Executive officers' affiliations with CPA firms: Causes and consequences for audit quality

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Abstract

An executive officer is 'affiliated' if she previously worked for her company's audit firm. This paper investigates the causes of executive-auditor affiliations and tests their impact on audit quality using a sample of companies where the probability of an unfavorable audit opinion is relatively high. I find most affiliations (71.3%) occur when auditors go to work for audit clients ('employment affiliations'), and the remaining affiliations occur when companies switch to their executives' former CPA firms ('alma mater affiliations'). Consistent with concerns that affiliations impair audit quality, I find affiliated companies are significantly more likely than unaffiliated companies to receive clean audit opinions. Audit quality impairment is found to be significant for both employment affiliations and alma mater affiliations. Executive turnover is found to be significantly lower (higher) for affiliated executives than for unaffiliated executives in the year following the issuance of clean (unfavorable) audit opinions. This suggests companies perceive affiliations as more valuable after affiliated executives prevent the issuance of unfavorable audit opinions.

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1. Introduction

Recent corporate scandals such as Enron and WorldCom have focused the world's attention on whether audit firms are independent from their clients. The Securities and Exchange Commission (SEC) and the Independence Standards Board (ISB) argue that audit quality can be impaired when executives previously worked for their companies' audit firms (i.e., when executives are 'affiliated' with auditors). The Sarbanes-Oxley Act (July 2002) now requires that CEOs and executives holding accounting or finance positions must not have been employed by their company's audit firm during the one year period following their participation on the external audit. Notwithstanding the concerns of regulators, there exists no published archival evidence on why affiliations occur or whether they impair audit quality. This paper therefore addresses two important and topical questions relating to affiliations. First, what causes affiliations between executive officers and their companies' audit firms? Second, do affiliations impair audit quality?

The first question is addressed by distinguishing three different types of affiliation. The first type (the 'employment affiliation') occurs when an individual leaves the audit firm to work for a client. For example, an individual is initially employed by X CPA and works on the audit of Y Corp, and the individual subsequently leaves X and becomes employed by Y. The second type (the 'alma mater affiliation') occurs when an executive persuades her company to appoint her former audit firm. For example, an individual leaves X CPA and becomes a senior executive at Y Corp which is audited by Z CPA. The individual then convinces the board of Y Corp to switch from Z CPA to X CPA (her alma mater firm). The third type (the 'chance affiliation') occurs randomly, namely there is no causality underlying the affiliation. For example, an individual trains for three years at X CPA and, later in her career, she is employed by a company that is coincidentally audited by X CPA. I identify the three types of executive-auditor affiliations by investigating when: (i) the company first hires its current audit firm, (ii) the individual leaves the audit firm, and (iii) the individual joins the company. I find the frequency of affiliation is significantly higher than would be observed simply by chance. After accounting for chance

affiliations, I find employment affiliations comprise 71.3% of affiliations and the remaining affiliations are due to the alma mater effect.

With respect to the second question, regulators have expressed concerns that employment affiliations impair audit quality but they have not so far expressed concerns about alma mater affiliations. The ISB (Independence Standards Board) has discussed three ways in which employment affiliations might impair audit quality (ISB, 1999). The first relates to impairment before the individual leaves the audit firm, and the other two relate to impairment when the former auditor works at the client. This paper tests whether affiliations impair audit quality when the affiliated executive works at the company, not before she leaves the audit firm.

Audit quality can be impaired before the individual leaves the audit firm if she is, or expects to be, negotiating an employment contract with an audit client. The concern is that collusion - either explicit or implicit – can occur between the auditor and the client. For example, a client offers a lucrative employment contract to a member of the audit team, and as a result she is unwilling to confront management with problems uncovered during the audit. A one year mandatory cooling-off period was introduced recently in order to prevent this problem occurring before the individual leaves the audit firm.

Audit quality can be impaired after the individual joins the company in two ways. First, the audit team members might be overly friendly with, or respectful of, their former colleague and so they might be unwilling to challenge her assertions. To combat this problem, the ISB recommends the audit firm consider whether the remaining members of the audit team are independent of their former colleague (ISB, 2000). Second, the former auditor might be sufficiently familiar with the audit firm's testing methodology that she can circumvent its design. The ISB recommends the audit firm consider modifying its audit approach in order to prevent circumvention by a former colleague (ISB, 2000). Although regulators have focused on the dangers posed by employment affiliations, it should be noted that alma mater affiliations might also impair audit quality for the two reasons discussed above.

Audit quality is defined as the joint probability that an existing problem is discovered and reported by the auditor (DeAngelo, 1981). Given that a problem exists, the probability of problem discovery depends on the auditor's competence and effort, and on the ability of senior executives to hide or minimize the problem's appearance. The probability that an auditor reports a discovered problem depends on auditor independence. Executive-auditor affiliations might impair audit quality by reducing the likelihood of problem discovery and/or by reducing auditor independence. As in previous studies (e.g., Craswell et al., 2002), I assume the audit opinion reflects the joint probability that an existing problem is both discovered and reported. Recent studies examine audit opinion reporting in order to test whether audit quality is impaired by financial incentives such as the provision of non-audit services and client size (Reynolds and Francis, 2000; Craswell et al., 2002; DeFond et al., 2002). Without exception, these studies find no significant association between financial incentives and clean audit opinions. This paper considers an alternative source of audit quality impairment, namely executive-auditor affiliations. If affiliations impair audit quality, it is expected that affiliated companies are more likely to receive clean audit opinions (after controlling for the likelihood that problems exist).

I identify companies that are likely to have problems by estimating an audit opinion model and I sample companies whose predicted unfavorable audit opinion probabilities exceed 10%. The problem company sample is partitioned into: (1) companies that have unaffiliated executives with prior CPA experience, (2) companies that have no executives with prior CPA experience, and (3) companies that have affiliated executives. I find the frequency of clean opinions is significantly higher in group (3) than in groups (1) and (2). The frequency of clean opinions is higher for both employment affiliations and alma mater affiliations, with the effect particularly strong for alma mater affiliations. These results hold after controlling for ex ante company characteristics (e.g., size, profitability) and ex post characteristics (e.g., bankruptcy, takeover). I conclude from these findings that executive-auditor affiliations significantly impair audit quality.

Affiliated executives are not always able to prevent the issuance of unfavorable audit opinions. This raises a question as to what happens to affiliated executives following the issuance of audit opinions. If companies form affiliations in order to influence audit reporting, I expect companies perceive affiliations as less valuable following the issuance of unfavorable opinions. I therefore hypothesize that turnover is abnormally high (low) for affiliated executives following the issuance of unfavorable (clean) audit opinions. I assess whether the turnover rate for affiliated executives is abnormally high or low by using a comparison group of unaffiliated executives who have prior CPA experience. Following the issuance of unfavorable audit opinions, the turnover rate is found to be significantly higher for affiliated executives than for unaffiliated executives. Following the issuance of clean audit opinions, the turnover rate is significantly lower for affiliated executives than for unaffiliated executives. I conclude that companies perceive affiliations as more valuable after affiliated executives prevent the issuance of unfavorable audit opinions.

The next section discusses the causes of executive-auditor affiliations and develops the two hypotheses tested. Section 3 explains how the sample is chosen, details the data sources, and provides descriptive statistics. Section 4 provides results for the multivariate models of audit reporting and executive turnover. Section 5 summarizes and concludes the paper.

2. Background and hypothesis development

Section 2.1 discusses the underlying causes of employment affiliations and alma mater affiliations. Section 2.2 develops the first hypothesis regarding the impact of executive-auditor affiliations on audit quality. Section 2.3 develops the second hypothesis regarding the turnover of affiliated and unaffiliated executives following the issuance of audit opinions.

2.1 Causes of executive-auditor affiliations

An employment affiliation occurs when an individual leaves an audit firm and joins one of the audit firm's clients. Employment affiliations may be common since many graduates become auditors without expecting to spending their entire careers in public accounting (Arlinghaus and Cashell, 2001). Accounting is an attractive career choice because it offers experience and contacts with audit clients, and this can improve subsequent career choices. The client can also benefit from hiring an auditor who is familiar with its accounting system (Beasley et al., 2000; SEC, 2000).

An alma mater affiliation occurs when an executive uses her influence to appoint her former CPA firm as the company's auditor. An affiliated executive may have a preference for her former audit firm for two reasons. First, she might feel a sense of kinship or loyalty towards her former employer. Second, she might have originally chosen to work at a CPA firm that she perceived was better than other CPA firms. If this perception persists over time she might retain a preference for her former firm when she later becomes a company executive. In either case, an affiliated executive might use her influence to persuade the company to hire her alma mater firm. On the other hand, two factors could cause a former auditor to prefer that her company does not hire her alma mater. These factors would make alma mater affiliations relatively uncommon compared to employment affiliations. First, there might be a negative loyalty effect if the former auditor leaves the audit firm on a sour note, for example if she fails to win promotion. Second, extant research shows companies change audit firms infrequently (e.g., DeFond and Subramanyam, 1998), which suggests the net costs of switching auditor are usually high. So even if an executive wants the company to hire her alma mater, the preference may not be sufficiently strong to justify the company dismissing its incumbent audit firm. On the other hand, as Francis and Wilson (1988) note, the auditor dismissal and appointment decisions may be partly independent. So, an alma mater affiliation could still affect the company's choice of incoming audit firm even if the alma mater affiliation does not cause the dismissal of the outgoing firm.

2.2 The effects of affiliations on audit quality

The extant literature uses survey or experimental approaches to test the *perceived* effect of affiliations on audit quality (Imhoff, 1978; Firth, 1981; Koh and Mahathevan, 1993; Parlin and Bartlett, 1994). These studies show financial statement users perceive that affiliations reduce audit quality, but auditors' perceptions are mixed. To my knowledge, there are no published archival papers that test whether executive-auditor affiliations impair audit quality *in fact*.

Anecdotal examples suggest affiliations may impair audit quality. In Lincoln Savings & Loan v. Wall (1990), it was revealed that Charles Keating offered an annual salary of $930,000 to hire an audit partner who had worked on the Lincoln engagement. The court ruled that auditor independence can be impaired when an auditor accepts an offer of employment from a client.[2] In 1996, Deloitte & Touche agreed to pay $65 million following its audit of Bonneville Pacific. Several Bonneville executives had previously worked for Deloitte & Touche, and the plaintiffs claimed this impaired the audit firm's independence (Clikeman, 1996). Financial press reports suggest executive-auditor affiliations prevented auditors discovering fraud in Livent, a Canadian producer of Broadway shows (Beasley et al., 2000). Senior management were former employees or partners of their companies' audit firms in the audit failures of Cendant, First Executive, Phar-Mor, and Waste Management (Clikeman, 1996; Buckless et al., 2000; Business Week, 2002). More recently, it has been noted that several Enron executives, including the Chief Accounting Officer, previously worked for Arthur Andersen (Business Week, 2002). The question as to whether the above anecdotes are isolated cases or represent a more systematic problem is an open empirical issue that this paper tests.

I hypothesize that executive-auditor affiliations impair audit quality by reducing the likelihood of problem discovery and/or by reducing the likelihood that an auditor reports a

[2] The court stated, "Atchison, who was in charge of the Arthur Young audit of Lincoln, left Arthur Young to assume a high paying position with Lincoln. This certainly raises questions about Arthur Young's independence. Here a person in charge of the Lincoln audit resigned from the accounting firm and immediately became an employee of Lincoln. This practice of 'changing sides' should certainly be examined by the accounting profession's standard setting authorities as to the impact such a practice has on the accountant's independence" (SEC, 2000).

discovered problem. Auditors are less likely to discover problems if the executive's prior experience at the audit firm enables her to circumvent normal audit testing procedures. Auditor independence is reduced if there are misplaced personal friendships or trust between the executive and her former audit colleagues. I assume the audit opinion reflects the joint probability that an (existing) problem is both discovered and reported. The first hypothesis (in alternative form) is therefore:

Hypothesis 1 (H1)

Ceteris paribus, clean audit opinions are issued more often to companies that have affiliated executives.

H1 is tested by estimating the following logit model:

$$M_i = \alpha_0 + \alpha_1 AFF_i + \alpha_2 X_i + u_i \qquad (1)$$

M_i equals one if company i receives an unfavorable audit opinion and equals zero if company i receives a clean audit opinion. I explain later how audit opinions are classified as unfavorable or clean. AFF_i equals one if company i has at least one affiliated executive and AFF_i equals zero if company i has no affiliated executives. Eq. (1) is estimated for affiliated companies and for unaffiliated companies that have at least one executive with prior CPA experience. Under H1, the coefficient on AFF_i is significantly negative ($\alpha_1 < 0$).

X_i is a vector of company characteristics that have been shown in extant research to explain audit opinion reporting. Most unfavorable opinions are issued for going concern issues, so the control variables largely capture the financial health of companies. The control variables are labeled 'ex ante' or 'ex post'. The ex ante variables are profitability, liquidity, leverage, default, company size and growth. They are ex ante in the sense that they correspond to the financial year-end reported upon by the auditor. The ex post variables indicate whether the

company goes bankrupt or is taken over in the year following the issuance of the audit opinion. Ex post variables are included because auditors and executives might have private information about future prospects, and such private information might be correlated with both affiliations and with unfavorable audit opinions.

2.3 Audit opinions and executive turnover

If executive-auditor affiliations affect audit reporting, companies may deliberately form and maintain affiliations in order to increase the likelihood of receiving clean audit opinions. Alternatively companies may form and maintain affiliations for efficiency reasons. For example, a company might employ a former auditor rather than an outsider, because the auditor is better acquainted with the company's accounting systems and requirements.

If companies maintain affiliations in order to avoid unfavorable audit opinions, they would view affiliations as less valuable following the issuance of unfavorable opinions. It is therefore expected that affiliated executives are more (less) likely to leave companies following the issuance of unfavorable (clean) audit opinions. Of course, the audit opinion might be associated with executive departure independent of whether the executive is affiliated. I therefore use a comparison group of unaffiliated executives who have prior CPA experience in order to test whether the departure rate for affiliated executives is abnormally high or low. The second alternative hypothesis (in alternative form) is:

Hypothesis 2 (H2)

> *Ceteris paribus, the departure rate is lower (higher) for affiliated executives than for unaffiliated executives following the issuance of clean (unfavorable) audit opinions.*

H2 is tested by estimating the following logit model:

$$DEP_j = \beta_0 + \beta_1 AFF_j + \beta_2 AFF_j \times M_j + \beta_3 M_j + \beta_4 Z_j + v_j \quad (2)$$

DEP_j equals one if executive j leaves the company within a year following the issuance of the audit opinion (zero otherwise). AFF_j equals one if executive j is affiliated (zero otherwise). M_j equals one if j's company received an unfavorable audit opinion (zero if clean). Under H2, the coefficient on AFF_j is significantly negative ($\beta_1 < 0$), and the coefficient on $AFF_j \times M_j$ is significantly positive ($\beta_2 > 0$). The M_j variable captures the normal association between audit opinions and executive turnover (i.e., the association for unaffiliated executives).

Z_j is a vector of company and executive characteristics that affect executive departures. Company characteristics include ex-ante variables (e.g., profitability) and ex-post variables (e.g, bankruptcy). Executive characteristics include tenure, position within the company, and age. Eq. (2) is estimated for the sample of j executives, whereas eq. (1) is estimated for the sample of i companies. Some companies have two or more executives with prior CPA experience, so the estimation sample is larger in eq. (2) than in eq. (1).

3. The sample and descriptive statistics

3.1 The sample

The initial sample consists of SEC registrants recorded on COMPUSTAT between 1995-98. There are four types of audit opinions in the sample: (1) unqualified and unmodified, (2) unqualified but modified, (3) qualified 'except for' opinions, and (4) opinion disclaimers. To obtain a finer classification for groups (2)-(4), I impose the sample restriction that these opinions are available from 10-K filings on EDGAR. The resulting initial sample consists of 28,292 audit opinions.

Panel A of Table 1 reports frequencies for the four types of audit opinions. Most audit opinions are unqualified and unmodified (83.45%), some are unqualified but modified (16.38%),

and there are few qualified opinions (0.08%), or opinion disclaimers (0.08%). Panel B of Table 1 shows the different types of modified audit opinions. There are 1,795 opinions that disclose going concern uncertainties, 98 disclose other fundamental uncertainties (usually litigation), 2,536 contain 'harmless' explanatory language, and 113 contain other language that would likely be viewed as unfavorable.[3] The unqualified audit opinions and the modified opinions with harmless explanatory language are coded $M = 0$, and for convenience I label these opinions as 'clean'. The other opinions (mostly going concern) are coded $M = 1$, and I label these opinions as 'unfavorable'.

[INSERT TABLE 1 HERE]

It would be prohibitively costly to collect executives' career histories for all 28,292 company-year observations. Instead, I identify companies that are more likely to receive unfavorable opinions by estimating an audit opinion reporting model. The model includes the following company characteristics as explanatory variables: profitability (P_i), liquidity (LIQ_i), leverage (LEV_i), company size ($SIZE_i$), growth ($GROW_i$), and default (DEF_i). P_i is the ratio of net income to total assets, LIQ_i is the ratio of current assets to current liabilities, LEV_i is the ratio of total liabilities to total assets, $SIZE_i$ equals total assets, $GROW_i$ is the annual percentage change in total assets, and DEF_i equals one if company i is in default (zero otherwise). With the exception of DEF_i, the variables are rank-transformed in order to avoid estimation problems associated with skewness and outliers. Kane and Meade (1998) show rank transformations are more efficient at avoiding skewness and outlier problems compared to alternative procedures

[3] Explanatory language is assumed to be harmless if it contains one or more of the following statements: (a) the financial statements comply with SEC regulations, (b) the opinion is shared with another audit firm, (c) there is a change in accounting principles, or (d) certain events affect the comparability or consistency of current and prior year financial statements. Explanatory language is unfavorable if it discloses problems such as financial distress, lack of compliance with SEC filing requirements, criminal investigations, accounting errors, or related party transactions.

such as log transformations and sample trimming. For a variable with N observations in year t, the rank transformation replaces each observation with its corresponding rank (from i = 1, . . . , N in ascending order) and the rank assigned to observation i is divided by N+1.

I estimate an audit opinion model for the full sample (N = 28,292), and the (unreported) results show that clean opinions are issued more often to companies that are profitable, have high liquidity, low leverage, are large, growing, and not in default.[4] The coefficient estimates are used to predict unfavorable audit opinion probabilities, and I sample 5,545 companies that have predicted probabilities exceeding 10%. This sampling approach is similar to other audit opinion studies that reduce data collection costs by focusing on distressed companies. I obtain executives' career biographies from 10-K and proxy filings (on EDGAR) and from Dun & Bradstreet's Reference Books of Corporate Managements. I obtain companies' audit firm names and audit firm appointment dates from COMPUSTAT, Who Audits America, Auditor-Trak, and 8-K filings. I identify affiliated executives by matching audit firm names with executives' biographical information.

An executive is affiliated by chance if her employment at the company and the company's choice of audit firm are not causally related. For example, suppose an individual leaves X CPA in 1987 and she joins Y Corp. in 1996, and suppose that X CPA was first appointed as Y Corp.'s auditor in 1990. Fig. 1a illustrates this case, since the individual first leaves the audit firm, then the company selects the audit firm, and the individual subsequently joins the company. An affiliation with this timing cannot be an employment affiliation because X was not Y's auditor when she left X in 1987. Moreover, it cannot be an alma mater affiliation because the company first appointed X in 1990, six years before she joined Y. I find 23 affiliations have the timing shown in Fig. 1a, and these chance affiliations are dropped from the sample.

[4] Estimation results for this model are available from the author.

[INSERT FIG. 1 HERE]

Next, the sample is partitioned into three groups: (1) companies that have no affiliated executives but have at least one executive with prior CPA experience, (2) companies that have no executives with prior CPA experience, and (3) companies that have at least one affiliated executive. For groups (1) and (3), I impose the sample restriction that filings are available from EDGAR in the year following the issuance of audit opinions ('ex post filings'). Using the ex post filings I identify executive departures, bankruptcies, and takeovers in the year following the issuance of audit opinions. I economize on data collection costs by not collecting ex post filings for group (2), since group (2) is much larger than groups (1) and (3). I also drop from the sample any companies that go bankrupt *prior* to the issuance of audit opinions. The final sample consists of 968 executives that have prior CPA experience, of which 339 executives are affiliated. At the company level: (1) 535 companies have no affiliated executives but have at least one executive with prior CPA experience, (2) 3,063 companies have no executives with prior CPA experience, and (3) 325 companies have at least one affiliated executive.

3.2 Employment and alma mater affiliations

This section investigates whether the 339 affiliated executives are employment affiliations or alma mater affiliations. This is done by considering when: (1) the company selects the audit firm, (2) the individual leaves the audit firm, and (3) the individual joins the company (see Figs. 1b-1c). Unfortunately, 95 affiliated executives cannot be classified in this way due to unavailable dates.

An executive has an employment affiliation if her employment with the company is the result of the company being an audit client. For example, suppose X CPA has been Y Corp.'s audit firm since 1987, and an individual leaves X and joins Y in 1992. Fig. 1b illustrates this case, since the company first selects the audit firm, then the individual leaves the audit firm and joins

the client. An affiliation with this timing is likely to be an employment affiliation, although one cannot rule out the possibility that it occurs by chance. Some measurement error is unavoidable since my data sources do not usually reveal whether the affiliated executive was previously a member of the team that audited Y Corp. I find 174 affiliated executives have the timing shown in Fig. 1b (employment affiliations). Among these 174 employment affiliations, 145 executives join the audit client within a year of leaving the audit firm. There are only three employment affiliations where the executive joins the client more than five years after leaving the audit firm. Therefore, measurement error is unlikely to be a serious problem for employment affiliations.

An executive has an alma mater affiliation if the company's choice of audit firm is affected by her prior employment with the audit firm. For example, suppose an individual leaves X CPA and joins Y Corp. in 1992, and X CPA was first appointed as Y's audit firm in 1993. Fig. 1c illustrates this case, since the individual first leaves the audit firm, then the individual joins the company, and subsequently the company switches to the executive's former CPA firm. An affiliation with this timing is likely to be an alma mater affiliation, although one cannot rule out the possibility it occurs by chance. Some measurement error is unavoidable since my data sources do not reveal whether the affiliated executive influenced the company's decision to appoint the alma mater audit firm. I find 70 affiliated executives have the timing shown in Fig. 1c (alma mater affiliations). Among these 70 alma mater affiliations, there are 41 cases in which companies switch to the executive's former CPA firm within a year of the executive joining the company. There are another 18 cases in which companies switch to the executive's former CPA firm within four years of the executive joining the company. These findings suggest measurement error is also not a serious problem for alma mater affiliations.

Using the above numbers, the ratio of employment affiliations to alma mater affiliations is estimated to be 174:70. Assuming the 95 unclassified affiliations have the same ratio, it is estimated that 71.3% of affiliations are employment affiliations and 28.7% are alma mater

affiliations. Overall, it is clear that the majority of executive-auditor affiliations are caused by the employment effect.

As already noted, some employment affiliations and alma mater affiliations could arise by chance and so there is some unavoidable measurement error. Moreover, 95 affiliations are unclassified due to missing dates and some of these could be chance affiliations (i.e., they could have the timing shown in Fig. 1a). It is therefore important to demonstrate that the 339 executive-auditor affiliations did not occur by chance. Table 2 does this by reporting the correlation between executives' prior CPA firms and companies' current CPA firms. The italicized leading diagonal contains the 339 affiliated executives, and the off-diagonal cells contain the 629 unaffiliated executives that have prior CPA experience. A chi-square test reveals significant clustering of observations along the leading diagonal ($p < 0.01$), so one can reject the hypothesis that the 339 affiliations are simply due to chance.

[INSERT TABLE 2 HERE]

3.2 Descriptive statistics

Table 3 provides descriptive statistics on executive-auditor affiliations and audit opinions. Panel A partitions the sample into: (1) 535 unaffiliated companies that have at least one executive with prior CPA experience, (2) 3,063 unaffiliated companies that have no executives with prior CPA experience, and (3) 325 affiliated companies. The percentage of clean audit opinions is 62.8% in group (1), 59.0% in group (2), and 80.6% in group (3). The percentage of clean audit opinions is significantly higher in group (3) than in groups (1) and (2) ($z = 5.87, 9.35$ respectively). This is consistent with the first hypothesis (H1), namely auditors issue clean opinions more often to companies that have affiliated executives. The difference between groups (1) and (2) is not statistically significant at the 5% level ($z = 1.72$, 2-tailed). Therefore, it cannot be concluded that audit reporting is affected by prior CPA experience *per se* (i.e., without affiliation).

[INSERT TABLE 3 HERE]

Panels B, C, D, and E partition the 325 affiliated companies according to different affiliation characteristics. Panel B shows 69 companies have at least one alma mater affiliation, and 172 companies have at least one employment affiliation. The percentage of clean audit opinions is significantly higher for alma mater affiliations (88.4%) and for employment affiliations (79.1%) compared to the 535 unaffiliated companies ($z = 5.84$ and 4.36, respectively). This suggests both employment and alma mater affiliations impair audit quality. The percentage of clean audit opinions is higher for alma mater affiliations (88.4%) than for employment affiliations (79.1%), but the difference is not significant at the 5% level ($z = 1.88$, 2-tailed).

The ISB has made the following observation, "the concerns one would have when a partner leaves a firm to join a client would exist, but to a lesser extent, when professionals with lower levels of responsibility leave and go to clients" (ED 99-02, para. 22). Panel C examines this argument by partitioning the affiliated executives according to their seniority at audit firms (i.e., the positions held before leaving, and the length of time worked at audit firms). Of the 325 affiliated companies, 195 disclose the positions that affiliated executives formerly held at CPA firms. There are 40 affiliated companies with former partners, 124 affiliated companies with former managers, and 31 below the managerial level. Consistent with the ISB view that seniority matters, the frequency of clean audit opinions is higher for affiliated executives who held more senior CPA positions. The clean opinion frequency rises from 74.2% below the managerial level to 85.0% for former partners. However, the difference is not statistically significant because of the small sample sizes. There are 256 companies that disclose the length of time affiliated executives worked at audit firms, and the median number of years is found to be six. The frequency of clean opinions is higher for affiliated executives who worked six or more years at audit firms (81.3%), compared with affiliated executives who worked less than six years (72.3%).

This suggests affiliations might be more problematic when affiliated executives worked longer at CPA firms. However, the difference between 81.3% and 72.3% is not statistically significant at the 5% level (z = 1.65, 2-tailed).

The ISB has argued that, "concerns are greater when a partner has *recently* left the firm to join an audit client" (ED 99-02, para. 28, italics added). Panel D examines this argument by partitioning the affiliated executives according to how recently they left audit firms. There are 310 companies that disclose when affiliated executives left audit firms, and the median length of time since departure is found to be five years. The frequency of clean audit opinions is higher for affiliated executives who left audit firms within the previous five years (83.5%), than for affiliated executives who left more than five years ago (75.4%). This is consistent with the ISB's argument that recent affiliations are more problematic. However, the difference between 83.5% and 75.4% is not statistically significant at the 5% level (z = 1.74, 2-tailed).

The ISB argued that concerns about audit quality, "vary depending on the nature and level of new responsibilities assumed by the departing professional at the client" (ED 99-02, para. 22). The consequences for audit quality may be more serious when affiliated executives hold senior rather than junior positions at audit clients. Unfortunately it is not possible to test this argument, since companies disclose biographical information for senior executives only (e.g., CEOs, CFOs), not for junior managers. Nevertheless, Panel E partitions the sample according to the corporate positions held by senior affiliated executives. There are 36 companies that have affiliated CEOs (this group includes CEOs with dual positions). There are 273 companies that have affiliated executives in finance or accounting positions (this group excludes CEOs with dual finance or accounting positions). The remaining 16 companies have affiliated executives who are not CEOs and who do not have finance or accounting positions. The frequencies of clean audit opinions are similar across the different executive positions (80.6%, 80.6% and 81.2%). This suggests the effects of affiliations do not vary across positions held by senior company executives.

Table 4 reports the association between audit opinions and subsequent executive departures. The sample is partitioned into 339 affiliated executives (Panel A), and 629 unaffiliated executives who have prior CPA experience (Panel B). The departure frequency for affiliated executives is more than twice as high following the issuance of unfavorable rather than clean audit opinions (34.3% versus 15.4%). The difference (18.9%) is statistically significant at the 1% level (z = 3.05, 2-tailed). The departure frequency is also higher for unaffiliated executives following the issuance of unfavorable audit opinions (28.8% compared to 25.8%), but the difference (3.0%) is small and statistically insignificant (z = 0.81, 2-tailed). The 'difference in differences' between affiliated and unaffiliated executives (18.9% versus 3.0%) is statistically significant at the 5% level (z = 2.20, 2-tailed). This is consistent with H2, namely affiliated executives are more likely than unaffiliated executives to remain (depart) following the issuance of clean (unfavorable) audit opinions.

[INSERT TABLE 4 HERE]

Table 5 provides means for the control variables across the 325 affiliated companies and 535 unaffiliated companies. Panel A reports means for the ex ante control variables (profitability, liquidity, leverage, default, company size, and growth), and Panel B reports means for the ex post control variables (bankruptcy and takeover). The first thing to note is that the final sample (860 observations) is considerably more distressed than the initial sample (28,292 observations). Within the initial sample, the rank-transformed variables have means and medians of 0.50 (the rank-transformation results in variables that are uniformly distributed between zero and one). Within the final sample, the means for profitability, liquidity, size, and growth are considerably less than 0.50. For example, mean profitability is 0.165 for affiliated companies and 0.177 for unaffiliated companies. The means for leverage are considerably larger than 0.50 in the final sample (0.653 for affiliated companies and 0.706 for unaffiliated companies). These differences

between the initial sample and the final sample occur because the final sample consists of companies whose predicted unfavorable opinion probabilities exceed 10%.

Panel A shows there are no significant differences in profitability, default, or company growth between affiliated and unaffiliated companies. Panel B shows there are no significant differences between affiliated and unaffiliated companies in the frequency of bankruptcy or takeover. Panel A shows affiliated companies are significantly larger, have higher liquidity and lower leverage compared to unaffiliated companies. There are two possible explanations for these differences between affiliated and unaffiliated companies. The first explanation is that affiliated companies are healthier than unaffiliated companies. For example, audit staff may have more incentive to accept offers of employment from clients they know are healthy. This is the self-selection argument, namely audit staff self-select into healthier companies. The second (less favorable) explanation is that auditors permit affiliated companies to report healthier accounting numbers. Whatever the actual reason, Eq. (1) includes these ex ante variables as controls, so these differences between affiliated and unaffiliated companies do not explain the multivariate association between affiliations and audit opinion reporting. It is beyond the scope of this paper to investigate whether the second explanation is true, but if it is, the inclusion of these control variables in Eq. (1) understates the true impact of affiliations on audit quality.

[INSERT TABLE 5 HERE]

4. Multivariate estimation results

4.1 Executive-auditor affiliations and audit reporting

This section reports the results for eq. (1), which tests whether affiliated companies are more likely to receive clean audit opinions (H1). The main variable of interest is AFF_i, which equals one for the 325 affiliated companies. The comparison group is 535 unaffiliated companies who

have at least one executive with prior CPA experience. The coefficient on AFF_i is negative if affiliated companies are more likely to receive clean audit opinions. Eq. (1) includes both ex ante and ex post variables as controls. The ex ante variables are profitability ($R(P_i)$), liquidity ($R(LIQ_i)$), leverage ($R(LEV_i)$), default (DEF_i), size ($R(SIZE_i)$), and growth ($R(GROW_i)$). The ex post control variables are bankruptcy ($BANK_i$) and takeover ($TAKE_i$). When estimating the coefficients' standard errors, I use a clustering procedure in order to account for dependence between company-year observations. The clustering procedure assumes that observations are independent between companies, but it does not require independence for multiple yearly observations of a given company.

Consistent with H1, Row 1 of Table 6 shows audit firms are significantly more likely to issue clean audit opinions to affiliated companies ($\hat{\alpha}_1$ = -0.67, p < 0.01). It is therefore concluded that executive-auditor affiliations impair audit quality. I assess the economic significance of this finding by predicting clean audit opinion probabilities with and without affiliation for each observation in the sample (N = 860). The mean clean opinion probability is 76.9% with affiliation and only 65.5% without affiliation, a difference of more than 10%. The effect of affiliations upon audit reporting is therefore economically significant as well as statistically significant.

The coefficients on the ex ante control variables are consistent with prior expectations and with the (unreported) model that was used to generate the sample cut-off threshold of 10%. In particular, companies receive clean opinions less often if they are less profitable, have low liquidity, high leverage, are in default, are small, and are decreasing in size. The coefficients on the ex post control variables are also consistent with prior expectations. Companies that receive unfavorable audit opinions are more likely to go bankrupt and are more likely to be taken over.

I investigate further the effects of affiliations by partitioning the sample into companies that have: (i) at least one alma mater affiliation (AFF_A_i), (ii) at least one employment affiliation (AFF_E_i), and (iii) at least one unclassified affiliation (AFF_U_i). This partitioning

is interesting for two reasons. First, regulators have focused on the potential problems associated with employment affiliations, but they have not discussed the potential problems of alma mater affiliations. It is instructive to compare the separate impact of these affiliations in order to judge whether the regulators' focus on employment affiliations is justified. Second, notwithstanding the fact that Eq. (1) includes ex ante and ex post control variables, one might be concerned that the results are caused by some (unobserved) selection bias. In particular, audit staff might self-select into audit clients that are less likely to deserve unfavorable audit opinions. It is important to note that this self-selection argument applies only to employment affiliations, not to alma mater affiliations. With an alma mater affiliation, the company switches to the executive's former audit firm after the executive leaves the audit firm. An executive who has an alma mater affiliation could not have formerly audited her company. Therefore, prior to joining the company, she could not have been better informed about the company's future prospects compared to unaffiliated executives. This implies that self-selection bias (if it exists) should affect only employment affiliations not alma mater affiliations. If the results in Row 1 are driven by self-selection there should be no association between alma mater affiliations and audit opinions.

Row 2 shows the coefficients on both AFF_A_i and AFF_E_i are negative and statistically significant at the 1% level. It is therefore concluded that *both* alma mater affiliations and employment affiliations are significantly associated with clean audit opinions. These findings imply that self-selection is not driving the association between affiliations and audit reporting. Indeed, the coefficient on AFF_A_i is *more* negative than the coefficient on AFF_E_i (although the difference is not statistically significant), which is opposite to what the self-selection argument predicts. These results also suggest regulators should be concerned with alma mater affiliations as well as employment affiliations. Both employment affiliations and alma mater affiliations affect audit reporting, and the average impact of alma mater affiliations is particularly serious.

[INSERT TABLE 6 HERE]

4.2 Executive-auditor affiliations, audit opinions, and subsequent executive departures

This section reports the results for Eq. (2), which tests whether the departure rate is abnormally high (low) for affiliated executives compared to unaffiliated executives following the issuance of unfavorable (clean) audit opinions. The explanatory variables of interest are AFF_j (which equals one if executive j is affiliated) and M_j (which equals one if j's company received an unfavorable audit opinion). Under H2, the coefficient on AFF_j is negative and the coefficient on $AFF_j \times M_j$ is positive. Eq. (2) is estimated for 968 executives (339 are affiliated, and 629 are unaffiliated but have prior CPA experience).

I now discuss the control variables in Eq. (2). Since all sample executives have prior CPA experience, it is unsurprising that most hold finance or accounting positions. Finance or accounting positions are held by 85.8% of affiliated executives and by 81.4% of unaffiliated executives who have prior CPA experience. Eq. (2) controls for this difference between affiliated and unaffiliated executives by including a dummy variable (FIN_j) which equals one if executive j has a finance or accounting position (zero otherwise). Unfortunately, there is little prior research on the determinants of turnover for finance and accounting executives. One exception is Mian (2001), who shows CFO turnover is significantly associated with poor performance. I control for performance using ex ante profitability in executive j's company ($R(P_j)$). Extant research shows CEO turnover is negatively related to CEO tenure (Goyal and Park, 2002). One explanation for this is that long tenure provides executives with more time to establish a power base and to entrench themselves. An alternative explanation is that tenure captures unobserved heterogeneity associated with low turnover. Eq. (2) includes a tenure variable (TEN_j) equal to the number of

years worked by executive j at the company. Executive turnover is expected to be higher in companies that go bankrupt or are taken over (e.g., Gilson, 1989; Franks and Mayer, 1996). Eq. (2) therefore includes dummy variables that indicate whether executive j's company goes bankrupt ($BANK_j$) or is taken over ($TAKE_j$) in the year following the issuance of the audit opinion. In (unreported) results, Eq. (2) controls for other executive characteristics (e.g., age) and other company characteristics (e.g., market performance), but these variables are found to be insignificant. Before discussing why these variables are insignificant, Table 7 presents the main results.

[INSERT TABLE 7 HERE]

The coefficient on AFF_j is negative and statistically significant at the 1% level ($\hat{\beta}_1$ = -0.60). Therefore, turnover is abnormally low for affiliated executives following the issuance of clean audit opinions. The coefficient on $AFF_j \times M_j$ is positive and statistically significant at the 5% level ($\hat{\beta}_2$ = 0.84). Therefore, turnover is abnormally high for affiliated executives following the issuance of unfavorable audit opinions. These two findings are consistent with H2. It is therefore concluded that companies view affiliations as more valuable after affiliated executives prevent the issuance of unfavorable audit opinions.

The coefficients on the control variables are consistent with prior expectations. The coefficient on FIN_j is positive, showing that executives in finance or accounting positions have higher turnover rates. The higher turnover rate for finance and accounting executives is to be expected because the sample companies have relatively poor performance. The coefficient on TEN_j is negative, implying that executives with long tenure are less likely to depart. The

coefficients on $BANK_j$ and $TAKE_j$ are positive, which shows executive turnover is higher in companies that go bankrupt or are taken over.

The coefficient on ex ante profitability ($R(P_j)$) is negative but statistically insignificant. In unreported results, Eq. (2) includes the change in profitability and stock price performance (raw and market-adjusted returns), but these performance variables are also found to be insignificant. The insignificant performance coefficients may seem quite surprising, but it is important to consider three mitigating factors. First, this study samples only companies that have poor performance, whereas most turnover studies (e.g., Mian, 2001) sample both good and poor performers. The lack of significant performance effects may therefore be due to the sampling methodology adopted in this study. Second, this study samples a relatively small number of executive changes (234 changes out of 968 executives). Mian (2001) finds the association between performance and CFO turnover is quite small economically, but he reports a statistically significant association using a much larger sample (2,227 CFO changes). Third, Eq. (2) controls for prior audit opinions, bankruptcy and takeover and these variables reflect variation in performance within the sample. In contrast, Mian (2001) reports only the univariate association between performance and CFO turnvoer.

Previous studies find executive departures are more common among executives who are at retirement age (Murphy and Zimmerman, 1993; Goyal and Park, 2002). When Eq. (2) includes age dummies for retirement, they are found to be insignificant. It turns out that retirements are not an important consideration in this sample because only 29 of the 968 executives are aged 60 or over, and only two of these 29 executives leave in the year following the issuance of audit opinions. This is consistent with Mian (2001), who shows that retirement is much less common for CFOs than for CEOs (CFOs are considerably younger). Other variables found to be insignificant are company size and the executive's gender. In all unreported results, the

conclusions about H2 (i.e., the coefficients on AFF_j and $AFF_j \times M_j$) are the same as those drawn from Table 7.

5. Conclusion

This paper has investigated the causes of affiliations between executive officers and audit firms and it has tested whether affiliations impair audit quality. It is found that most affiliations (71.3%) occur when individuals leave audit firms in order to work for audit clients. Most of these employment affiliations involve the individual joining the company immediately after leaving the audit firm. The remaining affiliations occur when companies switch to executives' former audit firms, and the majority of these alma mater affiliations involve the company hiring the executive's former audit firm shortly after the executive joins the company.

I find companies receive clean audit opinions significantly more often when executives are affiliated with their companies' audit firms. Consistent with the concerns of regulators (e.g., ISB, 2000), it is concluded that executive-auditor affiliations impair audit quality. Both employment affiliations and alma mater affiliations are found to impair audit quality, with impairment particularly severe for alma mater affiliations. Employment affiliations are therefore a valid cause of concern for regulators, as they are relatively common and they impair audit quality. However, regulators should also be concerned with alma mater affiliations which, despite being less common, have a significant negative impact on audit quality. Executive departure is found to be abnormally frequent (infrequent) for affiliated executives following the issuance of unfavorable (clean) audit opinions. This suggests that companies view affiliations as more valuable after affiliated executives prevent the issuance of unfavorable audit opinions.

There are three caveats to the paper, which might be explored in further research. First, I do not investigate whether audit firms take actions that reduce the impact of affiliations upon audit quality. If affiliations reduce the likelihood of problem discovery, it might be expected that

audit firms change their testing methodologies in order to prevent circumvention by former colleagues. If affiliations reduce auditor independence, it might be expected that audit firms take actions that prevent their audit opinions being affected by personal friendships or trust. However, in contrast to these two arguments, recent experimental evidence suggests affiliations affect auditors' *unconscious* judgments, such that auditors are unable to correct or de-bias themselves (Moore et al., 2002). It is therefore an open question whether audit firms take actions that mitigate the impact of affiliations upon audit quality.

Second, this paper investigates audit quality impairment when the affiliated executive works at the client, but it ignores the possibility of impairment before she leaves the audit firm. If audit quality is impaired before the auditor leaves the audit firm, employment affiliations are more serious than reported in this paper. There is a need for research that tests whether employment affiliations impair audit quality before the individual leaves the audit firm.

Third, the sample is non-representative as it consists of companies that are less likely to receive clean audit opinions compared to the average SEC registrant. There exists scope for further research on affiliations using a more representative sample of healthy companies. Since audit opinion reporting is just one dimension of audit quality, future research might investigate whether executive-auditor affiliations make it easier for companies to issue misleading financial statements.

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Table 1. Audit opinions

Panel A: Audit opinions (N = 28,292)

Audit opinion type	Observations	% of sample
1. Unqualified and unmodified	23,611	83.45
2. Unqualified but modified	4,635	16.38
3. Qualified 'except for' opinions	24	0.08
4. Opinion disclaimers	22	0.08

Panel B: Unqualified but modified audit opinions (N = 4,635)

	Observations
1. 'Harmless' explanatory language	2,629
2. Going concern uncertainty	1,795
3. Other fundamental uncertainty	98
4. Other unfavorable emphases of matter	113

Panel C: 'Clean' and 'unfavorable' audit opinions (N = 28,292)

		Observations	% of sample
'Clean' audit opinions ($M_i = 0$):			
1. Unqualified and unmodified		23,611	
2. Modified with 'harmless' explanatory language		2,629	
	Total	26,240	92.75
'Unfavorable' audit opinions ($M_i = 1$):			
1. Modified for going concern uncertainty		1,795	
2. Modified for other fundamental uncertainty		98	
3. Modified with other unfavorable emphases of matter		113	
4. Qualified 'except for' opinions		24	
5. Opinion disclaimers		22	
	Total	2,052	7.25

Notes:
'Except for' qualifications are issued for reporting disagreements and limitations on audit scope. Other fundamental uncertainties include: litigation, foreign exchange losses, asset values, and contractual uncertainties. Opinions with harmless explanatory language disclose that: the financial statements comply with SEC regulations, the audit opinion is shared with another audit firm, there is a change in accounting principles, or certain events (e.g., mergers) affect the comparability of current and prior year financial statements. Other unfavorable emphases of matter include: financial restructuring, bond covenant defaults, significant related party transactions, illegal acts, and correction of accounting errors relating to previous years.

Fig. 1 Classifications and timing of executive-auditor affiliations

Fig 1a. The chance affiliation

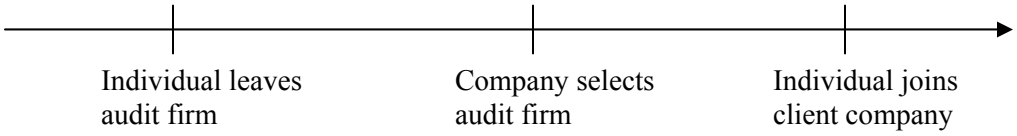

Fig 1b. The employment affiliation

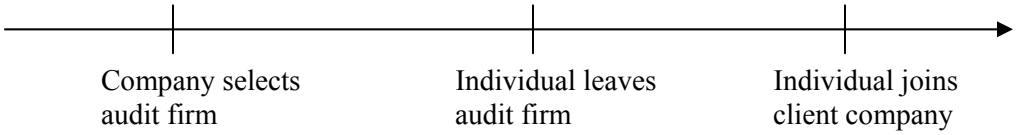

Fig 1c. The alma mater affiliation

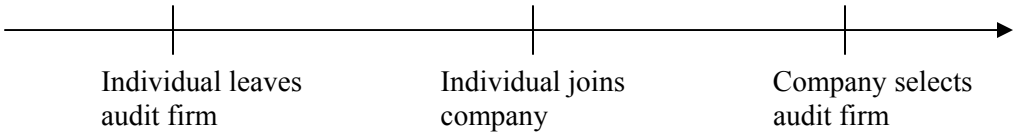

Table 2. Executives' former CPA firms and companies' current CPA firms

		Executives' former CPA firms							
		PW	C&L	KPMG	E&Y	D&T	AA	Non-Big 6 audit firm	Totals
Companies' current CPA firms	PW	*32*	10	11	8	2	7	8	78
	C&L	5	*25*	15	9	6	7	11	78
	KPMG	10	6	*74*	12	19	14	13	148
	E&Y	11	13	9	*52*	15	9	7	116
	D&T	11	2	2	17	*52*	13	11	108
	AA	4	10	19	16	16	*66*	23	154
	Non-Big 6 audit firm	26	24	38	31	31	31	*105*	286
	Totals	99	90	168	145	141	147	178	968

Notes:
There are 105 executives who worked for Non-Big 6 audit firms and whose companies are audited by Non-Big 6 firms (there are too many Non-Big 6 firms to give each firm a separate row and column). Within this group of 105 executives, there are 38 affiliated executives. The italicized leading diagonal shows there are 339 affiliated executives (= 32 + 25 + 74 + 52 + 52 + 66 + 38), and the off-diagonal cells show there are 629 unaffiliated executives (968 = 339 + 629).

Variable definitions:
PW = Price Waterhouse; C&L = Coopers & Lybrand; E&Y = Ernst & Young; D&T = Deloitte & Touche; AA = Arthur Andersen. PW and C&L merged in 1998 becoming PricewaterhouseCoopers (PWC), so affiliations are traced to the period prior to the merger. For example, if the company's current audit firm is PWC and before the merger it was PW, an executive who worked at PW is affiliated and an executive who worked at C&L is unaffiliated. Executives that previously worked for PWC are shown in the PW column and companies audited by PWC are shown in the PW row.

Table 3. Executive-auditor affiliations and audit opinions

Panel A: Affiliated and unaffiliated companies	Number of companies	% clean audit opinions
At least one executive with prior CPA experience but no affiliated executives	535	62.8%
No executives with prior CPA experience	3,063	59.0%
At least one affiliated executive	325	80.6%

Panel B: Alma mater affiliations and employment affiliations	Number of companies	% clean audit opinions
At least one alma mater affiliation	69	88.4%
At least one employment affiliation	172	79.1%

Panel C: Affiliated executives who held senior (non-senior) positions at CPA firms	Number of companies	% clean audit opinions
At least one affiliated executive who was a partner at the audit firm	40	85.0%
At least one affiliated executive who was a manager at the audit firm	124	78.2%
At least one affiliated executive who was below the managerial level at the audit firm	31	74.2%
At least one affiliated executive who worked six or more years at the audit firm	155	81.3%
At least one affiliated executive, but none who worked six or more years at the audit firm	101	72.3%

Panel D: Affiliated executives who left (did not leave) audit firms recently	Number of companies	% clean audit opinions
At least one affiliated executive who left the audit firm within the last five years	176	83.5%
At least one affiliated executive, but none who left the audit firm within the last five years	134	75.4%

Panel E: Positions held by affiliated executives at audit clients	Number of companies	% clean audit opinions
At least one affiliated CEO	36	80.6%
At least one affiliated executive in a finance or accounting position, but no affiliated CEOs	273	80.6%
At least one affiliated executive, but no affiliated executives in CEO, finance or accounting positions	16	81.2%

Table 4. Audit opinions and subsequent executive departures

Panel A: Affiliated executives (N = 339)	Number of executives	% of executives that leave the company within a year of the audit opinion
1. Companies received clean audit opinions	272	15.4%
2. Companies received unfavorable audit opinions	67	34.3%

Panel B: Unaffiliated executives with prior CPA experience (N = 629)	Number of executives	% of executives that leave the company within a year of the audit opinion
1. Companies received clean audit opinions	403	25.8%
2. Companies received unfavorable audit opinions	226	28.8%

Table 5. Ex ante and ex post control variables for affiliated and unaffiliated companies

	Companies that have at least one affiliated executive (N = 325) Means	Companies that have no affiliated executives (N = 535) Means	t-statistics for differences in means
Ex ante variables			
$R(P_i)$	0.165	0.177	-1.06
$R(LIQ_i)$	0.302	0.239	3.98**
$R(LEV_i)$	0.653	0.706	-2.96**
DEF_i	0.018	0.021	-0.21
$R(SIZE_i)$	0.231	0.195	3.26**
$R(GROW_i)$	0.349	0.317	1.48
Ex post variables			
$BANK_i$	0.022	0.034	-1.08
$TAKE_i$	0.028	0.049	-1.61

Notes:
** = Statistically significant (1% level, 2 tailed). * = Statistically significant (5% level, 2 tailed).

Variable definitions:
The ex ante variables are measured at the financial year end reported upon by the auditor. The ex post variables are measured in the year following the issuance of the audit opinion. P_i = Net income/Total assets. LIQ_i = Current assets/Current liabilities. LEV_i = Total liabilities/Total assets. DEF_i = one if company i is in default at the year-end date (zero otherwise). $SIZE_i$ = Total assets ($ million). $GROW_i$ = Percentage annual growth in total assets. $BANK_i$ = one if company i enters bankruptcy within a year following the issuance of the audit opinion (zero otherwise). $TAKE_i$ = one if company i is taken over within a year following the issuance of the audit opinion (zero otherwise). $R(X)$ = Rank-transformation of variable X. For a variable with N observations in year t, the rank transformation replaces each observation with its corresponding rank (from i = 1, . . . , N in ascending order) and the rank assigned to observation i is divided by N+1.

Table 6. Executive-auditor affiliations and audit opinions

	Affiliation variables				Ex ante control variables						Ex post control variables	
CONSTANT	AFF_i	AFF_E_i	AFF_A_i	AFF_U_i	$R(P_i)$	$R(LIQ_i)$	$R(LEV_i)$	DEF_i	$R(SIZE_i)$	$R(GROW_i)$	$BANK_i$	$TAKE_i$
0.21	-0.67				-2.92	-1.95	1.28	1.16	-3.19	-0.72	1.40	0.73
(0.46)	(-3.28)**				(-3.39)**	(-3.22)**	(2.57)**	(1.33)	(-4.31)**	(-2.48)*	(2.60)**	(1.83)
0.10		-0.53	-1.35	-0.60	-2.93	-1.88	1.37		-2.91	-0.69	1.55	0.72
(0.21)		(-2.03)*	(-3.07)**	(-1.69)	(-3.36)**	(-3.11)**	(2.74)**		(-4.02)**	(-2.40)*	(3.00)**	(1.79)

Notes:

$M_i = \alpha_0 + \alpha_1 AFF_i + \alpha_2 X_i + u_i$ (1)

Eq. 1 models the relation between executive-auditor affiliations and audit reporting. The sample consists of 325 affiliated companies and 535 unaffiliated companies (sample size = 860). The ex ante control variables are measured at the financial year end reported upon by the auditor. The ex post control variables are measured in the year following the issuance of the audit opinion. When estimating the coefficients' standard errors, I use a clustering procedure in order to account for dependence between yearly observations relating to the same company (z-statistics are reported in parentheses). The clustering procedure assumes that observations are independent between companies but it does not require independence for multiple observations of a given company. ** = Statistically significant (1% level, 2 tailed). * = Statistically significant (5% level, 2 tailed).

Variable definitions:

M_i = one if company i receives an unfavorable audit opinion (zero if clean opinion, see Table 1). AFF_i = one if company i has at least one affiliated executive (zero otherwise). AFF_E_i = one if company i has at least one executive with an employment affiliation (zero otherwise). AFF_A_i = one if company i has at least one executive with an alma mater affiliation (zero otherwise). AFF_U_i = one if company i has at least one executive with an unclassified affiliation (zero otherwise). P_i = Net income/Total assets. LIQ_i = Current assets/Current liabilities. LEV_i = Total liabilities/Total assets. DEF_i = one if company i is in default at the year-end date (zero otherwise). $SIZE_i$ = Total assets ($ million). $GROW_i$ = Percentage annual growth in total assets. $BANK_i$ = one if company i enters bankruptcy within a year following the issuance of the audit opinion (zero otherwise). $TAKE_i$ = one if company i is taken over within a year following the issuance of the audit opinion (zero otherwise). $R(X)$ = Rank-transformation of variable X. For a variable with N observations in year t, the rank transformation replaces each observation with its corresponding rank (from i = 1, . . . , N in ascending order) and the rank assigned to observation i is divided by N+1.

Table 7. Executive-auditor affiliations, audit opinions, and executive turnover

	Affiliation and audit opinion variables			Control variables (Z_j)				
CONSTANT	AFF_j	$AFF_j \times M_j$	M_j	FIN_j	TEN_j	$R(P_j)$	$BANK_j$	$TAKE_j$
-1.04 (-4.15)**	-0.60 (-2.95)**	0.84 (2.47)*	0.05 (0.25)	0.36 (1.63)	-0.09 (-3.33)**	-0.33 (-0.65)	0.93 (2.54)*	0.66 (1.77)

Notes:

$$DEP_j = \beta_0 + \beta_1 AFF_j + \beta_2 AFF_j \times M_j + \beta_3 M_j + \beta_4 Z_j + v_j \qquad (2)$$

Eq. 2 models the departure rates for affiliated and unaffiliated executives following the issuance of clean and unfavorable audit opinions. The sample consists of 339 affiliated executives and 629 unaffiliated executives that have prior CPA experience (sample size = 968). When estimating the coefficients' standard errors, I use a clustering procedure in order to account for dependence between yearly observations relating to the same company (z-statistics are reported in parentheses). The clustering procedure assumes that observations are independent between companies but it does not require independence for multiple observations of a given company. ** = Statistically significant (1% level, 2 tailed). * = Statistically significant (5% level, 2 tailed).

Variable definitions:

DEP_j = one if executive j leaves the company within a year following the issuance of the audit opinion (zero if the executive stays with the company). M_j = one if executive j's company received an unfavorable audit opinion (zero if clean, see Table 1). AFF_j = one if executive j is affiliated (zero otherwise). FIN_j = one if executive j has a finance or accounting position (zero otherwise). TEN_j = the number of years worked by executive j at the company. P_j = Net income/Total assets for executive j's company. $R(X)$ = Rank-transformation of variable X. For a variable with N observations in year t, the rank transformation replaces each observation with its corresponding rank (from i = 1, . . . , N in ascending order) and the rank assigned to observation i is divided by N+1. $BANK_j$ = one if executive j's company enters bankruptcy within a year following the issuance of the audit opinion (zero otherwise). $TAKE_j$ = one if executive j's company is taken over within a year following the issuance of the audit opinion (zero otherwise).