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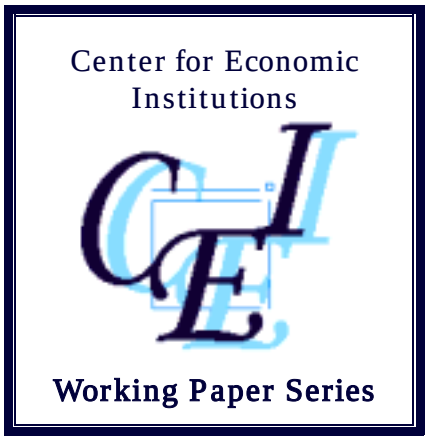

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Abstract

This paper tests whether companies engage in opinion shopping and examines the role of audit committees when auditors are dismissed (1996-98). There are three findings. First, US companies strategically dismiss when incumbent auditors are more likely to issue unfavorable audit opinions compared to newly appointed auditors. I estimate opinion shopping motivates 17% of auditor dismissals, and I find opinion shopping dismissals occur significantly later in the reporting period than other dismissals. Second, audit committees are more likely to disapprove of auditor dismissals that are motivated by opinion shopping. This is consistent with the argument that audit committees help maintain the integrity of the audit reporting process. Third, independent audit committee members are more likely to leave committees that disapprove of opinion shopping. This suggests either senior management dismiss audit committee members who oppose opinion shopping, or committee members resign because they do not wish to be associated with opinion shopping.

* I owe thanks to Eric Falkenstein at Moody's for providing data on corporate defaults. I am grateful for comments from Mike Adams, Gary Biddle, Kevin Chen, Jong Choi, Elisabeth Dedman, Jim Frederickson, Lee-Seok Hwang, Jen Ireland, Chul Park, Scott Whisenant, TJ Wong, and seminar participants at Chinese University of Hong Kong, City University (Hong Kong), Hong Kong Polytechnic University, and Hong Kong University of Science and Technology. The research is carried out under the auspices of the Institute of Chartered Accountants in Scotland and is funded by The Scottish Accountancy Research Trust and Hong Kong University of Science and Technology. I would also like to thank Angel Chu, Licardo Chan and Dammi Sze for their research assistance. Any remaining errors are my own. Tel: +852-23587571. E-mail: accl@ust.hk

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1. Introduction

Audit opinions attest to the fair presentation of financial statements and they alert investors to significant problems affecting the interpretation of accounting information. Unfavorable audit opinions are associated with falling share prices (Fleak and Wilson, 1994), perhaps because they signal impending bankruptcy (Chen and Church, 1996) and because they make it harder for companies to raise capital (Firth, 1980). Unfavorable opinions might also cause falls in executive remuneration or lead to management changes. These factors mean managers have incentives to strategically dismiss auditors in order to avoid unfavorable audit opinions (e.g., Securities and Exchange Commission (SEC), 1988) – this practice is known as 'opinion shopping'. Audit committees are expected to prevent opinion shopping since opinion shopping impairs the integrity of the audit reporting process, and the hiring and firing of audit firms is an important responsibility of the audit committee. This paper tests whether companies engage in opinion shopping, and investigates the role of audit committees when auditors are dismissed.[1]

The extant literature draws conflicting conclusions about whether companies engage in opinion shopping, and no previous study examines the mitigating influence of audit committees. I use the methodology of Lennox (2000) to predict how likely companies would receive unfavourable audit opinions from retained incumbent audit firms and from new audit firms. A comparison of these predicted opinions with companies' dismissal decisions shows that opinion shopping is a highly significant predictor of audit firm dismissals in the US. This result is consistent with UK evidence (Lennox, 2000), but it is inconsistent with prior US research that argues opinion shopping is futile (e.g., Krishnan, 1994). I also find opinion shopping dismissals occur significantly later in the

[1] Espahbodi and Hendrickson (1991) argue, "Several factors motivate managers to shop for opinions, including the desire to attain or exceed stated goals and objectives, and, in extreme cases, the urgent need to survive. Managers want their audit reports to be positive (unqualified). Negative reports may affect their own compensation, their company's ability to market securities, and the value of their own holdings in the company. Motivation to shop for opinions can be enhanced by deteriorating economic conditions, trying to avoid hostile takeover attempts, and by having compensation plans tied to reported income . . . Unfortunately, it is clear that the search for a second opinion is not always motivated by a desire to be right. Some managers have a preconceived objective in mind that can only be achieved by using a particular, and usually less desirable, accounting treatment. This agreeable accountant will receive a reward in the form of appointment as the business's auditor. This insidious practice is not the seeking of a second opinion; it is opinion shopping . . . Excluding management from auditor hiring-paying-firing could deter opinion shopping. This might possibly be accomplished through an effective audit committee."

reporting period compared to other dismissals and this is consistent with three explanations. First, an opinion shopping company delays the auditor dismissal decision in order to form a more accurate assessment of the opinion that would be issued if the incumbent audit firm were retained. Second, an opinion shopping company delays the auditor change so that the incoming audit firm has less time to uncover problems. Third, an opinion shopping company spends more time searching out a compliant audit firm. The timing difference is consistent with Schwartz and Soo (1996a) who argue that companies which replace their auditors early (late) in the reporting period do so for positive (negative reasons) and experience shorter (longer) reporting delays.

The audit committee is part of a regulatory framework that emphasises disclosure and transparency in financial reporting (Blue Ribbon Committee, 1999), and auditor hiring and firing is cited as a major responsibility of the audit committee (e.g., SEC, 1978). Item 304 of Regulation S-K requires SEC registrants to disclose whether audit committees recommend or approve auditor changes. Since opinion shopping makes audit reporting less transparent, I hypothesize that audit committees are more likely to disapprove (not recommend) dismissals that are motivated by opinion shopping. Consistent with this hypothesis, I find a significant negative relation between audit committee approval and opinion shopping. This result continues to hold when I control for the fact that some audit committees do not participate in audit firm dismissal decisions, and when I control for the endogeneity of audit committee activity.

Next, I test the association between audit committee disapproval of opinion shopping and the departure of members from the audit committee. I find a higher departure rate when audit committees disapprove of opinion shopping and this is consistent with two explanations. First, audit committee members resign because they do not wish to be associated with opinion shopping dismissals. Second, managers remove disapproving audit committee members in order to exert more influence over the auditor dismissal decision and thereby avoid unfavorable audit opinions. In further tests, I find the association between audit committee disapproval and turnover is driven by the departure of

independent rather than affiliated audit committee members. Therefore, opinion shopping not only impairs the integrity of audit reporting, but it also weakens the audit committee's role in auditor selection.

The rest of this paper is structured as follows. The next section discusses the extant literature on opinion shopping and audit committees, and develops the hypotheses. Section 3 tests whether US companies engage in opinion shopping and compares the timing of opinion shopping dismissals with other dismissals. Section 4 tests whether audit committees disapprove of opinion shopping and examines the association between audit committee disapproval and the departure of audit committee members. Section 5 summarises the paper's main results and the implications for public policy.

2. Extant literature and hypothesis development

2.1 Opinion shopping

The extant literature draws conflicting conclusions about whether companies engage in opinion shopping. US studies claim opinion shopping is futile since incoming auditors' first opinions are not generally more favorable than outgoing auditors' final opinions (e.g. Krishnan, 1994).[2] Lennox (2000) argues a comparison of opinions issued by outgoing and incoming auditors is a flawed test for opinion shopping. Instead, he predicts how likely companies would receive unfavorable audit opinions if audit firm changes are different to those actually observed, and he shows opinion shopping is a highly significant predictor of audit firm changes in the UK. This paper applies the methodology of Lennox (2000) to SEC registrants in order to determine whether extant conclusions differ because of differences in empirical methodologies or because of institutional differences between the UK and US.

There are important institutional differences that make opinion shopping less likely in the US compared to the UK. The SEC has strict auditor change disclosure requirements whereas the UK

does not require notification of auditor changes to the London Stock Exchange. SEC registrants file 8-K forms promptly disclosing audit firm changes and any auditor-client disagreements or modified opinions in the two preceding years. The AICPA SEC Practice Section requires outgoing auditors to notify the SEC independently when there is a change in auditor, thereby enabling the SEC to identify non-filers (Schwartz and Soo, 1996b). These disclosure requirements make it more difficult and costly for managers to hide unfavourable information when they change auditors, and this reduces managers' incentives to engage in opinion shopping. For example, Smith and Nichols (1982) find a significant negative market reaction when auditor change disclosures involve auditor-client disagreements, and this increases the cost of changing auditor to managers that own equity or options.

An alternative explanation for the different conclusions about opinion shopping is that they reflect different testing methodologies. The conclusion that US companies do not engage in opinion shopping is based on a comparison of the opinions issued by outgoing and incoming auditors – the opinions of companies that do not change auditors are ignored. In contrast, Lennox (2000) uses data on both auditor changes and auditor retentions to predict how likely companies would receive unfavourable opinions if they make opposite switch decisions. He finds that a failure to sample auditor retentions leads to an (incorrect) inference that UK companies do not engage in opinion shopping.

This paper discriminates between the institutional and methodological explanations by applying the methodology of Lennox (2000) to US data. If the different conclusions are due to methodology rather than institutional factors, it is expected that US companies do engage in opinion shopping. The first hypothesis (in alternative form) is therefore:

H1: US companies successfully engage in opinion shopping

[2] DeFond and Subramanyam (1998) examine the association between earnings management and audit firm changes. They find discretionary accruals are income decreasing during the last year with the outgoing auditor and insignificant during the first year with the

2.2 The extant literature on the association between audit committees and financial reporting

Some studies show audit committees are associated with higher quality financial reporting. DeFond and Jiambalvo (1991) find earnings overstatements are less prevalent in companies that have audit committees. Similarly Dechow et al., (1996) demonstrate that companies with audit committees are less likely to commit fraud compared to a control sample matched by industry and size. Wild (1994) finds an increase in the informativeness of accounting numbers after companies voluntarily form audit committees. Similarly, Klein (2000a) finds the informativeness of accounting data is positively related to audit committee independence. For a sample of distressed companies, Carcello and Neal (2000) show auditors issue going concern opinions more often when audit committee members are independent of senior management. Recent studies also find that earnings management is negatively related to audit committee characteristics such as independence, meeting activity, and financial literacy (Chtourou et al., 2001; Xie et al., 2001).

To some extent, it is difficult to draw policy conclusions from the above studies because it is difficult to determine the direction of causality between audit committees and financial reporting integrity. Managers that are inclined to commit fraud or issue misleading accounting numbers have less incentive to set up independent audit committees. Therefore, the reported association between audit committees and financial reporting quality might simply reflect the underlying incentives of senior management. Consistent with this argument, Klein (2002) finds managers' economic incentives are important determinants of audit committee independence. This study addresses the causality issue by investigating what audit committees *do*, rather than testing for a statistical association between audit committee characteristics (i.e., existence, independence) and observed financial reporting outcomes.

Other studies provide evidence of no association between audit committee characteristics and financial reporting quality. Beasley (1996) finds no association between audit committee existence and financial statement fraud. Klein (2000b) finds no significant relation between earnings

incoming auditor, which is consistent with managers dismissing incumbent auditors in response to auditor conservatism.

management and 100% audit committee independence. Menon and Williams (1994) find the likelihood of forming an independent audit committee is insignificantly associated with various proxies of the demand for financial reporting quality. They also show voluntarily formed audit committees hold meetings infrequently, and they conclude that committees are often created for appearance rather than because companies rely on them. Overall then, the evidence is mixed concerning whether audit committees improve the quality of financial reporting.

2.3 The role of audit committees when companies dismiss their auditors

As a sub-committee of the board of directors, the audit committee is an important corporate governance mechanism for monitoring senior management (e.g., Blue Ribbon Committee, 1999). Regulators and audit committee guides cite auditor hiring and firing as a primary responsibility of the audit committee (e.g., SEC, 1978; American Bar Association, 1978; Conference Board, 1988; Cadbury Committee, 1992; Auditing Practices Board, 1994; Braiotta et al., 1999; National Office of Audit and Accounting, 2001). The audit committee is expected to act on behalf of shareholders in maintaining the integrity of the auditing process, rather than allow opportunistic management to choose their own auditor. In a survey study, Kalbers (1992) finds both audit committee members and auditors believe the audit committee has an important influence on auditor choice. However, there is little archival evidence on the role of audit committees when companies change auditors. Abbott and Parker (2000) find companies with both active and independent audit committees are more likely to hire industry-specialist auditors, but they find the effects of activity and independence are insignificant when tested separately. This study provides a unique look at whether audit committees are discharging their responsibilities regarding auditor dismissals.

Membership of an audit committee bonds the director to oversee the integrity of financial reporting on behalf of outside directors who do not sit on the audit committee (Reinstein et al., 1984; Abbott and Parker, 2000). Courts hold that audit committee members owe standards of care that

exceed those of other outside directors, because audit committee members have access to inside accounting information and because they implicitly agree to oversee the integrity of auditing (Olson, 1999).[3] Audit committee members face economic losses from litigation and reputation impairment if they fail to detect accounting irregularities. Since the oversight of auditor changes is a primary function of the audit committee and since opinion shopping diminishes the integrity of audit reporting, audit committees should disapprove of disapprovals that are motivated by opinion shopping. My second hypothesis is therefore:

H2: Audit committees are more likely to disapprove of opinion shopping dismissals than other dismissals

I use models of audit opinion reporting and auditor dismissal to predict whether dismissals are motivated by opinion shopping. Since my opinion shopping variable is predicted, there is no endogeneity problem when using it to explain audit committee approval.

I obtain audit committee approval data from companies' 8-K filings. Item 304 of Regulation S-K requires that SEC registrants disclose whether auditor changes are recommended or approved by audit committees (e.g., SEC, 1995).[4] I search for the words 'approved' or 'recommended' as evidence that an audit committee approves the auditor dismissal.[5] It is important to note that *I do not assume audit committee non-approval is equivalent to disapproval*. Rather I allow for the fact that an audit committee may not approve an audit firm dismissal because it does not participate in the dismissal

[3] In Dubowski v. Ash, 606 E Supp. 600, 605 (S. D. N. Y. 1985), audit committee members were held responsible for reviewing the independent auditor even though they were not officers of the company. In re MTC Elec. Techs. Shareholders Litig., 898 E Supp. 974, 980 (E. D. N. Y. 1995) the audit committee was charged with "overseeing the conduct of MTC's accountants". In AUSA Life Ins. Co. v. Dwyer, 928 E Supp. 1239, 1259-61 (S. D. N. Y 1996) the audit committee was accused of being "wilfully blind" in its oversight of the audit firm.

[4] Accounting Series Release No. 247 (SEC, 1978) required that companies disclose only whether audit committees reviewed auditor changes - this was subsequently amended by Item 304 of Regulation S-K.

[5] When the audit committee does not approve auditor dismissal, the 8-K filing either does not disclose who approves the dismissal or it discloses approval by other individuals (usually the full board of directors). In a few cases, the audit committee approves the appointment of the new audit firm but not the dismissal decision. These observations are coded as non-approvals, but the reported results are robust to dropping these observations.

decision. It is important to account for audit committee non-participation since extant research finds some audit committees are inactive (Menon and Williams, 1994).[6]

Fig. 1 illustrates an audit committee's participation and approval decisions when an auditor is dismissed. The audit committee first decides whether to participate in the auditor dismissal decision and a participation dummy (PA) equals one if the audit committee participates. If the audit committee does not participate ($PA = 0$) then, by definition, it cannot approve the auditor dismissal. If the audit committee does participate ($PA = 1$), an approval dummy (AP) equals one if the committee approves and equals zero if it disapproves. An 8-K filing discloses only the *joint* product of the audit committee's participation and approval decisions ($PA \times AP$). An auditor dismissal is approved ($PA \times AP = 1$) if the audit committee both participates ($PA = 1$) and does not disapprove ($AP = 1$). A dismissal is not approved ($PA \times AP = 0$) either because the committee does not participate ($PA = 0$) or because it participates and disapproves ($PA = 1, AP = 0$). Since PA and AP are jointly observed in the 8-K filing, it is important to identify whether non-approval ($PA \times AP = 0$) is due to non-participation or disapproval. The distinction is important because non-participation indicates an ineffective audit committee, whereas an effective audit committee should disapprove of opinion shopping. I distinguish between non-participation and disapproval by simultaneously estimating probit models that take into account the partial observability of the PA and AP variables (Maddala, 1983).

[INSERT FIG. 1 HERE]

I predict audit committee participation using the level of, and change in, audit committee meeting activity during the auditor dismissal year. Although audit committee meetings are not perfectly correlated with participation, the statistical results are highly significant so lack of precision from measurement error is not an important limitation. Three empirical findings show that meeting

[6] For example, Kalbers (1992) reports that some, but not all, audit committees take an active role with regard to audit fees and audit scope.

activity is a good predictor of audit committee participation. First, I find a significant increase in the number of audit committee meetings during the auditor dismissal year, suggesting that audit committees arrange extra meetings in order to discuss auditor changes. Second, when audit committees do not approve audit firm dismissals, there is a smaller increase in meeting activity during the auditor dismissal year and a lower level of audit committee activity. This suggests that some audit committee non-approvals ($PA \times AP = 0$) are due to non-participation ($PA = 0$) rather than disapproval ($PA = 1,\ AP = 0$). Third, there is a significant increase in meeting activity during the auditor dismissal year even when audit committees do not approve audit firm dismissals. This indicates some audit committee non-approvals are due to disapproval rather than non-participation.

Although audit committee meetings are strongly correlated with audit committee participation, it is acknowledged that meeting data have two limitations. First, an endogeneity problem could arise because audit committees meet to discuss events other than audit firm dismissals (e.g., the issuance of financial results). If the other events discussed by audit committees are correlated with companies' dismissal decisions there is endogeneity bias. Second, not all companies that have audit committees disclose the number of audit committee meetings. My concern is that a company might not disclose the number of meetings if the audit committee does not meet (i.e, it may not disclose zero meetings), in which case incomplete disclosure results in an over-statement of audit committee activity. I control for these endogeneity and disclosure bias issues using company size as an instrumental variable to predict audit committee meeting activity. First, company size is an ideal instrument to control for endogeneity, because it is exogenous and because it is a strong predictor of meeting activity. Menon and Williams (1994) show that audit committees in large companies are more active because scale economies result in greater net monitoring benefits. Second, company size data are available for all audit firm dismissals so I am able to avoid the problem of disclosure bias by

predicting meeting activity for the full sample.[7] I therefore control for endogeneity and disclosure bias when testing H2.

Finally, I hypothesise that audit committees are more likely to lose independent audit committee members when they disapprove of opinion shopping, for two reasons. First, senior management exert greater control over the audit committee and hence over the auditor dismissal decision if they remove audit committee members who object to opinion shopping. Second, the authority of the audit committee is compromised when a company dismisses its auditor despite disapproval from the audit committee. It is therefore expected that audit committee members are more likely to resign when an audit committee disapproves of an opinion shopping dismissal but the company still dismisses. These two arguments apply more strongly to audit committee members who are independent of senior management, since their incentives are more closely aligned with those of investors rather than senior management. The third hypothesis is therefore:

H3: There is a higher departure rate of independent audit committee members when audit committees disapprove of opinion shopping[8]

3. Identifying opinion shopping companies

This section is structured as follows. Sub-section 3.1 explains the methodology employed to test for opinion shopping. Sub-sections 3.2 and 3.3 describe the dependent and control variables. Sub-section 3.4 investigates whether scope exists for opinion shopping. Sub-section 3.5 tests whether companies

[7] Section 4.3 provides evidence of significant disclosure bias. When companies disclose meeting activity the mean number of audit committee meetings is 2.35, but when companies do not disclose the mean predicted number of audit committee meetings is 2.00 which is significantly lower.

[8] Three points are worth noting in connection with H3. First, companies do not disclose whether audit committee members depart because of dismissal or resignation. To some extent, this does not matter since H3 results in weaker audit committees irrespective of whether departures are dismissals or resignations. Second, companies do not disclose how individual audit committee members vote so the analysis considers approval or disapproval by the audit committee as a whole. Third, H3 is silent on whether departing audit committee members remain with the company. Senior management exert more influence over the auditor dismissal decision even if the departing audit committee member remains on the board. On the other hand, senior managers exert more influence over other monitoring functions (e.g., the compensation or nominating committees) if the dissenting audit committee member is dismissed from the board. It has already been noted that audit committee members owe a greater duty of care than other outside directors when accounting irregularities occur. Therefore, an audit committee member who resigns faces a lower threat of litigation even if she remains with the company. On the other hand, an audit committee member who resigns could leave the company if she is uncomfortable with the actions of senior management.

engage in opinion shopping, and it compares the timing of opinion shopping dismissals with other dismissals.

3.1 Methodology for testing opinion shopping

Scope for opinion shopping depends on whether significant reporting differences exist between retained and newly appointed auditors. Reporting differences make opinion shopping possible since a company can condition its dismissal decision on whether a new auditor or its incumbent auditor would more likely give a favourable audit opinion. The methodology employed tests whether scope exists for opinion shopping, and whether companies exploit this scope to avoid unfavorable audit opinions.

For lack of a better terminology, an unfavorable audit opinion is henceforth described as 'modified' (M_{it} = 1) and any other opinion is termed 'unmodified' (M_{it} = 0). The final opinion of an outgoing auditor is given at t-1 (M_{it-1}). An auditor dismissal dummy (D_{it}) equals one if company i appoints a new auditor, or zero if it retains its incumbent auditor. The issued audit opinion (M_{it}) depends on the auditor dismissal decision (D_{it}), the opinion received prior to the dismissal decision (M_{it-1}), and a vector of other explanatory variables (X_{it}). The conditional probability that company i receives a modified opinion is written as $\Pr(M_{it}^{D}=1)$ where the D superscript denotes the auditor dismissal decision. Company i receives a modified report with probability $\Pr(M_{it}^{0}=1)$ if it retains its incumbent auditor and with probability $\Pr(M_{it}^{1}=1)$ if it hires a new auditor. Company i engages in opinion shopping if it dismisses its auditor when $\Pr(M_{it}^{0}=1) > \Pr(M_{it}^{1}=1)$ and if it retains when $\Pr(M_{it}^{0}=1) \leq \Pr(M_{it}^{1}=1)$.

Estimation takes place in two stages. First, I estimate a probit model of audit opinion reporting that tests whether reporting differences exist between retained and new auditors. Next, I

predict the difference between opinion probabilities ($\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)$) and I test whether companies condition their dismissal decisions on whether incumbent or new audit firms are more likely to issue unmodified opinions. If the coefficient on $\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)$ is positive in the auditor dismissal model, I conclude companies engage in opinion shopping (H1).

The audit opinion reporting model is:

$$M_{it} = \gamma_0 + \gamma_1 M_{it-1} + \gamma_2 X_{it} + \gamma_3 D_{it} + \gamma_4 D_{it} \times M_{it-1} + \gamma_5 D_{it} \times X_{it} + v_{it} \quad (1)$$

The γ_1 coefficient on prior opinions (M_{it-1}) is expected to be positive because extant research finds strong persistence in audit opinion reporting (e.g., Monroe and Teh, 1993; Lennox, 2000). As discussed later, the X_{it} vector includes control variables that previous studies show are associated with modified audit opinions (e.g., profitability, liquidity, leverage, default, company size, and growth). The auditor dismissal dummy (D_{it}) and interaction terms ($D_{it} \times M_{it-1}$ and $D_{it} \times X_{it}$) capture reporting asymmetries between retained and new auditors. Reporting differences exist between new and retained auditors if γ_3, γ_4, or γ_5 are statistically significant.

The difference between modified opinion probabilities ($\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)$) is predicted from eq. (1) and included in an auditor dismissal model as follows:

$$D_{it} = \theta_0 + \theta_1(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \theta_2 Z_{it} + u_{it} \quad (2)$$

The opinion shopping variable ($\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)$) captures the effect of reporting differences on auditor dismissal decisions, and θ_1 is positive if companies engage in opinion shopping (H1). The Z_{it} vector includes control variables that previous studies show are associated with audit firm changes (these are discussed later).

3.2. Audit firm dismissals and audit opinions

Data on audit firm changes are obtained from AUDITOR-TRAK, which is a more comprehensive source than COMPUSTAT.[9] Each auditor change is checked against the corresponding 8-K filing to identify whether the change is a dismissal or resignation. Audit firm resignations are dropped from the sample because opinion shopping concerns companies' dismissal decisions.[10] Audit firm changes are also dropped when: (a) an 8-K filing does not disclose whether the change is a dismissal or resignation, (b) the change is mutually agreed by the auditor and client, or (c) the client and auditor disagree about whether the change is a dismissal or a resignation. This leaves a sample of 18,445 auditor retentions and 828 dismissals (4.30%).

There are four types of audit opinion in the sample: (1) 'unqualified without explanatory language', (2) 'unqualified with explanatory language', (3) 'qualified', and (4) 'opinion disclaimer'. COMPUSTAT does not provide further information on explanatory language, qualifications or disclaimers, so opinion types (2)-(4) are collected by hand from 10-K filings.

[INSERT TABLE 1 HERE]

Table 1 details the different types of audit opinions. Panel A shows the most frequent opinion is unqualified without explanatory language (87.40%). Unqualified with explanatory language opinions are shown in Panels B-E, qualified opinions are in Panel F and opinion disclaimers are in panel G. Unqualified with explanatory language opinions are grouped into Panels B-E according to the type of language used. Panel B shows 5.75% of opinions are unqualified with harmless

[9] COMPUSTAT provides audit firm names only for clients of the 'Big five' and 18 medium-sized audit firms. AUDITOR-TRAK (Strafford Publications) summarizes and supplements information contained in the Public Accounting Report on audit firm changes. Mayper and Addy (1991) show the Public Accounting Report is more than 99% accurate in reporting audit firm changes. A few discrepancies are found between AUDITOR-TRAK and COMPUSTAT regarding the timing of auditor changes and these are resolved by checking auditor change dates and audit firm names in 8-K and 10-K filings. AUDITOR-TRAK includes audit firm mergers as changes but these are classified in the paper as non-dismissals. The largest audit firm merger during the sample period (1996-98) involves Price Waterhouse and Coopers and Lybrand. I identify other audit firm mergers by reading 8-K filings to see why the change occurs.

[10] Some 8-K filings might incorrectly disclose audit firm dismissals as resignations, for example if a company requests the resignation of its incumbent auditor. Extant research finds significant differences between disclosed audit firm resignations and dismissals (e.g., DeFond et al., 1997), indicating few dismissals are incorrectly disclosed as resignations.

explanatory language.[11] Panel C shows 6.10% of opinions are modified because of going concern difficulties.[12] Panel D contains unqualified opinions where the explanatory language refers to a fundamental uncertainty other than going concern (usually litigation). Panel E contains other modified opinions where the explanatory language would likely be viewed as unfavorable.[13] Panel F contains qualified ('except for') opinions which are issued in one of two circumstances: (a) there is a reporting disagreement if an auditor believes part of the financial statements is not fairly presented (typically GAAP non-compliance), or (b) there is a limitation on audit scope if an auditor is unable to collect sufficient evidence on part of the financial statements.[14] [15] Panel G contains opinion disclaimers, which are issued when the scope limitation is so severe that the auditor is unable to form an opinion about whether the financial statements are fair.

It is necessary to map the different types of opinions into a quantitative variable. Since the opinions in Panels A and B are not unfavorable, they are coded as unmodified ($M_{it}=0$). Going concern opinions warn about bankruptcy, fundamental uncertainties indicate high risk, and qualifications and opinion disclaimers are unfavorable, so the opinions in Panels C, D, F and G are modified ($M_{it}=1$). The Panel E opinions also appear to be unfavourable so they are coded as

[11] 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. Auditors refer to changes in accounting principles when there is a material effect on the financial statements. Most changes in accounting principles occur because of new accounting standards rather than for voluntary reasons, so (c) is assumed to be harmless. Voluntary changes in accounting principles might be viewed as harmless or unfavorable (e.g., opportunistic earnings management), so it is unclear how these opinions should be coded. In unreported results, the paper's conclusions are found to be robust when these opinions are dropped from the sample. Events that affect financial statement comparability include mergers, acquisitions, significant corporate transactions and changes in accounting entities - these are all viewed as harmless. The only consistency opinion classified as unfavourable is where reference is made to accounting errors or irregularities – these are shown in Panel E rather than Panel B.

[12] There are 171 audit opinions that disclose the company is in bankruptcy or adopts fresh start reporting after emerging from bankruptcy protection (these opinions usually include statements about going concern uncertainty). Bankruptcy is a public signal of poor performance and uncertainty irrespective of the audit opinion, so bankrupt observations are dropped from the sample.

[13] Some opinions disclose financial distress (e.g., sale of a significant part of the company's operations, debt refinancing) but presumably the auditor believes the distress is not so severe that it warrants a going concern opinion. Some opinions indicate existing problems (e.g., lack of compliance with SEC filing requirements, criminal investigation) while others hint at potential problems (e.g., related party transactions).

[14] Trusts are allowed to use modified cash basis accounting rather than GAAP – these opinions are dropped from the sample rather than classed as audit qualifications.

[15] An auditor issues an except for opinion only if she concludes the overall financial statements are fair. An adverse opinion should be issued when an auditor believes the overall financial statements are not fair - there are no adverse opinions in the sample.

modified.[16] This results in a sample of 17,952 unmodified opinions and 1,321 modifications (6.8%), most of which mention going concern problems. Attention now turns to the control variables in the audit opinion (eq. (1)) and auditor dismissal (eq. (2)) models.

3.3 Control variables

Extant research shows financially distressed companies receive modified opinions more often than healthy companies (e.g., Chen and Church, 1992; Monroe and Teh, 1993; Krishnan, 1994), and distressed companies are more likely to change auditors (Menon and Schwartz, 1985; Krishnan, 1994; DeFond and Subramanyam, 1998). My financial health variables are profitability ($PROF_{it}$), liquidity (LIQ_{it}), leverage (LEV_{it}), and corporate default (DEF_{it}). Profitability is net income divided by total assets, liquidity is current assets divided by current liabilities, leverage is total liabilities divided by total assets, and the default dummy indicates the company's default status (DEF_{it} equals one if the company is in default in the period -365 to +90 days around the year-end). Financial ratios are obtained from COMPUSTAT and Moody's provide the default data.[17]

Small companies receive modified opinions more often than large companies (e.g., Monroe and Teh, 1993; Krishnan, 1994) and small companies are more likely to change auditors (Krishnan et al., 1996). Therefore, the audit opinion and auditor dismissal models control for company size

[16] There are three possible objections to this mapping of the audit opinion variable. First, the coding of the Panel E opinions is inappropriate if they are favorable. In unreported results, the paper's conclusions are found to be robust when: (1) the Panel E opinions are dropped from the sample, (2) the Panel E opinions are classified as unmodified, or (3) some Panel E opinions are classified as modified (e.g., accounting errors) and others are classified as unmodified (e.g., death of CEO). The robustness is unsurprising since Panel E accounts for only 0.43% of opinions. Second, it might be argued that disclaimers (Panel G) are more negative than qualifications (Panel F), which in turn are more negative than unqualified opinions. However, a separate analysis of these opinions is impractical since there are only 11 qualifications and 13 disclaimers. Third, multiple bad news disclosures might be worse than single disclosures. For example, a going concern opinion that also mentions accounting errors might be more negative than a going concern opinion alone. In practice, an attempt to rank audit opinions would be fraught with difficulties. For example, is a 'going concern opinion plus litigation uncertainty' worse than a 'going concern opinion plus accounting error'? Are these multiple unqualified opinions worse than a single qualification? Without answers to such questions, a ranking is too subjective and so is avoided. In any case, only 53 (0.28%) reports have multiple negative disclosures, so this is not a significant limitation.

[17] Moody's default data covers bond defaults for companies both rated and unrated by Moody's. Moody's compiles default histories from a variety of sources including: Industrial, Railroad, and Public Utilities Manuals; reports of the National Quotation Service; The Commercial and Financial Chronicle; financial reports; press releases; press clippings; internal memoranda; records of analyst contact with rated issuers; and documents from the Securities and Exchange Commission, Dun & Bradstreet, the New York Stock Exchange, and the American Stock Exchange. A bond default is defined as any missed or delayed disbursement of interest and/or principal, bankruptcy, receivership, or distressed exchange where (i) the issuer offers bondholders a new security or package of securities that amount to a diminished financial obligation (such as preferred or common stock, or debt with a lower coupon or par amount) or (ii) the exchange has the apparent purpose of helping the borrower avoid default.

($SIZE_{it}$), which is measured using total assets. The opinion model also controls for company growth ($GROWTH_{it}$), which is the annual percentage change in total assets. The association between company growth and modified opinions is expected to be negative since low growth can be a symptom of poor financial health. The relation between growth and auditor dismissals is expected to be non-monotonic because companies that grow or decline rapidly are more likely to change auditors compared to companies that grow at a steady rate (e.g., Beattie and Fearnley, 1995). The auditor dismissal model captures this non-monotonic relation by including dummy variables for rapid growth ($GROW_{it}$) and decline (DEC_{it}).[18] After ranking the sample by growth, $GROW_{it}$ equals one for the top 10% and DEC_{it} equals one for the bottom 10%.

I expect companies with poor investment opportunities are more likely to receive modified audit opinions. The book-to-market ratio (BM_{it}) is often used as a proxy for investment opportunities but, to my knowledge, it has not been used in prior research on audit opinions.[19] Since investment opportunities are inversely related to the book-to-market ratio, a positive association is expected between BM_{it} and modified opinions. The book-to-market ratio (BM_{it}) is also included in the auditor dismissal model (DeFond and Subramanyam, 1998).

Table 2 provides variable definitions and descriptive statistics. The non-dummy control variables ($PROF_{it}$, LIQ_{it} , LEV_{it} , $SIZE_{it}$, $GROWTH_{it}$, BM_{it}) are highly skewed with outlying observations. Sample trimming and log or square root transformations are traditional methods for dealing with skewness and outliers, but these procedures are less effective than the rank transformations adopted here (e.g., see Kane and Meade, 1998).[20] For a variable with N observations in year t, each observation is replaced with its corresponding rank (from i = 1, . . . , N in ascending

[18] The non-monotonic relation between growth and auditor dismissal could also be estimated using a quadratic functional form, but I find (unreported) the quadratic specification results in a slightly worse fit compared to the model using growth dummies.

[19] In unreported results, the paper's conclusions are not found to be sensitive to exclusion of BM_{it} .

[20] Kane and Meade (1998) find rank transformations contain information that is obfuscated by untransformed variables or alternative transformations. In addition, log and square root transformations are not viable for variables with non-positive observations ($PROF_{it}$,

order) and the rank assigned to observation i is divided by N+1. The rank transformed variables ($R(PROF_{it})$, $R(LIQ_{it})$, $R(LEV_{it})$, $R(SIZE_{it})$, $R(GROWTH_{it})$, and $R(BM_{it})$) are therefore uniformly distributed between zero and one.

[INSERT TABLE 2 HERE]

3.4 Are there significant reporting differences between retained and new audit firms?

Columns (1)-(3) of Table 3 provide results for three audit opinion models (eq. (1)).[21] Column (1) is a benchmark model, which imposes the restriction that new and retained auditors do not report differently ($\gamma_3 = \gamma_4 = \gamma_5 = 0$). Column (2) adds the auditor dismissal dummy and interaction terms in order to identify reporting differences between new and retained auditors.[22] The positive coefficient on the dismissal dummy (D_{it}) shows new auditors issue modified opinions more often than retained incumbents when prior opinions are unmodified. The negative coefficient on $D_{it} \times M_{it-1}$ captures the incremental sensitivity of audit opinions to dismissal when prior opinions are modified. The total sensitivity of audit opinions to dismissal is negative when prior opinions are modified ($\hat{\gamma}_3 + \hat{\gamma}_4$ = 0.17 - 0.85 = -0.68). Therefore, new auditors issue modified opinions less often than retained incumbents

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LIQ_{it} , $GROWTH_{it}$). Simulation studies indicate little loss of information even when rank transformations are applied to normally distributed variables (Conover and Iman, 1980).

[21] I account for possible dependence between observations relating to the same company by allowing for clustering and by computing robust estimates of the coefficients' standard errors. This procedure assumes that observations are independent between companies but does not require independence for multiple observations of a given company. The standard errors are estimated using the 'robust cluster' command in STATA.

[22] I also test (unreported) whether the scope for opinion shopping depends on the size of the outgoing or incoming audit firm by including in the audit opinion model auditor size dummies and interactions between auditor size and prior opinions. Consistent with extant research (e.g., Monroe and Teh, 1993; Krishnan and Stephens, 1995), I find the coefficients on the auditor size dummies and interaction terms are statistically insignificant, suggesting the scope for opinion shopping does not depend on audit firm size. A limitation of this test is that audit firm size is endogenous since companies choose whether to hire large or small audit firms. The coefficients might be insignificant due to two offsetting effects. First, large audit firms are more conservative and so are more likely to issue modified opinions. Second, companies that are more deserving of modified opinions are more likely to hire small audit firms. The net effect implies large audit firms are no more likely to issue modified opinions even though they are more conservative. It is beyond the scope of this paper to test for the association between audit firm size and audit opinions after controlling for the endogeneity of audit firm size.

when prior opinions are modified. The significant reporting differences between retained and new auditors ($\hat{\gamma}_3 > 0, \hat{\gamma}_4 < 0$) imply that scope for opinion shopping exists ($\Pr(M_{it}^0 = 1) \neq \Pr(M_{it}^1 = 1)$).[23]

[INSERT TABLE 3 HERE]

3.5 Do companies successfully engage in opinion shopping?

The coefficients in Column (3) are used to predict the difference between modified opinion probabilities for retained and new auditors ($\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)$), and this variable is included in the auditor dismissal model (eq. (2)) to test whether companies engage in opinion shopping. Columns (4)-(5) show the coefficients on $\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)$ are significantly positive ($\hat{\theta}_1$ = 1.77, 1.75, and z = 6.69, 6.62). I therefore conclude that companies successfully engage in opinion shopping (H1).[24] I predict that opinion shopping motivates 142 of the 828 dismissals (17.1%).[25] There is a significant improvement in audit opinions for opinion shopping dismissals, but opinions are slightly worse for other dismissals. The mean values of $\hat{\Pr}(M_{it}^0 = 1)$ - $\hat{\Pr}(M_{it}^1 = 1)$ are 17.99% for opinion shopping dismissals and -1.73% for other dismissals. These offsetting effects explain why previous studies find no significant improvement in audit opinions for auditor dismissals as a whole.

[23] The effects of the control variables are consistent with prior research. The positive coefficient on prior opinions shows strong persistence in audit opinion reporting. The negative coefficients on profitability , liquidity, size and growth show modified opinions are issued more often to companies that are small, unprofitable and that have poor liquidity and growth. The positive coefficients on leverage and default show companies receive modified opinions more often if they are highly leveraged or in default. The positive coefficient on book-to-market reveals companies receive modified opinions more often when investment opportunities are poor. In unreported results, one digit SIC codes and year dummies are included in the audit opinion reporting and dismissal models but their effects are jointly insignificant.

[24] The auditor dismissal model cannot control for all possible determinants of dismissal – for example, audit fees are undisclosed during the sample period but some companies change auditors in order to pay lower fees. I investigate whether omitted factors confound the results for opinion shopping by examining whether 8-K filings disclose the reasons for dismissal. There are 163 companies (19.7%) that disclose why auditors are dismissed and the most common reason is the need for lower fees (55 dismissals). When companies that disclose reasons are dropped from the sample, the opinion shopping coefficient and level of significance are similar to Table 3 ($\hat{\theta}_1$ = 1.67, z = 5.9). In addition, no significant correlation is found between opinion shopping and the company's propensity to disclose a reason for the dismissal. Since the opinion shopping motive and other dismissal motives are uncorrelated, I conclude the opinion shopping coefficient is not biased by omitted determinants of dismissal.

[25] An auditor dismissal is predicted to be motivated by opinion shopping if $\hat{\Pr}(M_{it}^0 = 1) > \hat{\Pr}(M_{it}^1 = 1)$.

Interestingly, I find opinion shopping dismissals occur significantly later in the reporting period compared to other dismissals. I count the number of days from auditor dismissal to the year-end reported on by the new auditor (a dismissal before the year-end has a positive number of days, whereas a dismissal after the year-end has a negative number of days). The mean (median) number of days is 49 (28) for the opinion shopping dismissals and 105 (85) for the other dismissals, and the timing difference is statistically significant ($t = -2.71$, $t = -4.92$ respectively). Opinion shopping dismissals therefore occur nearly two months later than other dismissals and there are three possible explanations for this timing difference. First, an opinion shopping company delays the dismissal decision until it is reasonably certain the incumbent audit firm will give an unfavourable opinion. Second, an opinion shopping company delays the auditor change in order to make the audit more difficult for the incoming auditor. Third, opinion shopping companies engage in longer search for compliant audit firms.

4. Opinion shopping and the role of audit committees

This section considers the role of audit committees and addresses the following questions: Are audit committees more likely to disapprove of auditor dismissals that are motivated by opinion shopping? If so, is turnover amongst audit committee members higher when committees disapprove of opinion shopping? In addressing these questions, I use the predicted opinion shopping variable of the previous section.

Companies disclose in their 8-K filings whether audit committees approve audit firm changes but the audit committee's role is not disclosed when incumbent auditors are retained, so the following analysis is for auditor dismissals rather than retentions. This is an important data constraint, as I cannot test whether audit committee disapproval affects the likelihood of auditor dismissal. I identify whether an audit committee exists by reading 10-K and proxy filings before and after auditor dismissals. Filings disclose that audit committees do not exist for 92 dismissals. Filings do not disclose whether audit committees exist for 52 dismissals and, in most cases, this probably reflects

the absence of a committee. This leaves 684 dismissals (= 828 - 92 - 52) where audit committees exist, and the following analysis focuses on this sample.[26]

Sub-section 4.1 shows that audit committees are less likely to approve auditor dismissals that are motivated by opinion shopping. Sub-section 4.2 shows that this association reflects audit committee disapproval (H2) rather than non-participation. Sub-section 4.3 demonstrates that H2 is robust to endogeneity and to the non-disclosure of audit committee activity. Sub-section 4.4 shows that the departure rate of independent audit committee members is significantly higher when audit committees disapprove of opinion shopping.

4.1 The association between opinion shopping and audit committee non-approval

Table 4 reports the association between opinion shopping ($\hat{\Pr}(M_{it}^{0}=1)$ - $\hat{\Pr}(M_{it}^{1}=1)$) and audit committee approval ($PA_{it} \times AP_{it}$). Audit committees approve only 37.8% of opinion shopping dismissals (= 37/98) but they approve 64.7% of other dismissals (= 379/586). A chi-square test reveals audit committees are significantly less likely to approve dismissals that are motivated by opinion shopping (1% level).

[INSERT TABLE 4 HERE]

In Table 4, the 268 non-approvals ($PA_{it} \times AP_{it} = 0$) are either due to non-participation ($PA_{it} = 0$) or disapproval ($PA_{it} = 1, AP_{it} = 0$). Therefore, there are two competing explanations for the association between opinion shopping and audit committee approval. The first explanation is that audit committees disapprove of opinion shopping (H2). The second is that audit committees are less likely to participate in auditor dismissal decisions when companies engage in opinion shopping, for example an

[26] The frequency of opinion shopping in the three sub-samples (92, 52 and 684 observations) is 30%, 31% and 14% respectively. Univariate results (unreported) reveal a significantly lower incidence of opinion shopping when companies have audit committees. However, multivariate

audit committee might leave the auditor dismissal decision to the full board of directors in order to avoid conflict with senior management. The next section shows audit committees are not less likely to participate when companies engage in opinion shopping, so the association between opinion shopping and non-approval reflects disapproval rather than non-participation.

4.2 Is opinion shopping associated with audit committee non-participation?

Audit committee meeting data are obtained from 10-K and proxy filings for the auditor dismissal year (MD_{it}) and a non-dismissal year ($MND_{i.}$). The non-dismissal year is the year prior to auditor dismissal or, if meeting data for that year are unavailable, I use the year after dismissal.[27] The level of audit committee activity equals the number of meetings (MD_{it}), and the change in audit committee activity is the difference between meetings in dismissal and non-dismissal years ($AM_{it} \equiv MD_{it} - MND_{i.}$). I use the level of, and change in, meeting activity to predict whether audit committees participate in auditor dismissal decisions. The level of meeting activity (MD_{it}) captures the possibility that an active committee discusses the audit firm dismissal as part of its regular meeting schedule. Abnormal meeting activity (AM_{it}) indicates whether an audit committee holds extra meetings in order to discuss the dismissal. As will be shown, the conclusions are robust to using either meeting variable as a predictor of audit committee participation.

results indicate the association is insignificant after controlling for company size, so it cannot be concluded that audit committee existence deters opinion shopping.

[27] Proxy and 10-K filings disclose the number of audit committee meetings during the fiscal year but do not disclose meeting dates. It is straightforward to measure meeting activity during the auditor dismissal year if the dismissal occurs prior to the year-end reported on by the new auditor. However, if the dismissal occurs after the year-end it is unclear which year should be used to measure meeting activity. For example, suppose the fiscal year is 1st January 19X1 – 31st December 19X1, the outgoing auditor is dismissed on 1st February 19X2 and the incoming auditor issues a report for the year ending 31st December 19X1. In this example, meeting activity in the dismissal year is measured for the fiscal year 1st January 19X2 – 31st December 19X2 since this is the period in which the auditor is dismissed. This might introduce measurement error because the audit committee could meet to discuss the dismissal before 31st December 19X1. Fortunately only a minority of dismissals (22.9%) occur between the year-end and the incoming auditor's report and it is found (unreported) that dropping these from the sample does not affect the following results.

Audit committee meetings are undisclosed for 167 auditor dismissals so the sample is 517 (= 684 – 167).[28] Non-disclosure is a potential cause for concern because a company might not disclose the number of meetings if the audit committee does not meet, in which case the disclosed number of meetings overstates true activity. Another concern is that audit committees meet to discuss issues other than audit firm dismissals and if these issues are correlated with audit firm dismissals there is endogeneity bias. Sub-section 4.3 addresses these non-disclosure and endogeneity concerns.

Three findings indicate that audit committee meetings are a good proxy for audit committee participation. First, there is a significant increase in audit committee meeting activity in the auditor dismissal year. The mean change in meeting activity (AM_{it}) is 0.45, which is significantly greater than zero (t = 6.71). This indicates some audit committees arrange extra meetings to discuss audit firm dismissals. Second, when audit firm dismissals are not approved, the increase in meeting activity (AM_{it}) is significantly smaller (0.55 versus 0.26, t = 3.34), and the level of meeting activity (MD_{it}) is significantly lower (2.65 versus 1.84, t = 5.46). This indicates some audit committee non-approvals ($PA_{it} \times AP_{it} = 0$) are due to non-participation ($PA_{it} = 0$) rather than disapproval ($PA_{it} = 1, AP_{it} = 0$). Third, there is a significant increase in meeting activity even when audit committees do not approve audit firm changes (the mean value of AM_{it} is then 0.26, which is significantly greater than zero (t = 2.30)). This indicates some audit committee non-approvals ($PA_{it} \times AP_{it} = 0$) are due to disapproval ($PA_{it} = 1$, $AP_{it} = 0$) rather than non-participation ($PA_{it} = 0$). In summary, audit committees that participate in auditor dismissal decisions have higher levels of meeting activity and increase their activity during the auditor dismissal year.

Attention now turns to the association between opinion shopping and audit committee participation. The dependent variable in eq. (3) is the level of meeting activity (MD_{it}) and the dependent variable in eq. (4) is abnormal meeting activity (AM_{it}):

[28] One year is used to measure meeting activity in the non-dismissal period in order to avoid losing more observations. There is no significant trend in meeting activity during the sample period, so it makes no difference whether the non-dismissal period is the year before

$$MD_{it} = \varpi_0 + \varpi_1(\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)) + \varpi_2 R(SIZE_{it}) + \psi_{it} \quad (3)$$

$$AM_{it} = \kappa_0 + \kappa_1(\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)) + \kappa_2 R(SIZE_{it}) + \xi_{it} \quad (4)$$

Eq. (3) is estimated using Poisson since MD_{it} takes discrete non-negative values, and eq. (4) is estimated using OLS.

If the association between opinion shopping and audit committee non-approval (Table 4) reflects non-participation, there should be a negative relation between opinion shopping and meeting activity ($\varpi_1 < 0$ and $\kappa_1 < 0$). Insignificant coefficients indicate that opinion shopping is associated with audit committee disapproval (H2) rather than with non-participation.[29] Eqs. (3)-(4) include company size ($R(SIZE_{it})$) as a control variable because audit committees of large companies are more active than those of small companies ($\varpi_2 > 0$ and $\kappa_2 > 0$) (Menon and Williams, 1994).

The results are reported in Columns (1)-(4) of Table 5. There is no significant relation between opinion shopping and meeting activity ($\hat{\varpi}_1$ = 0.34, z = 0.57, and $\hat{\kappa}_1$ = 0.10, t = 0.10). This suggests that the association between opinion shopping and non-approval reflects disapproval rather than non-participation. As expected, the association between company size and audit committee activity is positive and highly significant ($\hat{\varpi}_2$ = 1.18, 1.20, z = 9.68, 10.37, and $\hat{\kappa}_2$ = 1.00, 1.01, t = 3.19, 3.30). Therefore, audit committees of large companies are more active and are more likely to participate in auditor dismissal decisions.[30] The next section explores further the audit committee's participation and approval decisions, and it controls for endogeneity and disclosure bias associated with the audit committee meeting variables.

[INSERT TABLE 5 HERE]

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or the year after dismissal.

[29] The coefficients $\hat{\varpi}_1$ and $\hat{\kappa}_1$ are estimated without bias since eqs. (3) and (4) use *predicted* audit opinion probabilities to capture the opinion shopping motive.

4.3 The association between opinion shopping and audit committee disapproval

The audit committee's participation and approval decisions are first modelled jointly using a single dependent variable ($PA_{it} \times AP_{it}$) and later they are modelled separately using two dependent variables (PA_{it} and AP_{it}). In eqs. (5)-(6) the dependent variable is the joint participation-approval outcome:

$$PA_{it} \times AP_{it} = \tau_0 + \tau_1 \hat{M}D_{it} + \tau_2(\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)) + \zeta_{it} \quad (5)$$

$$PA_{it} \times AP_{it} = \varsigma_0 + \varsigma_1 \hat{A}M_{it} + \varsigma_2(\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)) + \rho_{it} \quad (6)$$

The meeting variables ($\hat{M}D_{it}$ and $\hat{A}M_{it}$) capture the association between audit committee activity and participation. The coefficients τ_1 and ς_1 are positive if active audit committees are more likely to participate in auditor dismissals. The meeting variables are predicted from Columns (2) and (4) of Table 5. I use predicted meeting variables rather than disclosed meeting activity for two reasons. First, company size is an ideal instrument to control for the endogeneity of meeting activity because it is exogenous and because it is a strong predictor of meeting activity. Second, company size data are available for all dismissals so estimation results can be obtained using predicted meeting activity for the full sample (N = 684), thereby avoiding the problem of disclosure bias.[31] The opinion shopping variable ($\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)$) captures companies' dismissal motives. The coefficients τ_2 and ς_2 are negative if audit committees disapprove of opinion shopping.

The probit estimation results for eqs. (5)-(6) are shown in Columns (1)-(2) of Table 6. A significant positive relation exists between meeting activity and the participation-approval outcome ($\hat{\tau}_1$ = 0.33, z = 4.77, and $\hat{\varsigma}_1$ = 1.01, z = 5.26), which confirms that active audit committees are more likely to participate in auditor dismissal decisions. The coefficients on the opinion shopping variable are

[30] In unreported results, meeting activity shows no significant trend over the sample period and no significant relation is found between meeting activity and audit committee size.

significantly negative ($\hat{\tau}_2$ = -1.88, z = -2.92, and $\hat{\zeta}_2$ = -1.79, z = -2.79), which shows that audit committees are more likely to disapprove when dismissals are motivated by opinion shopping (H2).

[INSERT TABLE 6 HERE]

A possible objection to these findings is that the audit committee's participation and approval decisions are modelled as a joint dependent variable, whereas Fig. 1 depicts them as separate sequential decisions. Eqs. (7)-(8) address this objection by modelling the audit committee's participation and approval decisions separately:

$$PA_{it} = \tau_0 + \tau_1 \hat{MD}_{it} + \zeta_{it} \quad (7)$$

$$AP_{it} = \varsigma_0 + \varsigma_2 (\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)) + \rho_{it} \quad (8)$$

In eq. (7), the predicted number of meetings ($\hat{MD}_{it}$) explains participation (PA_{it}) and in eq. (8) the predicted opinion shopping variable ($\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)$) explains approval (AP_{it}). Eqs. (7)-(8) are estimated simultaneously using probit models that take into account the sequential decision-making process illustrated in Fig. 1, and the partial observability of participation and approval. The following likelihood function is programmed and maximized using STATA:

$$L = \prod_{PA_{it} \times AP_{it} = 1} [\Phi(\tau_0 + \tau_1 \hat{MD}_{it}) \Phi(\varsigma_0 + \varsigma_2 (\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)))] \quad \times$$
$$\prod_{PA_{it} \times AP_{it} = 0} [1 - \Phi(\tau_0 + \tau_1 \hat{MD}_{it}) \Phi(\varsigma_0 + \varsigma_2 (\hat{\Pr}(M_{it}^0 = 1) - \hat{\Pr}(M_{it}^1 = 1)))]$$

[31] The mean predicted number of meetings ($\hat{MD}_{it}$) is 2.35 when meeting activity is disclosed (N = 517) and 2.00 when it is not disclosed (N = 167). The difference (0.35) is statistically significant (t = 5.15) implying companies are less likely to disclose meeting activity when committees meet rarely. This validates my concern that the disclosed number of meetings overstates the true level of audit committee activity.

The results are shown in Columns (3)-(6) of Table 6.[32] The positive coefficients on $\hat{M}D_{it}$ and $\hat{A}M_{it}$ show active audit committees are more likely to participate in auditor dismissal decisions ($\hat{\tau}_1$ = 2.18, 4.22, and z = 2.61, 2.65). The negative coefficients on ($\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)$) confirm that audit committees disapprove of opinion shopping ($\hat{\zeta}_2$ = -2.28, -2.29, and z = -2.74, -2.72).[33]

4.4 What happens when audit committees disapprove of opinion shopping?

This sub-section tests whether audit committee disapproval of opinion shopping is associated with a higher frequency of member departure. I hypothesize that either senior management remove audit committee members that disapprove of opinion shopping, or disapproving members leave voluntarily. I obtain the names of audit committee members before and after auditor dismissals from 10-K and proxy filings. The mean number of audit committee members prior to auditor dismissal (MEM_{it}) is 2.84, and the mean number of members that leave during the auditor dismissal year ($MEML_{it}$) is 0.67. The mean departure rate ($MEML_{it} / MEM_{it}$) is 24.1%, so nearly a quarter of audit committee members leave during the year.

Eq. (11) estimates the effect of audit committee participation and approval on member departure:

$$MEML_{it} = \eta_0 + \eta_1 MEM_{it} + \eta_2 \hat{P}A_{it} + \eta_3 \hat{A}P_{it} + \psi_{it} \qquad (11)$$

[32] Columns (5)-(6) (eqs. (9)-(10)) are the same as Columns (3)-(4) (eqs. (7)-(8)) except that abnormal meeting activity ($\hat{A}M_{it}$) is used to predict participation.

[33] Abowd and Farber (1982) first developed the estimation procedure for sequential decisions and partially observed dependent variables. Maddala (1983) (p. 278-280) provides a detailed description of the sequential probit model with partial observability. A simplifying assumption of the sequential model is that audit committees' approval decisions (eqs. (10) and (12)) are defined only on the sub-population $PA_{it}=1$. This assumption is consistent with the hypothesized decision-making process illustrated in Fig. 1, but one can perhaps argue that a joint partial observability model would be more appropriate, for example if audit committees are less likely to participate when they are more likely to disapprove. In this case, the approval decision exists even for audit committees that do not participate, and eqs. (10) and (12) should be defined for the whole population rather than the sub-population $PA_{it}=1$. In the joint partial observability model, one needs to estimate $Cov(\zeta_{it}\rho_{it})$ in addition to the coefficients in eqs. (9)-(12). The (unreported) results from the joint partial observability models are very similar to the sequential models, with the coefficients on meeting activity significantly positive and the coefficients on opinion shopping significantly negative (1% level). The results are therefore robust to alternative modelling approaches.

The dependent variable is the number of audit committee members that leave ($MEML_{it}$) and eq. (11) is estimated using Poisson since $MEML_{it}$ takes discrete non-negative values. The number of members prior to auditor dismissal (MEM_{it}) is a control variable because large audit committees have more members that might potentially leave ($\eta_1 > 0$). Audit committee participation ($\hat{PA}_{it}$) and approval ($\hat{AP}_{it}$) are predicted from Columns (3)-(6) of Table 6.[34] I expect audit committee members are more likely to leave when audit committees disapprove of opinion shopping dismissals yet companies still dismiss ($\eta_3 < 0$).[35] The results for eq. (11) are shown in Columns (1)-(2) of Table 7. The significant negative coefficients on approval ($\hat{AP}_{it}$) reveal members are more likely to depart when audit committees disapprove of opinion shopping ($\hat{\eta}_3$ = -0.84, -0.82, and z = -2.84, -2.81).[36]

[INSERT TABLE 7 HERE]

Some studies posit that audit committees are more effective when members are unaffiliated with senior management (e.g., Carcello and Neal, 2000). Audit committee members are affiliated if they are relatives of senior management, current or former employees, company advisors, officers of significant customers or suppliers, or interlocking directors.[37] I use proxy and 10-K filings to identify

[34] Since these variables are both predicted, there is no endogeneity problem.

[35] Since audit committee disapproval is predicted using the opinion shopping variable (eqs. (8) and (10)), η_3 indirectly captures the effect of opinion shopping on member departure.

[36] Similar (unreported) findings emerge when the departure model includes the predicted opinion shopping and meeting variables. The coefficients on the meeting variables are insignificant, confirming that member departure is not associated with activity. The coefficient on opinion shopping is positive and significant, showing audit committee members are more likely to depart when opinion shopping motivates auditor dismissals. I perform robustness checks (unreported) to investigate whether the results reflect the confounding effects of omitted variables. First, I test whether the results are unique to the audit committee since events other than opinion shopping can change board composition and therefore trigger changes in audit committee membership. I find no significant association between opinion shopping and the departure of board members who do not sit on the audit committee. Therefore, the association between opinion shopping and member departure is unique to the audit committee. Second, financial health variables are included as controls because member departure could be caused by financial distress. The financial health variables are jointly insignificant and the association between audit committee disapproval and member departure remains significant.

[37] There are two problems in identifying whether audit committee members lack independence. First, there is high turnover of audit committee members during the auditor dismissal year and since the dates of member departures and appointments are not disclosed, audit committee composition at the auditor dismissal date is unknown. Therefore, it is not possible to correlate opinion shopping with audit committee independence at the auditor dismissal date. Second, companies are not required to disclose all affiliations with audit committee members. For example, an audit committee member could be a personal friend of the CEO but this would not typically be disclosed. Certain financial ties also

whether audit committee members are affiliated (AFF_{it}) or independent ($INDEP_{it}$). I find 8.0% of audit committee members are insiders (employed by the company) and 19.6% have some non-employment affiliation ('gray' directors), so 27.6% of members are affiliated - these percentages are similar to previous studies (e.g., see Table 2 of Carcello and Neal, 2000).

I estimate two variants of eq. (11) to test whether audit committee disapproval is associated with the departure of independent or affiliated members. The dependent variable in eq. (12) is the departure of affiliated audit committee members ($AFFL_{it}$), and the dependent variable in eq. (13) is the departure of independent committee members ($INDEPL_{it}$):

$$AFFL_{it} = \eta_0 + \eta_1 AFF_{it} + \eta_2 \hat{P}A_{it} + \eta_3 \hat{A}P_{it} + \psi_{it} \quad (12)$$

$$INDEPL_{it} = \eta_0 + \eta_1 INDEP_{it} + \eta_2 \hat{P}A_{it} + \eta_3 \hat{A}P_{it} + \psi_{it} \quad (13)$$

Eqs. (12)-(13) are estimated using Poisson because $AFFL_{it}$ and $INDEPL_{it}$ take discrete non-negative values.

Columns (3)-(6) of Table 7 provide the results for eqs. (12)-(13). Audit committee disapproval of opinion shopping is insignificantly associated with the departure of affiliated committee members ($\hat{\eta}_3$ = -0.60, -0.59, and z = -1.54, -1.52), but it is significantly associated with the departure of independent members ($\hat{\eta}_3$ = -1.11, -1.08, and z = -3.17, -3.14). I conclude that audit committees are significantly more likely to lose independent audit committee members when they disapprove of opinion shopping (H3).

5. Conclusion

This paper tests whether companies engage in opinion shopping and examines the role of audit committees when incumbent auditors are dismissed. In contrast to prior US research, I conclude that companies successfully engage in opinion shopping. There exists scope for opinion shopping because

need not be disclosed, for example Enron's proxy filing does not disclose contributions made to affiliated organizations of two audit committee members (Business Week (Asian Edition), January 21, 2002, pages 38-39). Indeed, clever management might hire directors that appear to be

new and retained audit firms differ in their propensities to issue unfavourable audit opinions. Opinion shopping companies take advantage of these reporting differences by dismissing incumbent auditors who are likely to give modified opinions and by retaining incumbent auditors who are likely to give unmodified opinions.

I find opinion shopping dismissals occur significantly later than other dismissals. This finding should be of interest to regulators as it suggests that a ban on late auditor changes would have three benefits. First, it would give an opinion shopping company less time to assess the opinion that would be issued by the incumbent audit firm. Second, it would give an opinion shopping company less time to search out a compliant audit firm. Third, it would give an incoming audit firm more time to assess audit risk and discover underlying problems.

I find audit committees are more likely to disapprove of audit firm dismissals that are motivated by opinion shopping. This is consistent with evidence that active audit committees help maintain financial reporting integrity (e.g., DeFond and Jiambalvo, 1991; Dechow et al., 1996). However, independent members are more likely to depart audit committees that disapprove of opinion shopping and there are two complementary explanations for this. First, audit committee members resign because they do not wish to be associated with opinion shopping dismissals. Second, senior management remove disapproving members in order to exert greater control over the audit committee and over the auditor dismissal decision. Both explanations imply that the audit committee's role in auditor selection is weaker when managers engage in opinion shopping.

A caveat to the analysis is that companies do not disclose whether audit committees approve auditor retentions, so I am unable to estimate the effect of audit committee disapproval on the likelihood of auditor dismissal. The audit committees in my dismissal sample are ineffective since auditors are dismissed even when committees disapprove of dismissal. Of course, this does not mean audit committees are generally ineffective because the data do not permit me to identify instances in which auditors are retained following audit committee disapproval.

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independent but are not, in order to give investors a false impression of having effective corporate governance (Byrd and Hickman, 1992).

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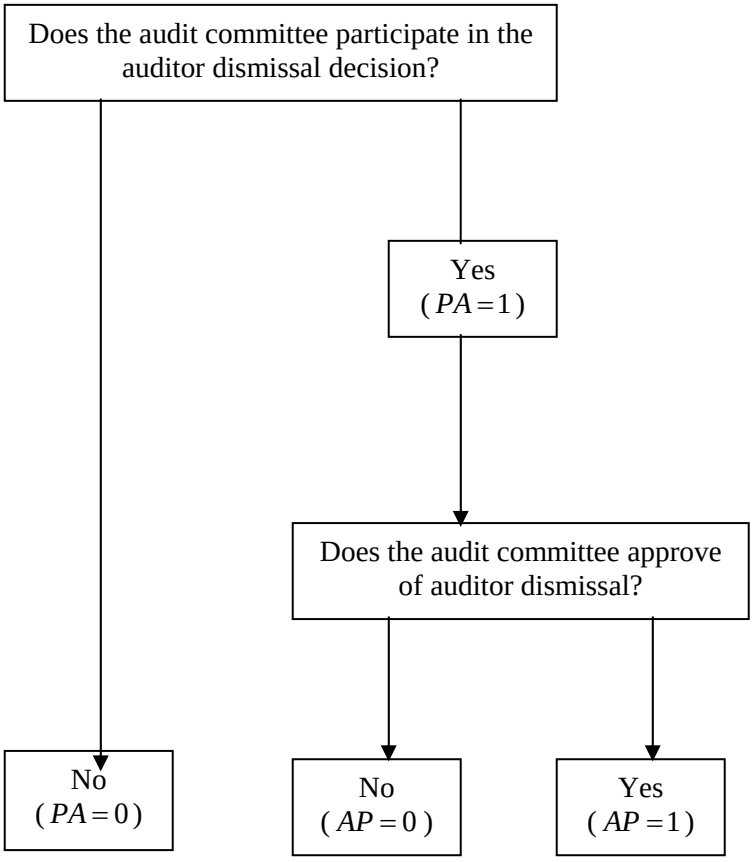
Fig. 1.
Audit committee participation and approval of auditor dismissal decisions



Notes:
Fig. 1 shows the sequential nature of the audit committee's decision to participate in and approve an auditor dismissal. PA = 1 if the audit committee participates in the auditor dismissal decision; 0 otherwise. AP = 1 if a participating audit committee approves the auditor dismissal decision; 0 otherwise. 8-K filings disclose only the joint product of an audit committee's participation and approval decisions ($PA \times AP$). $PA \times AP$ = 1 if the auditor dismissal is approved by the audit committee or $PA \times AP$ = 0 if it is not approved.

Table 1
Audit opinion types

	Observations	%
Panel A: [a] ($M_{it} = 0$)		
Unqualified opinions without explanatory language	16,844	87.40
Panel B: [b] ($M_{it} = 0$)		
Unqualified opinions with 'harmless' explanatory language	1,108	5.75
Panel C: [c] ($M_{it} = 1$)		
Going concern opinions	1,138	
Going concern + litigation uncertainty	29	
Going concern + related party transactions	1	
Going concern + correction of accounting errors	3	
Going concern + uncertainty about tax payable	1	
Going concern + uncertainty about environmental clean-up costs	1	
Going concern + litigation uncertainty + related party transactions	1	
Going concern + litigation uncertainty + development stage company	1	
	1,175	6.10
Panel D: [d] ($M_{it} = 1$)		
Litigation uncertainty	30	
Uncertainty about foreign exchange losses	2	
Uncertainty about losses in Russia	1	
Uncertainty about value of mining assets	3	
Uncertainty about value of accounts receivable	2	
Uncertainty about whether a distribution agreement will be re-negotiated	1	
Uncertainty about consequences of opting out of Master Settlement Agreement	1	
	40	0.21
Panel E: [e] ($M_{it} = 1$)		
Correction of accounting errors	5	
Sale of a significant part of the company's operations	15	
Revenues come from a limited number of sources	5	
Proposed merger or acquisition	10	
Death of CEO	1	
Possible acceleration of account payable	3	
Significant related party transactions	10	
Restructuring of long-term debt facilities	3	
Restructuring of short-term debt facilities	1	
Company is in development stage	12	
Intangibles comprise a significant part of total assets	2	
Results may not be indicative of those resulting from a stand alone company	4	
Stock repurchase	2	
Company is in breach of statutory insurance requirements	2	
Company has defaulted on its debt covenants	1	
Company is dependent upon its parent for financial support	1	
Company is not complying with SEC filing requirements	1	
Company is subject to a criminal investigation	3	
Company is subject to breaches of warranties and representations in connection with a merger agreement	1	
	82	0.43

Table 1 (contd.) **Audit opinion types**	Observations		%
Panel F: [f] ($M_{it} = 1$)			
Except for reporting disagreement	6		
Except for limitation on audit scope + going concern	3		
Except for limitation on audit scope + going concern + litigation uncertainty	2		
		11	0.06
Panel G: [g] ($M_{it} = 1$)			
Opinion disclaimer	2		
Opinion disclaimer + going concern	8		
Opinion disclaimer + going concern + litigation uncertainty + significant related party transactions	3		
		13	0.07
	Total	19,273	100.00

Notes:
Table 1 provides information on the different types of audit opinions issued. Panel A consists of unqualified opinions without explanatory language. Panels B-E consist of unqualified opinions with explanatory language. Opinions are grouped into Panels B-E according to the type of explanatory language used. Explanatory language is 'harmless' (Panel B) 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 (d) the current year financial statements are not comparable with those of the previous year. Panel C consists of going concern opinions. Panel D consists of fundamental uncertainties. Panel E consists of other emphases of matter. Panel F consists of qualified ('except for') opinions. Panel G consists of opinion disclaimers. Opinions with multiple bad news disclosures are shown separately in Panels C-G.
[a] Data source is COMPUSTAT.
[b, c, d, e, f, g] Data source is COMPUSTAT and companies' 10-K filings.

Table 2
Variable definitions and descriptive statistics (N = 19,273)

D_{it} = 1 if company i dismisses its incumbent auditor; = 0 if the incumbent auditor is retained
M_{it} = 1 if company i receives a modified audit opinion; = 0 otherwise (see Table 1)
$PROF_{it}$ = Net income/Total assets
LIQ_{it} = Current assets/Current liabilities
LEV_{it} = Total liabilities/Total assets
DEF_{it} = 1 if company i is in default; 0 otherwise
$SIZE_{it}$ = Total assets ($ million)
$GROWTH_{it}$ = Percentage annual growth in total assets
$GROW_{it}$ = 1 if company i's percentage annual growth is in the top 10%; = 0 otherwise
DEC_{it} = 1 if company i's percentage annual growth is in the bottom 10%; = 0 otherwise
BM_{it} = Book value of total assets/Market value

	Mean	Median	Min	Max
D_{it}	0.043	0	0	1
M_{it}	0.068	0	0	1
$PROF_{it}$	-0.14	0.03	-452.25	286.67
LIQ_{it}	3.47	1.99	0	716.67
LEV_{it}	0.59	0.49	0.0005	496
DEF_{it}	0.002	0	0	1
$SIZE_{it}$	1124.82	87.76	0.001	153498
$GROWTH_{it}$	7.26	0.10	-0.99	97579
$GROW_{it}$	0.10	0	0	1
DEC_{it}	0.10	0	0	1
BM_{it}	35.83	0.94	0.0003	613909

Table 3
Audit opinion reporting and auditor dismissal models

	Audit opinion reporting (Eq. (1))			Auditor dismissals (Eq. (2))	
	(1)	(2)	(3)	(4)	(5)
CONSTANT	-0.39	-0.47	-0.41	-1.59	-1.62
	(-4.00)**	(-4.58)**	(-4.21)**	(-17.70)**	(-31.15)**
M_{it-1}	1.95	2.07	2.07	.	.
	(32.25)**	(30.73)**	(30.80)**	.	.
$\hat{\Pr}(M_{it}^{0}=1)$ - $\hat{\Pr}(M_{it}^{1}=1)$	.	.	.	1.77	1.75
	.	.	.	(6.69)**	(6.62)**
$R(PROF_{it})$	-1.95	-1.98	-1.98	-0.25	-0.27
	(-15.74)**	(-14.86)**	(-15.63)**	(-3.58)**	(-4.15)**
$R(LIQ_{it})$	-1.06	-1.03	-1.06	-0.06	.
	(-10.58)**	(-9.69)**	(-10.51)**	(-0.72)	.
$R(LEV_{it})$	0.36	0.41	0.36	0.30	0.36
	(3.59)**	(3.94)**	(3.66)**	(3.55)**	(5.55)**
DEF_{it}	1.04	1.06	1.03	0.40	.
	(3.92)**	(3.79)**	(3.85)**	(1.58)	.
$R(SIZE_{it})$	-1.59	-1.61	-1.60	-0.80	-0.81
	(-16.44)**	(-15.99)**	(-16.34)**	(-12.25)**	(-12.61)**
$R(GROWTH_{it})$	-0.36	-0.31	-0.34	.	.
	(-4.90)**	(-4.06)**	(-4.71)**	.	.
$GROW_{it}$	.	.	.	0.32	0.31
	.	.	.	(6.33)**	(6.30)**
DEC_{it}	.	.	.	0.04	.
	.	.	.	(0.69)	.
$R(BM_{it})$	0.30	0.34	0.31	0.29	0.29
	(3.88)**	(4.05)**	(3.94)**	(4.59)**	(4.59)**
D_{it}	.	0.83	0.17	.	.
	.	(2.61)**	(1.96)*	.	.
$D_{it} \times M_{it-1}$	.	-0.81	-0.85	.	.
	.	(-4.85)**	(-5.32)**	.	.
$D_{it} \times R(PROF_{it})$	.	0.07	.	.	.
	.	(0.17)	.	.	.
$D_{it} \times R(LIQ_{it})$	.	-0.30	.	.	.
	.	(-0.84)	.	.	.
$D_{it} \times R(LEV_{it})$	.	-0.53	.	.	.
	.	(-1.60)	.	.	.
$D_{it} \times DEF_{it}$	.	-0.24	.	.	.
	.	(-0.28)	.	.	.
$D_{it} \times R(SIZE_{it})$	.	0.13	.	.	.
	.	(0.33)	.	.	.
$D_{it} \times R(GROWTH_{it})$	.	-0.34	.	.	.
	.	(-1.37)	.	.	.
$D_{it} \times R(BM_{it})$	.	-0.27	.	.	.
	.	(-1.08)	.	.	.

Notes:

$$M_{it} = \gamma_0 + \gamma_1 M_{it-1} + \gamma_2 X_{it} + \gamma_3 D_{it} + \gamma_4 D_{it} \times M_{it-1} + \gamma_5 D_{it} \times X_{it} + v_{it} \quad (1)$$

$$D_{it} = \theta_0 + \theta_1(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \theta_2 Z_{it} + u_{it} \quad (2)$$

Eq. (1) tests for reporting differences between new and retained audit firms. Eq. (2) tests whether companies engage in opinion shopping ($\vartheta_1 > 0$). Robust standard errors are estimated because company observations may not be independent over time (z-statistics are reported in parentheses). All columns are estimated using probit. N = 19,273. R(X) = Rank-transformation of variable X. $\Pr(M_{it}^{D}=1)$ = Probability that company i receives a modified audit opinion conditional on its dismissal decision (D = 1 if company i appoints a new auditor, D = 0 if company i retains its incumbent auditor). The modified opinion probabilities are predicted using the results from Column (3). See Table 2 for other variable definitions. * = Statistically significant (5% level, 2-tailed). ** = Statistically significant (1% level, 2-tailed).

Table 4
The association between opinion shopping and audit committee approval

			Is the auditor dismissal motivated by opinion shopping?		
			Yes	No	
			$\hat{\Pr}(M_{it}^{0}=1) > \hat{\Pr}(M_{it}^{1}=1)$	$\hat{\Pr}(M_{it}^{0}=1) \leq \hat{\Pr}(M_{it}^{1}=1)$	Total
Does an audit committee approve the auditor dismissal decision?	No	$PA_{it} \times AP_{it} = 0$	61	207	268
	Yes	$PA_{it} \times AP_{it} = 1$	37	379	416
		Total	98	586	684

Notes:
Table 4 reports the association between opinion shopping and audit committee approval of auditor dismissal decisions. 8-K filings disclose only the joint outcome of an audit committee's participation and approval decisions ($PA_{it} \times AP_{it}$) (see Fig. 1). PA_{it} = 1 if the audit committee participates in the auditor dismissal decision; 0 otherwise. AP_{it} = 1 if a participating audit committee approves the auditor dismissal decision; 0 otherwise. $\Pr(M_{it}^{D}=1)$ = Probability that company i receives a modified audit opinion (D = 0 if company i retains its incumbent auditor, D = 1 if company i appoints a new auditor). An auditor dismissal is predicted to be motivated by opinion shopping if $\hat{\Pr}(M_{it}^{0}=1) > \hat{\Pr}(M_{it}^{1}=1)$. The modified opinion probabilities are predicted from Column (3) of Table 3.

Table 5
Audit committee meeting models

	Level of audit committee meeting activity (Eq. (3))		Change in audit committee meeting activity (Eq. (4))	
	(1)	(2)	(3)	(4)
CONSTANT	0.29	0.29	0.01	0.01
	(4.23)**	(4.42)**	(0.09)	(0.07)
$\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)$	0.34	.	0.10	.
	(0.57)	.	(0.10)	.
$R(SIZE_{it})$	1.18	1.20	1.00	1.01
	(9.68)**	(10.37)**	(3.19)**	(3.30)**

Notes:

$$MD_{it} = \varpi_0 + \varpi_1(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \varpi_2 R(SIZE_{it}) + \psi_{it} \quad (3)$$

$$AM_{it} = \kappa_0 + \kappa_1(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \kappa_2 R(SIZE_{it}) + \xi_{it} \quad (4)$$

Eqs. (3)-(4) test the effects of company size and opinion shopping on the level of, and change in, audit committee meeting activity. Robust standard errors are calculated (z-statistics are reported in parentheses). MD_{it} = Number of audit committee meetings in auditor dismissal years. $MND_{i.}$ = Number of audit committee meetings in non-dismissal years. AM_{it} = Abnormal meeting activity in auditor dismissal years ($AM_{it} \equiv MD_{it} - MND_{i.}$). Columns (1) and (2) are estimated using Poisson because MD_{it} takes discrete non-negative values. Columns (3) and (4) are estimated using OLS regression. A dismissal is in the sample if 10K or proxy filings disclose audit committee meeting activity (N = 517). $R(SIZE_{it})$ = Rank transformation of $SIZE_{it}$, where $SIZE_{it}$ = Total assets ($ million). $\Pr(M_{it}^{D}=1)$ = Probability that company i receives a modified audit opinion (D = 0 if company i retains its incumbent auditor, D = 1 if company i appoints a new auditor). An auditor dismissal is predicted to be motivated by opinion shopping if $\hat{\Pr}(M_{it}^{0}=1) > \hat{\Pr}(M_{it}^{1}=1)$. The modified opinion probabilities are predicted from Column (3) of Table 3. * = Statistically significant (5% level, 2-tailed). ** = Statistically significant (1% level, 2-tailed).

Table 6
Audit committee participation and approval

	Eq. (5)	Eq. (6)	Eq. (7)	Eq. (8)	Eq. (9)	Eq. (10)
	(1)	(2)	(3)	(4)	(5)	(6)
CONSTANT	-0.44	-0.10	-2.91	0.58	-0.10	0.59
	(-2.71)**	(-1.14)	(-2.30)*	(6.66)**	(-0.46)	(6.07)**
$\hat{M}D_{it}$	0.33	.	2.18	.	.	.
	(4.77)**	.	(2.61)**	.	.	.
$\hat{A}M_{it}$	.	1.01	.	.	4.22	.
	.	(5.26)**	.	.	(2.65)**	.
$\hat{\Pr}(M_{it}^{0}=1)$ - $\hat{\Pr}(M_{it}^{1}=1)$	-1.88	-1.79	.	-2.28	.	-2.29
	(-2.92)**	(-2.79)**	.	(-2.74)**	.	(-2.72)**

Notes:

$$PA_{it} \times AP_{it} = \tau_0 + \tau_1 \hat{M}D_{it} + \tau_2(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \zeta_{it} \quad (5)$$

$$PA_{it} \times AP_{it} = \varsigma_0 + \varsigma_1 \hat{A}M_{it} + \varsigma_2(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \rho_{it} \quad (6)$$

$$PA_{it} = \tau_0 + \tau_1 \hat{M}D_{it} + \zeta_{it} \quad (7)$$

$$AP_{it} = \varsigma_0 + \varsigma_2(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \rho_{it} \quad (8)$$

$$PA_{it} = \tau_0 + \tau_1 \hat{A}M_{it} + \zeta_{it} \quad (9)$$

$$AP_{it} = \varsigma_0 + \varsigma_2(\hat{\Pr}(M_{it}^{0}=1) - \hat{\Pr}(M_{it}^{1}=1)) + \rho_{it} \quad (10)$$

Eqs. (5)-(10) test the effects of meeting activity and opinion shopping on audit committee participation and approval of auditor dismissals. Robust standard errors are calculated (z-statistics are reported in parentheses). Eqs. (5)-(6) are estimated using standard probit models. Eqs. (7)-(10) are estimated simultaneously using sequential probit models of partial observability (Abowd and Farber, 1982). N = 684. PA_{it} = 1 if the audit committee participates in the auditor dismissal decision; 0 otherwise. AP_{it} = 1 if a participating audit committee approves the auditor dismissal decision; 0 otherwise. MD_{it} = Number of audit committee meetings in auditor dismissal years. $MND_{i.}$ = Number of audit committee meetings in non-dismissal years. AM_{it} = Abnormal meeting activity in auditor dismissal years ($AM_{it} \equiv MD_{it} - MND_{i.}$). $\hat{M}D_{it}$ and $\hat{A}M_{it}$ are predicted from Columns (2) and (4) of Table 5. $\Pr(M_{it}^{D}=1)$ = Probability that company i receives a modified audit opinion (D = 0 if company i retains its incumbent auditor, D = 1 if company i appoints a new auditor). An auditor dismissal is predicted to be motivated by opinion shopping if $\hat{\Pr}(M_{it}^{0}=1) > \hat{\Pr}(M_{it}^{1}=1)$. The modified opinion probabilities are predicted from Column (3) of Table 3. * = Statistically significant (5% level, 2-tailed). ** = Statistically significant (1% level, 2-tailed).

Table 7
Audit committee member departure

	Departure of all audit committee members Eq. (11)		Departure of affiliated audit committee members Eq. (12)		Departure of independent audit committee members Eq. (13)	
	(1)	(2)	(3)	(4)	(5)	(6)
CONSTANT	-0.68	-0.67	-2.49	-2.47	-1.02	-1.01
	(-2.97)**	(-2.92)**	(-10.76)**	(-10.44)**	(-4.63)**	(-4.54)**
MEM_{it}	0.26	0.26	.	.	.	.
	(3.32)**	(3.41)**	.	.	.	.
AFF_{it}	.	.	1.17	1.16	.	.
	.	.	(16.34)**	(16.37)**	.	.
$INDEP_{it}$	.	.	.	.	0.34	0.35
	.	.	.	.	(4.61)**	(4.90)**
$\hat{PA}_{it}$	-0.01	-0.02	-0.05	-0.07	0.01	-0.02
	(-0.16)	(-0.37)	(-0.84)	(-0.77)	(0.06)	(-0.22)
$\hat{AP}_{it}$	-0.84	-0.82	-0.60	-0.59	-1.11	-1.08
	(-2.84)**	(-2.81)**	(-1.54)	(-1.52)	(-3.17)**	(-3.14)**

Notes:

$$MEML_{it} = \eta_0 + \eta_1 MEM_{it} + \eta_2 \hat{PA}_{it} + \eta_3 \hat{AP}_{it} + \psi_{it} \quad (11)$$

$$AFFL_{it} = \eta_0 + \eta_1 AFF_{it} + \eta_2 \hat{PA}_{it} + \eta_3 \hat{AP}_{it} + \psi_{it} \quad (12)$$

$$INDEPL_{it} = \eta_0 + \eta_1 INDEP_{it} + \eta_2 \hat{PA}_{it} + \eta_3 \hat{AP}_{it} + \psi_{it} \quad (13)$$

Eq. (11) tests the effect of audit committee participation and approval on the departure of audit committee members. Eq. (12) tests the effect of audit committee participation and approval on the departure of affiliated audit committee members. Eq. (13) tests the effect of audit committee participation and approval on the departure of independent audit committee members. Robust standard errors are calculated (z-statistics are reported in parentheses). A dismissal is in the sample if 10K or proxy filings disclose audit committee membership before and after auditor dismissal (N = 457). Eqs. (11)-(13) are estimated using Poisson because the dependent variables take discrete non-negative values. $MEML_{it}$ = Number of audit committee members that leave during the auditor dismissal year. MEM_{it} = Number of audit committee members prior to auditor dismissal. $AFFL_{it}$ = Number of affiliated audit committee members that leave during the auditor dismissal year. AFF_{it} = Number of affiliated audit committee members prior to auditor dismissal. An audit committee member is 'affiliated' if he/she is an employee of the company, a former employee, a relative of senior management or has other business relations with the company. $INDEPL_{it}$ = Number of non-affiliated ('independent') audit committee members that leave during the auditor dismissal year. $INDEP_{it}$ = Number of non-affiliated audit committee members prior to auditor dismissal. PA_{it} = 1 if the audit committee participates in the auditor dismissal decision; 0 otherwise. AP_{it} = 1 if a participating audit committee approves the auditor dismissal decision; 0 otherwise. In Columns (1), (3) and (5), $\hat{PA}_{it}$ and $\hat{AP}_{it}$ are predicted from Columns (3)-(4) of Table 6. In Columns (2), (4) and (6), $\hat{PA}_{it}$ and $\hat{AP}_{it}$ are predicted from Columns (5)-(6) of Table 6. ** = Statistically significant (1% level, 2-tailed).