 percent compared to 34.7 percent, $p<0.001$). For board tenure, the difference between tied and untied audit committee members is not significant (6.48 years vs. 6.62 years, $p=0.110$). Untabulated results controlling for these proxies for the level of engagement show that the conclusion indicating that social ties from other activities reduce oversight quality continues to hold, except for the going-concern and ICD analysis.

Endogeneity

Our results establish an association between social ties measures and variables that proxy for the quality of oversight. It is possible, however, that socially connected directors are appointed to audit committees of firms that have poor oversight quality, because only connected directors are willing to take up positions or alternatively that experts who are hired to improve the company's oversight quality are hard to find outside the CEO's personal network.

A common way to control for these endogeneity concerns, is to re-estimate all the previous regressions with lagged values of our three social ties measures *OTHERACT*, *EDUC*, and *EMPLOY* and the other corporate governance variables (Fich and Shivdasani, 2006; Krishnan et al. 2011a). The relationships between lagged *OTHERACT* and next year's oversight quality have signs and significance levels similar to the associations observed in the main tests except for the earnings management and ICD test. More specifically, lagged *OTHERACT* is significant at the 5

¹⁰ To assess the effect of financial expert connectedness, we include three measures reflecting the proportion of connected financial experts through education, employment or other activities (*FinExp_EDUC*, *FinExp_EMPLOY* and *FinExp_OTHERACT*). In our sample, 17.2 percent of financial experts in the audit committee share ties with the CEO. When we control for different types of financial expert connectedness, connections through other activities (*OTHERACT*) continue to be the main driver of our results, except for our earnings management regression. Here, it is important that the financial experts are linked through other activities (i.e. *FinExp_OTHERACT* is significant ($p=0.010$), while the effect of *OTHERACT* disappears ($p=0.687$).)

percent level or less in the audit fee regression, going-concern regression and internal control amendments test. For the earnings management test, the effect of lagged *OTHERACT* is only marginally significant ($p=0.110$, for absolute accruals; and $p=0.076$ using only positive accruals). For the ICD test the effect of *OTHERACT* is not significant anymore ($p=0.371$).

Another approach to control for endogeneity is to conduct a two-stage instrument variable approach as described in Caramanis and Lennox (2008). Because most of our results materialize on social ties from other activities, we use the instrument variable approach on the variable *OTHERACT*. Because social ties are persistent over time (Carcello et al. 2011b), we run a first stage model that estimates the observed level of social ties through other activities with the lag of *OTHERACT* as an instrument variable and all previously used controls and governance variables of either Tables 3, 4, 5, 6 or 7 as exogenous variables (Caramanis and Lennox 2008). The predicted ties from other activities (*I_OTHERACT*) from the first stage then replace *OTHERACT* in our second stage model. The results for our second stage models produce similar conclusions suggesting that audit committee oversight quality is hampered when friendship ties are present. The instrumented variable for ties from other activities (*I_OTHERACT*) is significant in the anticipated direction in the earnings management ($p=0.037$), audit fee ($p=0.004$), going-concern ($p=0.056$) and internal control amendment regressions ($p=0.006$), except for the internal control deficiency regression where the effect is not significant ($p=0.351$).¹¹

¹¹ We believe that our second stage estimation produces reliable results for two reasons (Larcker and Ristucus 2010; Caramanis and Lennox 2008). First, in all first stage regressions, lagged social ties from other activities are strongly correlated with current ties from other activities ($p\text{-value}<0.001$), indicating that lagged other activities can serve as a powerful instrument. Secondly, our second stage estimates are reliable if the instrument variable is uncorrelated with the error term. Using the Hausman test (Woolridge 2001), we find no evidence of an endogeneity bias at the 5 percent level for any of the estimated regressions. Because *OTHERACT* passes the Hausman test, we have good reason to believe that lagged *OTHERACT* is a valid instrument. That is, due to its high persistence over time, lagged *OTHERACT* is unlikely to be correlated with the error term, because *OTHERACT* is uncorrelated with the error term.

VI. CONCLUSIONS

To safeguard the quality of financial statements, SOX requires all audit committees to be composed solely of independent directors. However, anecdotal evidence suggests that even after SOX, audit committees do not always act in the interest of shareholders and that their role is sometimes reduced to a ceremonial one (Beasley et al. 2009). We offer evidence on a large sample of U.S.-listed companies that suggests that about 39 percent of all audit committees are not fully independent, because of social ties between CEOs and its audit committee members.

More importantly, social connections may hamper the functioning of the audit committee. Our evidence suggests that social ties formed through the CEO's friendship network proxied by other activities reduce oversight quality. Managers of such companies engage more in earnings management, and their audit committees pre-approve lower levels of audit effort. Moreover, we find that auditors in these companies are less likely to report internal control deficiencies or issue going-concern opinions for firms in distress. Additional analysis shows that the likelihood that a firm will make a subsequent amendment of a clean internal control report is higher in firms with friendship ties. This may indicate that audit committees with friendship ties are more likely to support management when the auditor disagrees with management over the type of report to issue. This finding is important because little prior research focuses on CEO incentives to influence client-auditor negotiation processes (Brown and Wright 2008). At the same time our results suggest that not all connections are detrimental, because this negative impact is not observed for social ties formed through employment or education.

Our findings shed light on some unanticipated effects of the SOX mandate for "independent" audit committee members. While the growth in board and audit committee size that followed this mandate has led to improvements in audit committee expertise (Cohen et al. 2012a; Krishnan et

al. 2011a; Linck et al. 2009), our results suggests that CEOs in certain firms still appoint or maintain directors from their personal network of friends to build an audit committee that is sympathetic to their reporting choices.

This paper focuses on the effectiveness of an audit committee in the presence of social ties between CEOs and audit committee members. Potential topics for future study (Feng et al. 2011; Naiker and Sharma 2009) include exploring other connections, such as those among audit committee members or between audit committee members and other key experts that influence the quality of financial reporting. Krishnan et al. (2011b) conclude that CFOs compared to CEOs are often less connected to the board of directors. However, a detailed look at the connections between CFOs and the audit committee can contribute to this literature by providing insights as to when CFOs can exercise their influence on the audit committee. Further work might also explore whether or not so-called friendship ties are always detrimental. Because boards of directors also serve as advisors to management, directors with the necessary expertise may be found primarily within one's personal network.

Our findings can inform shareholders, nomination and governance committees. Such parties might refrain from appointing a director in the audit committee who is too closely connected to the CEO. Our results can guide investors, legislators, and the public as to when audit committees are likely to serve in the interests of management rather than to oversee management. It may be important to require more disclosure about the nature and type of social connections between audit committee members and the CEO. Recent experimental evidence suggests that investors care about such disclosures when assessing the effectiveness of an audit committee, and that investors even differentiate between friendship ties and professional ties (Cohen et al. 2012b).

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TABLE 1: Sample size and industry description

<i>Panel A: Distribution of sample firms by year</i>									
Year	Accruals model		Audit fee model		Going-concern model		Internal control model		
	N	Percent	N	Percent	N	Percent	N	Percent	
2004	1,856	17.29	1,919	17.44	461	14.32	1,047	14.05	
2005	2,039	19.00	2,090	18.99	538	16.71	1,426	19.14	
2006	2,155	20.08	2,228	20.25	605	18.79	1,544	20.72	
2007	2,303	21.46	2,366	21.50	660	20.50	1,701	22.83	
2008	2,381	22.18	2,401	21.82	955	29.67	1,733	23.26	
Total	10,734	100.00	11,004	100.00	3,219	100.00	7,451	100.00	

<i>Panel B: Distribution of sample firms by industry</i>									
2-digit SIC		Accruals model		Audit fee model		Going-concern model		Internal control model	
		N	Percent	N	Percent	N	Percent	N	Percent
01-09	Agriculture, forestry, and fishing	0	0.00	22	0.20	3	0.09	18	0.24
10-14	Mining	622	5.79	646	5.87	161	5.00	432	5.80
15-17	Construction	124	1.16	84	0.76	18	0.56	105	1.41
20-29	Manufacturing-Part 1	1,962	18.28	2,040	18.54	811	25.19	1,297	17.41
30-39	Manufacturing-Part 2	3,654	34.04	3,710	33.72	1,151	35.76	2,531	33.97
40-49	Transportation, communication, utilities	1,187	11.06	1,231	11.19	253	7.86	887	11.90
50-51	Wholesale trade	380	3.54	381	3.46	96	2.98	266	3.57
52-59	Retail Trade	619	5.77	655	5.95	86	2.67	446	5.99
70-89	Services	2,148	20.01	2,213	20.11	634	19.70	1,453	19.50
91-99	Public administration	38	0.35	22	0.20	6	0.19	16	0.21
Total		10,734	100.00	11,004	100.00	3,219	100.00	7,451	100.00

TABLE 2: Proportions of audit committee members with social ties over the years 2004 to 2008*Panel A: Proportion of audit committee directors with social ties for entire sample*

	2004	2005	2006	2007	2008	Total
Number of observations	2,070	2,279	2,429	2,578	2,607	11,963
Proportion of tied directors (<i>ALLTIES</i>)	0.17	0.16	0.16	0.16	0.16	0.17
Proportion of directors with ties						
- through employment (<i>EMPLOY</i>)	0.09	0.09	0.09	0.10	0.10	0.10
- through education (<i>EDUC</i>)	0.04	0.04	0.04	0.04	0.03	0.04
- through other activities (<i>OTHERACT</i>)	0.06	0.05	0.05	0.05	0.04	0.05
Proportion of socially dependent audit committees (AC contains at least one connection between CEO and audit committee member)	0.41	0.39	0.38	0.38	0.38	0.39

Panel B: Importance of social ties in audit committees (AC) where at least one connection is present

	2004	2005	2006	2007	2008	Total
Number of observations	859	897	933	987	987	4,663
Proportion of tied directors (<i>ALLTIES</i>)	0.42	0.42	0.43	0.43	0.43	0.42
Proportion of directors with ties						
- through employment (<i>EMPLOY</i>)	0.22	0.23	0.24	0.26	0.27	0.25
- through education (<i>EDUC</i>)	0.09	0.09	0.10	0.09	0.09	0.09
- through other activities (<i>OTHERACT</i>)	0.14	0.14	0.13	0.12	0.11	0.13

Table 2 shows the observations over the sample period for which we have data on social ties between the CEO and audit committee members. The proportion of tied directors (*ALLTIES*) is calculated by dividing the number of directors that share at least one connection to the CEO by the total number of directors in the audit committee. For social ties based on employment (*EMPLOY*), education (*EDUC*) or other activities (*OTHERACT*), we count the proportion of audit committee members that have a connection to the CEO on the basis of this respective tie. Panel A provides the summary statistics for the entire sample. Panel B provides the statistics for those companies that have socially dependent audit committees. That is, we consider those companies where audit committees have at least one socially connected director (i.e., *ALLTIES* > 0). In Table 2, the overall proportion of audit committee members with social ties is smaller than the sum of the proportions of directors with ties through education, employment, and other activities. This difference arises because a single director can have multiple types of ties to the CEO. In this case, the director is counted in each of the disaggregated ties measures (*EMPLOY*, *EDUC*, *OTHERACT*), but only once in the “*ALLTIES*” measure.

TABLE 3: Social ties and absolute discretionary accruals

<i>Panel A: Descriptive statistics (n = 10,734)</i>						
	Mean	Median	1 st quartile	3 rd quartile	Std. dev.	
DA	0.024	0.02	-0.02	0.07	0.18	
ADA	0.096	0.05	0.02	0.11	0.15	
ALLTIES	0.161	0.00	0.00	0.33	0.24	
OTHERACT	0.051	0.00	0.00	0.00	0.14	
EMPLOY	0.089	0.00	0.00	0.00	0.20	
EDUC	0.035	0.00	0.00	0.00	0.11	
CEOCHAIR	0.539	1.00	0.00	1.00	0.50	
CEOTENURE	7.307	5.00	2.00	10.00	7.39	
BOARDSIZE	8.130	8.00	7.00	9.00	2.24	
INDEP	0.738	0.75	0.67	0.86	0.13	
FINEXP	0.434	0.33	0.25	0.60	0.26	
ACSIZE	3.710	3.00	3.00	4.00	0.98	
BIG4	0.779	1.00	1.00	1.00	0.42	
LNTA	6.136	6.12	4.65	7.55	2.02	
LAGMB	3.379	2.42	1.57	3.98	4.60	
CHANGENI	0.107	0.04	0.01	0.10	0.22	
LOSS	0.211	0.00	0.00	0.00	0.41	
LTDTA	0.199	0.12	0.00	0.30	0.25	

<i>Panel B: Absolute discretionary accruals model (Dependent variable = ADA)</i>						
	Expected sign	MODEL 1		MODEL 2		
		coeff.	t-value	coeff.	t-value	
Intercept		0.173	3.92***	0.179	4.02***	
ALLTIES	+	-0.004	-0.70			
OTHERACT	+			0.023	2.72***	
EMPLOY	+			-0.010	-1.37	
EDUC	+			-0.014	-1.51	
CEOCHAIR	+	0.000	0.16	0.000	0.02	
CEOTENURE	+	0.000	0.62	0.000	0.43	
BOARDSIZE	?	0.001	1.73*	0.001	1.65*	
INDEP	-	-0.018	-1.21	-0.019	-1.24	
FINEXP	-	0.005	0.98	0.005	0.94	
ACSIZE	?	0.001	0.79	0.001	0.62	
BIG4	-	0.004	0.81	0.004	0.79	
LNTA	-	-0.010	-8.25***	-0.011	-8.31***	
LAGMB	?	-0.001	-1.84*	-0.001	-1.85*	
CHANGENI	+	0.273	10.26***	0.273	10.27***	
LOSS	?	0.051	12.00***	0.051	12.00***	
LTDTA	+	0.016	1.20	0.016	1.22	
Industry controls		Yes		Yes		
Year controls		Yes		Yes		
N		10,734		10,734		
Adj. R ²		0.29		0.29		
P-value model		<0.0001		<0.0001		

ADA is the absolute value of discretionary accruals using the Ball and Shivakumar (2006) methodology. *ALLTIES* is the proportion of socially dependent directors on the audit committee, and *OTHERACT*, *EMPLOY*, *EDUC* are the proportion of directors having ties respectively from employment, education, or other activities. *CEOCHAIR* is an indicator variable equal to 1 if the CEO is the chair of the board and 0 otherwise. *CEOTENURE* is the number of years the CEO has been in office. *BOARDSIZE* is the number of directors on the board. *INDEP* is the proportion of independent directors on the board. *FINEXP* is the proportion of financial experts on the audit committee. *ACSIZE* is the number of directors on the audit committee. *BIG4* is an indicator variable equal to 1 if the auditor is one of the Big 4 auditing firms and 0 otherwise. *LNTA* is the natural log of total assets. *LAGMB* is the market-to-book ratio, measured at the beginning of the fiscal year. *CHANGENI* is the absolute value of the change in net income between years $t-1$ and t . *LOSS* is an indicator variable equal to 1 if the firm has two or more consecutive years of negative income and 0 otherwise. *LTDTA* is long-term debt divided by last year's total assets. *, **, and *** denote significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively. Following Rogers (1993) coefficient p -values are based on asymptotic t -statistics robust to heteroscedasticity and firm clustering.

TABLE 4: Social ties and audit fees*Panel A: Descriptive statistics for audit fees model (n = 11,004)*

	Mean	Median	1 st quartile	3 rd quartile	Std. dev.
AUDIT FEE	13.701	13.74	12.87	14.55	1.30
ALLTIES	0.162	0.00	0.00	0.33	0.24
OTHERACT	0.050	0.00	0.00	0.00	0.13
EMPLOY	0.092	0.00	0.00	0.00	0.20
EDUC	0.036	0.00	0.00	0.00	0.11
CEOCHAIR	0.536	1.00	0.00	1.00	0.50
CEOTENURE	7.108	5.00	2.00	10.00	7.30
BOARDSIZE	8.103	8.00	7.00	9.00	2.22
INDEP	0.735	0.75	0.67	0.86	0.14
FINEXP	0.433	0.33	0.25	0.50	0.26
ACSIZE	3.695	3.00	3.00	4.00	0.98
LNTA	6.120	6.10	4.66	7.50	2.00
INITIAL	0.076	0.00	0.00	0.00	0.26
BIG4	0.782	1.00	1.00	1.00	0.41
DA	0.483	0.47	0.28	0.64	0.26
LIQ	2.944	2.07	1.36	3.39	2.74
ROA	0.022	0.07	0.01	0.12	0.22
LOSS	0.211	0.00	0.00	0.00	0.41
INVREC	0.246	0.22	0.10	0.35	0.18
BM	0.521	0.42	0.25	0.67	0.50
FOROPS	0.266	0.00	0.00	1.00	0.44
GROWTH	0.216	0.11	0.02	0.26	0.52
NEWFIN	0.953	1.00	1.00	1.00	0.21

Panel B: Audit fee models (Dependent variable = AUDIT FEE)

	Expected sign	MODEL 1		MODEL 2	
		coeff.	t-value	coeff.	t-value
Intercept		8.804	12.58***	8.788	12.51***
ALLTIES	-	-0.082	-2.01**		
OTHERACT	-			-0.218	-2.83***
EMPLOY	-			-0.004	-0.08
EDUC	-			-0.003	-0.04
CEOCHAIR	-	0.004	0.23	0.005	0.24
CEOTENURE	-	-0.008	-5.61***	-0.008	-5.33***
BOARDSIZE	?	0.017	2.75***	0.017	2.85***
INDEP	+	0.448	5.56***	0.455	5.66***
FINEXP	+	0.105	2.90***	0.107	2.96***
ACSIZE	?	-0.016	-1.53	-0.014	-1.39
LNTA	+	0.540	59.33***	0.541	59.29***
INITIAL	-	-0.034	-1.22	-0.035	-1.28
BIG4	+	0.264	9.06***	0.264	9.04***
DA	+	0.144	2.83***	0.143	2.80***
LIQ	-	-0.015	-3.59***	-0.015	-3.58***
ROA	-	-0.448	-7.51***	-0.446	-7.49***
LOSS	+	0.061	2.21**	0.062	2.25**
INVREC	+	0.523	6.58***	0.528	6.65***
BM	-	-0.060	-3.09***	-0.060	-3.15***
FOROPS	+	0.196	8.63***	0.196	8.58***
GROWTH	?	-0.025	-1.72*	-0.027	-1.86*
NEWFIN	+	-0.021	-0.61	-0.019	-0.57
Industry controls		Yes		Yes	
Year controls		Yes		Yes	
N		11,004		11,004	
Adj. R ²		0.77		0.77	
P-value model		<0.0001		<0.0001	

TABLE 4—continued

AUDIT FEE is the natural log of the audit fee paid to the incumbent auditor, *ALLTIES* is the proportion of socially dependent directors on the audit committee, and *OTHERACT*, *EMPLOY*, *EDUC* are the proportion of directors having social ties from employment, education, or other activities, respectively. *CEOCHAIR* is an indicator variable equal to 1 if the CEO is the chair of the board and 0 otherwise. *CEOTENURE* is the number of years the CEO has been in office. *BOARDSIZE* is the number of directors on the board. *INDEP* is the proportion of independent directors on the board. *FINEXP* is the proportion of financial experts on the audit committee. *ACSIZE* is the number of directors on the audit committee. *LNTA* is the natural log of total assets. *INITIAL* is an indicator variable equal to 1 if the auditor is in the first year of engagement and 0 otherwise. *BIG4* is an indicator variable equal to 1 if the auditor is one of the Big 4 auditing firms and 0 otherwise. *DA* is the ratio of liabilities to assets. *LIQ* is the ratio of current assets to current liabilities. *ROA* is the ratio of operating income to assets. *LOSS* is an indicator variable equal to 1 if net income in fiscal year t or $t-1$ is less than zero and 0 otherwise. *INVREC* is the ratio of inventory and receivables to total assets. *BM* is the book-to-market ratio at the end of the audit-fee year, calculated as common equity to market capitalization (shares outstanding times closing stock price). *FOROPS* is an indicator variable equal to 1 if foreign currency gain or loss is non-zero or non-missing and 0 otherwise. *GROWTH* is one year growth in sales. *NEWFIN* is an indicator variable equal to 1 if the company issued either equity or debt during the fiscal year and 0 otherwise. *, **, and *** denote significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively. Following the methodology in Rogers (1993), coefficient p -values are based on asymptotic t -statistics robust to heteroscedasticity and firm clustering.



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TABLE 5: Social ties and going-concern opinions issued by distressed firms*Panel A: Descriptive statistics full sample (n = 3,219)*

	Mean	Median	1 st quartile	3 rd quartile	Std. dev.
GC	0.053	0.00	0.00	0.00	0.22
ALLTIES	0.143	0.00	0.00	0.33	0.23
OTHERACT	0.033	0.00	0.00	0.00	0.11
EMPLOY	0.085	0.00	0.00	0.00	0.20
EDUC	0.035	0.00	0.00	0.00	0.11
CEOCHAIR	0.452	0.00	0.00	1.00	0.50
CEOTENURE	6.783	5.00	2.00	9.00	6.95
BOARDSIZE	7.530	7.00	6.00	9.00	1.91
INDEP	0.730	0.75	0.67	0.83	0.13
FINEXP	0.418	0.33	0.25	0.50	0.24
ACSIZE	3.475	3.00	3.00	4.00	0.78
BIG4	0.693	1.00	0.00	1.00	0.46
PRIORGC	0.034	0.00	0.00	0.00	0.18
LNTA	5.089	4.84	3.80	6.22	1.79
REPLAG	8.710	8.66	8.19	9.22	1.15
PB	-2.067	-2.54	-3.55	-1.20	2.05
RETURN	-0.159	-0.25	-0.53	0.09	0.53
LEV	0.291	0.15	0.00	0.49	0.36
LOSS	0.649	1.00	0.00	1.00	0.48
CFOTA	-0.103	-0.03	-0.18	0.05	0.25
INVM	0.330	0.24	0.07	0.57	0.30
NEWFIN	0.943	1.00	1.00	1.00	0.23
LIT	0.449	0.00	0.00	1.00	0.50

Panel B: Going-concern opinions model (Dependent variable = GC)

	Expected sign	MODEL 1		MODEL 2	
		coeff.	z-value	coeff.	z-value
Intercept		-4.114	-3.76***	-4.274	-4.01***
ALLTIES	-	-0.406	-0.83		
OTHERACT	-			-2.686	-1.71*
EMPLOY	-			0.088	0.18
EDUC	-			-0.605	-0.59
CEOCHAIR	-	-0.015	-0.06	-0.036	-0.15
CEOTENURE	-	-0.015	-0.83	-0.013	-0.71
BOARDSIZE	?	-0.012	-0.16	-0.008	-0.12
INDEP	+	-1.105	-1.32	-1.197	-1.44
FINEXP	+	-0.569	-1.12	-0.587	-1.16
ACSIZE	?	0.033	0.20	0.046	0.27
BIG4	+	0.442	1.71*	0.466	1.80*
PRIORGC	+	3.190	8.16***	3.143	7.97***
LNTA	?	-0.219	-2.27**	-0.211	-2.24**
REPLAG	+	0.186	3.59***	0.196	4.15***
PB	+	0.320	4.49***	0.319	4.49***
RETURN	-	-1.119	-3.22***	-1.119	-3.21***
LEV	+	-0.119	-0.30	-0.120	-0.30
LOSS	+	0.330	1.20	0.337	1.23
CFOTA	-	-2.054	-3.90***	-2.061	-3.91***
INVM	-	-2.809	-5.28***	-2.832	-5.35***
NEWFIN	-	0.342	0.76	0.386	0.85
LIT	+	0.096	0.43	0.099	0.45
Year controls		Yes		Yes	
N		3,219		3,219	
Pseudo R ²		0.41		0.41	
P-value model		<.0001		<.0001	

TABLE 5—continued

GC is an indicator variable equal to 1 if the company receives a going-concern opinion and 0 otherwise. *ALLTIES* is the proportion of socially dependent directors on the audit committee, and *OTHERACT*, *EMPLOY*, *EDUC* are the proportion of directors having social ties from employment, education, or other activities, respectively. *CEOCHAIR* is an indicator variable equal to 1 if the CEO is the chair of the board and 0 otherwise. *CEOTENURE* is the number of years the CEO has been in office. *BOARDSIZE* is the number of directors on the board. *INDEP* is the proportion of independent directors on the board. *FINEXP* is the proportion of financial experts on the audit committee. *ACSIZE* is the number of directors on the audit committee. *BIG4* is an indicator variable equal to 1 if the auditor is one of the Big 4 auditing firms and 0 otherwise. *PRIORG* is an indicator variable equal to 1 if the firm receives a going-concern opinion in the prior fiscal year and 0 otherwise. *LNTA* is the natural log of total assets. *REPLAG* is the square root of the number of days between the fiscal year end and the earnings announcement date. *PB* is the probability of bankruptcy, calculated from the Zmijewski (1984) weighted probit bankruptcy prediction model. *RETURN* is the firm's stock return over the fiscal year. *LEV* is the debt-to-capital ratio. *LOSS* is an indicator variable equal to 1 if the firm reports a loss for the previous year and 0 otherwise. *CFOTA* is operating cash flows divided by total assets. *INVM* is cash, cash equivalents, and short- and long-term investment securities deflated by total assets. *NEWFIN* is an indicator variable equal to 1 if the firm issues equity or debt during the fiscal year and 0 otherwise. *LIT* is an indicator variable equal to 1 if the firm is in a litigious industry (SIC codes 2833-2836, 3570-3577, 3600-3674, 5200-5961 and 7370) and 0 otherwise. *, **, and *** denote significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively. Following the methodology in Rogers (1993), coefficient *p*-values are based on asymptotic *z*-statistics robust to heteroscedasticity and firm clustering.



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TABLE 6: Social ties and internal control deficiencies*Panel A: Descriptive statistics (n = 7,451)*

	Mean	Median	1 st quartile	3 rd quartile	Std. dev.
ICD	0.091	0.00	0.00	0.00	0.29
ALLTIES	0.170	0.00	0.00	0.33	0.24
OTHERACT	0.058	0.00	0.00	0.00	0.14
EMPLOY	0.091	0.00	0.00	0.00	0.19
EDUC	0.038	0.00	0.00	0.00	0.11
CEOCHAIR	0.541	1.00	0.00	1.00	0.50
CEOTENURE	6.848	5.00	2.00	9.00	6.91
BOARDSIZE	8.525	8.00	7.00	10.00	2.22
INDEP	0.755	0.78	0.67	0.86	0.13
FINEXP	0.451	0.33	0.25	0.67	0.27
ACSIZE	3.842	4.00	3.00	4.00	1.02
INITIAL	0.052	0.00	0.00	0.00	0.22
BIG4	0.875	1.00	1.00	1.00	0.33
LNTA	6.814	6.69	5.56	7.94	1.71
GROWTH	0.180	0.11	0.03	0.24	0.40
LOSS	0.238	0.00	0.00	0.00	0.43
FOROPS	0.313	0.00	0.00	1.00	0.46
GEOSEG	3.245	2.00	1.00	4.00	2.75
LEVERAGE	0.508	0.50	0.32	0.66	0.25
INVREC	0.244	0.22	0.10	0.34	0.17
RESTRUCT	0.328	0.00	0.00	1.00	0.47
LIT	0.317	0.00	0.00	1.00	0.47

Panel B: Internal control deficiencies models (Dependent variable = ICD)

	Expected sign	MODEL 1		MODEL 2	
		coeff.	z-value	coeff.	z-value
Intercept		-0.396	-1.00	-0.462	-1.14
ALLTIES	-	-0.362	-1.65*		
OTHERACT	-			-0.725	-1.67*
EMPLOY	-			-0.154	-0.60
EDUC	-			-0.185	-0.42
CEOCHAIR	+	0.005	0.05	0.006	0.06
CEOTENURE	+	-0.001	-0.18	-0.001	-0.08
BOARDSIZE	?	-0.091	-2.62***	-0.090	-2.58**
INDEP	-	-0.998	-2.28**	-0.968	-2.18**
FINEXP	-	0.143	0.75	0.144	0.76
ACSIZE	?	0.096	1.59	0.100	1.66
INITIAL	+	0.711	4.31***	0.706	4.29***
BIG4	+	-0.169	-1.07	-0.167	-1.05
LNTA	-	-0.109	-2.51**	-0.106	-2.44**
GROWTH	?	-0.212	-2.19**	-0.211	-2.18**
LOSS	+	0.769	6.88***	0.765	6.87***
FOROPS	+	0.457	4.11***	0.456	4.08***
GEOSEG	+	0.047	2.34**	0.046	2.32**
LEVERAGE	+	0.402	2.18**	0.399	2.15**
INVREC	+	0.185	0.61	0.178	0.58
RESTRUCT	+	0.140	1.28	0.139	1.27
LIT	+	0.129	1.11	0.128	1.10
Year controls		Yes		Yes	
N		7.451		7.451	
Pseudo R ²		0.10		0.10	
P-value model		<0.0001		<0.0001	

TABLE 6—continued

ICD is an indicator variable equal to 1 if the auditor reports one or more internal control deficiencies and 0 otherwise. *ALLTIES* is the proportion of socially dependent directors on the audit committee, and *OTHERACT*, *EMPLOY*, *EDUC* are the proportion of directors having social ties from employment, education, or other activities, respectively. *CEOCHAIR* is an indicator variable equal to 1 if the CEO is the chair of the board and 0 otherwise. *CEOTENURE* is the number of years the CEO has been in office. *BOARDSIZE* is the number of directors on the board. *INDEP* is the proportion of independent directors on the board. *FINEXP* is the proportion of financial experts on the audit committee. *ACSIZE* is the number of directors on the audit committee. *INITIAL* is an indicator variable equal to 1 if the auditor is in the first year of engagement and 0 otherwise. *BIG4* is an indicator variable equal to 1 if the auditor is one of the Big 4 auditing firms and 0 otherwise. *LNTA* is the natural log of total assets. *GROWTH* is one year growth in sales. *LOSS* is an indicator variable equal to 1 if the firm reports a loss for the fiscal year and 0 otherwise. *FOROPS* is an indicator variable equal to 1 if foreign currency gain or loss is non-zero or non-missing, and 0 otherwise. *LEVERAGE* is the debt to total assets ratio. *GEOSEG* is the number of geographical segments. *INVREC* is inventory plus receivables scaled by total assets. *SPITEMS* is special items scaled by total assets. *LIT* is an indicator variable equal to 1 if the firm is in a litigious industry (SIC codes 2833-2836, 3570-3577, 3600-3674, 5200-5961 and 7370) and 0 otherwise. *, **, and *** denote significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively. Following the methodology in Rogers (1993), coefficient *p*-values are based on asymptotic *z*-statistics robust to heteroscedasticity and firm clustering.



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TABLE 7: Social ties and internal control report adjustments*Panel A: Descriptive statistics (n = 625)*

	Mean	Median	1 st quartile	3 rd quartile	Std. dev.
ICAMENDED	0.125	0.00	0.00	0.00	0.33
ALLTIES	0.148	0.00	0.00	0.25	0.23
OTHERACT	0.041	0.00	0.00	0.00	0.12
EMPLOY	0.085	0.00	0.00	0.00	0.19
EDUC	0.035	0.00	0.00	0.00	0.10
CEOCHAIR	0.523	1.00	0.00	1.00	0.50
CEOTENURE	6.926	4.00	1.00	10.00	7.73
BOARDSIZE	7.979	8.00	6.00	9.00	2.16
INDEP	0.735	0.75	0.67	0.85	0.13
FINEXP	0.444	0.33	0.25	0.67	0.26
ACSIZE	3.742	4.00	3.00	4.00	0.93
BIG4	0.827	1.00	1.00	1.00	0.38
INITIAL	0.102	0.00	0.00	0.00	0.30
#WEAKNESS	2.038	1.00	1.00	2.00	1.94
LNTA	6.310	6.13	5.26	7.31	1.59
MB	3.053	2.27	1.51	3.50	3.88
NAF	0.258	0.09	0.02	0.25	0.73
LOSS	0.371	0.00	0.00	1.00	0.48
FOROPS	0.394	0.00	0.00	1.00	0.49
GEOSEG	3.782	3.00	1.00	5.00	3.21
UTIL	0.032	0.00	0.00	0.00	0.18

Panel B: Internal control adjustments models (Dependent variable = ICAMENDED)

	Expected sign	MODEL 1		MODEL 2	
		coeff.	z-value	coeff.	z-value
Intercept		-2.094	-1.68	-1.737	-1.39
ALLTIES	+	1.308	2.52**		
OTHERACT	+			2.720	2.78***
EMPLOY	+			0.518	0.77
EDUC	+			1.038	0.87
CEOCHAIR	+	-0.116	-0.38	-0.133	-0.42
CEOTENURE	+	0.016	0.93	0.011	0.65
BOARDSIZE	?	0.062	0.80	0.066	0.83
INDEP	-	-0.635	-0.59	-0.680	-0.62
FINEXP	-	-0.281	-0.54	-0.360	-0.67
ACSIZE	?	-0.046	-0.26	-0.082	-0.46
BIG4	-	0.315	0.60	0.406	0.77
INITIAL	-	-1.334	-1.75*	-1.277	-1.72*
#WEAKNESS	-	-0.408	-2.94***	-0.407	-2.97***
LNTA	+	0.116	1.00	0.078	0.65
MB	+	0.055	1.99**	0.058	2.09**
NAF	+	-0.099	-0.64	-0.149	-0.79
LOSS	?	-0.666	-1.92*	-0.664	-1.89*
FOROPS	?	-0.451	-1.49	-0.501	-1.63
GEOSEG	?	0.033	0.75	0.039	0.91
UTIL	?	-1.590	-1.34	-1.531	-1.31
Year Controls		Yes		Yes	
N		625		625	
Pseudo R ²		0.13		0.14	
P-value model		<0.0001		<0.0001	

TABLE 7—continued

ICAMENDED is an indicator variable equal to 1 if the company initially reported effective internal controls but subsequently amended these reports to reflect ineffective internal controls, and 0 otherwise. *ALLTIES* is the proportion of socially dependent directors on the audit committee, and *OTHERACT*, *EMPLOY*, *EDUC* are the proportion of directors having social ties from employment, education, or other activities, respectively. *CEOCHAIR* is an indicator variable equal to 1 if the CEO is the chair of the board and 0 otherwise. *CEOTENURE* is the number of years the CEO has been in office. *BOARDSIZE* is the number of directors on the board. *INDEP* is the proportion of independent directors on the board. *FINEXP* is the proportion of financial experts on the audit committee. *ACSIZE* is the number of directors on the audit committee. *BIG4* is an indicator variable equal to 1 if the auditor is one of the Big 4 auditing firms and 0 otherwise. *INITIAL* is an indicator variable equal to 1 if the auditor is in the first year of engagement and 0 otherwise. *#WEAKNESS* is the number of material weaknesses reported in the fiscal year. *LNTA* is the natural log of total assets. *MB* is the market-to-book ratio. *NAF* is the ratio of non-audit fees to total fees. *LOSS* is an indicator variable equal to 1 if the firm reports a loss for the fiscal year and 0 otherwise. *FOROPS* is an indicator variable equal to 1 if foreign currency gain or loss is non-zero or non-missing and 0 otherwise. *GEOSEG* is the number of geographical segments. *UTIL* is an indicator variable equal to 1 if a firm's 2-digit SIC code is 49, and 0 otherwise. *, **, and *** denote significance at the 10 percent, 5 percent, and 1 percent levels (two-tailed), respectively. Following the methodology in Rogers (1993), coefficient *p*-values are based on asymptotic *z*-statistics robust to heteroscedasticity and firm clustering.



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