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Opinion Shopping to Avoid a Going Concern Audit Opinion and Subsequent Audit Quality

ABSTRACT: Despite regulatory concerns over opinion shopping (OS) behavior, there exists little systematic evidence on the prevalence and consequences of OS to avoid a going concern opinion (GCO) in today's audit environment. Using 11,628 distressed sample firms over the period 2004–2012 and Lennox's (2000) framework to identify OS, we find that distressed firms successfully engage in OS to avoid a GCO. Moreover, clients engaging in OS exhibit a higher ex post Type II error rate in audit opinions than clients that do not, and the higher Type II error rate is salient for clients switching auditors for OS but not for clients retaining auditors for OS. We continue to find this asymmetric effect of the two types of OS on audit quality measured by restatements. These results indicate that auditor switching for OS not only results in a higher likelihood of audit reporting failures but also impairs other dimensions of audit quality, while auditor retaining for OS has little adverse effects on audit quality.

Keywords: opinion shopping, auditor switch, Type II errors, audit quality.

INTRODUCTION

While auditor switches occur for various reasons, such as a change in demand for audit services, auditor–client mismatch, and an effort to reduce audit fees, some switches are suspected to be motivated by client opinion shopping (i.e., shopping for an improved audit opinion from a successor auditor, OS hereafter).[1] In particular, financially distressed firms could have strong incentives to engage in OS to avoid a going concern audit opinion (GCO hereafter) because receiving a GCO causes costly consequences, such as negative market reaction, credit rating downgrade, and difficulty in raising new capital (Menon and Williams 2010; Chen, He, Ma, and Stice 2016), which may result in company failures. However, there is no clear, systematic evidence of the prevalence of OS to avoid a GCO and its consequences. This study aims to provide answers for the following three questions: (1) Do distressed clients successfully engage in OS in the current audit environment?; (2) does OS pose an auditor independence problem and thus increase ex post Type II errors in audit opinions (i.e., failures to warn of upcoming bankruptcy) and reduce audit quality in other dimensions?; and (3) does the effect of OS on audit quality differ between the two types of clients, clients switching auditors for OS and clients retaining auditors for OS?

The OS behavior has received substantial attention from regulators worldwide, since this behavior has important implications for the credibility of audit opinions and auditor independence.[2] However, prior archival evidence on the efficacy of OS is mostly dated. While earlier studies compare pre- and post-switch audit opinions and find no association between switching to a new auditor and a subsequent improvement in audit opinions (Chow

[1] For example, a *New York Times* article profiled Overstock.com which was suspected of engaging in OS (Norris 2009). Overstock.com switched auditors from Grant Thornton to KPMG shortly after replacing PWC with Grant Thornton in 2009. The case ignited controversy on the motivation behind Overstock.com changing auditors frequently and raised concerns from the investment community over the possibility of OS.

[2] Regulators in Canada (MacDonald Commission 1987), the U.K. (Cadbury Committee 1992; Institute of Chartered Accountants in England and Wales 2002) and the European Union (European Commission 2010) have expressed concerns over OS. In the U.S., the Sarbanes–Oxley Act (SOX) of 2002 requested the Government Accountability Office to develop mechanisms to strengthen auditor resistance to OS threats from clients.

and Rice 1982; Krishnan and Stephens 1995; Geiger, Raghunandan, and Rama 1998), Lennox (2000) argues that this evidence does not necessarily indicate that OS is futile, because an OS client is expected to compare the two probabilities of receiving an unfavorable opinion from the incumbent auditor and from the successor auditor. Using U.K. data over 1988-1994, he tests for OS by predicting opinions that clients would have received if they had made switch decisions opposite to those that actually occur, and finds that U.K. firms successfully engage in OS. In this study, we follow this methodology to construct a proxy to measure the tendency that clients engage in OS to avoid a GCO in the U.S., and test whether the OS behavior exists and how it influences subsequent audit quality.

An exception to dated OS literature is a recent study by Newton, Persellin, Wang, and Wilkins (2016) which examines whether clients successfully shop for favorable opinions related to *internal controls over financial reporting* (ICFR). Distinct from this study, we focus on the issue of *OS to avoid a GCO* and *subsequent audit quality* for the following reasons. First, since the vast majority of non-clean audit opinions issued to distressed clients are GCOs and receiving a GCO causes serious consequences, the incentives for these clients to engage in OS to avoid a GCO are likely high. Second, the proportion of bankrupt firms that previously received a GCO is only about 50 percent in prior studies (Geiger and Raghunandan 2002; Francis 2011). This high Type II error rate raised concerns over possible OS to avoid a GCO among regulators (e.g., European Commission 2010; Public Company Accounting Oversight Board [PCAOB] 2011). Third, in addition to the prevalence of OS, the effects of OS on audit quality are of great concerns to researchers. For example, DeFond and Zhang (2014, 310) claim that successful OS implies a lack of auditor independence which should be reflected in audit quality. Since the existing evidence of OS in the U.S. is based solely on audit opinions, this claim motivates us to investigate non-opinion dimensions of audit quality subsequent to OS activities.

Lennox's (2000) framework suggests two types of OS in which clients switch auditors when the likelihood of receiving a GCO is lower from a successor auditor than from the incumbent auditor (switching OS hereafter), and clients retain auditors when the likelihood of receiving a GCO is higher from a successor auditor than from the incumbent auditor (non-switching OS hereafter). We posit that the effects on audit quality may differ between these two types of OS. Switching OS may result in more adverse consequences on audit quality if successor auditors are incentivized to keep their new clients until they recover start-up costs and thus are more susceptible to client pressure (DeAngelo 1981). In addition, if auditors are concerned about reputation damages borne by early termination of audit contract, the successor auditors subsequent to switching OS could be more vulnerable to the threats of dismissal (Geiger and Raghunandan 2002). In contrast, incumbent auditors under non-switching OS can be more resistant to client pressure as they have recovered the start-up costs partly or fully from previous audit service. Therefore, we further examine whether the adverse effect of OS on audit quality is more pronounced for switching OS than for non-switching OS.

Our results from a sample of distressed clients in the U.S. over the period 2004-2012 are summarized as follows. First, we find evidence suggesting that clients are more likely to switch (retain) auditors when the likelihood of receiving a GCO is lower (higher) from a successor auditor than from the incumbent auditor, consistent with successful OS. Second, using a sample of bankrupt clients, we find that OS clients on average exhibit a higher ex post Type II GCO reporting error rate than non-OS clients, suggesting that high Type II error rates documented in prior studies are at least partly attributable to the OS engagements. Furthermore, when OS clients are split into switching OS and non-switching OS clients, we find that the higher Type II error rate is evident for switching OS clients but not for non-switching OS clients, consistent with the two types of OS having an asymmetric effect on ex

post Type II errors. Third, using the likelihood of restatements as a proxy for audit quality in non-opinion dimensions, we find that switching OS clients are more likely to misstate their financial reports, compared to clients that do not engage in OS or non-switching OS clients.[3] Taken together, our evidence suggests that switching OS is motivated by a client's desire to appoint a less independent auditor who is more likely to yield to client pressure. In contrast, we do not find evidence suggesting impaired independence of incumbent auditors under non-switching OS. This asymmetric effect is noteworthy in understanding the consequences of OS.

Our results are robust to various sensitivity checks, such as using a matched-sample based on propensity score matching, refining non-switching OS clients, and changing the cutoff value for classifying OS and non-OS clients. Furthermore, we find that successor auditors who frequently accept OS clients are more likely to be low-quality auditors who tend to exhibit poorer audit quality not only for switching OS clients but also for other non-OS clients. Since their perceived reputational and litigation losses upon the occurrence of a Type II reporting error are not as substantial as those for high-quality auditors and the actual number of Type II errors is small (Francis 2011), these low-quality auditors appear to accept OS clients with expectation that the benefits (i.e., future quasi-rents from audit contracts) would outweigh potential costs. Lastly, we find that OS to avoid a GCO and its adverse effect on audit quality are more prevalent for non-accelerated filers, who are not subject to additional scrutiny on ICFR by auditors, than for accelerated filers. This finding explains why Newton et al. (2016) fail to find evidence of OS to avoid a GCO for accelerated filers, and implies that the exemption from ICFR attestation raises difficulties for auditors in evaluating their clients' going concerns.

[3] As an additional proxy for audit quality, we use the magnitude of performance-adjusted absolute discretionary accruals (Kothari, Leone, and Wasley 2005) in untabulated analyses. Consistent with the findings from the restatement test, we find that switching OS clients exhibit a larger magnitude of discretionary accruals, compared to clients that do not engage in OS or non-switching OS clients.

This study contributes to the literature on OS and audit quality. DeFond and Zhang (2014) suggest that the issue of OS is important but research in this area has been limited. We document new evidence of OS engagement to avoid a GCO and its consequences in recent audit environment. Importantly, while prior studies using the U.S. setting focus solely on audit opinions as the outcome of OS, we extend the literature by documenting that auditor switching for OS causes not only a higher likelihood of audit reporting failures but also poorer audit quality in other dimensions. Furthermore, our study is the first to empirically document that the effect of OS engagements identified by Lennox (2000) framework on audit quality is asymmetric, that is, detrimental only for switching OS clients.

This study is relevant to several interested parties. For regulators, our findings are consistent with the concern that auditor switching for OS impairs auditor independence. Therefore, this study highlights the need to develop mechanisms that curb clients' opportunistic auditor switches, such as regulatory intervention in the choice of a successor auditor or other mechanisms that discipline excessive client pressure. Our findings also provide important implications for investors and audit committees by suggesting that both audit opinion credibility and financial reporting quality can be hampered by auditor switching for OS.

This study proceeds as follows. In the next section, we present related literature and hypothesis development. The third section details sample selection and research design. The fourth section lays out descriptive statistics, main empirical results, and the results of sensitivity tests and other analyses. The final section sets forth our conclusion.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Going Concern Audit Opinion and Opinion Shopping

According to Statement on Auditing Standards (SAS) No. 126, auditors have a responsibility to evaluate whether there is substantial doubt regarding an entity's ability to continue as a going concern for a reasonable period of time, not to exceed one year from the date of the financial statements. SAS No. 126 identifies various trends or conditions that may be indicative of a going concern problem. If auditors have substantial doubt based on knowledge obtained from audit procedures, they need to consider management's plans to improve the company's financial situation. If the substantial doubt still remains, auditors are required to issue a GCO.

Since a GCO can induce adverse consequences, such as negative market reaction, credit rating downgrade, and difficulty in raising new capital (Menon and Williams 2010; Chen, He, Ma, and Stice 2016), distressed clients have incentives to avoid a GCO. Unfavorable audit opinions may be avoided through strategic auditor switching, which is known as OS. Studies indicate that clients tend to switch auditors after receiving non-clean audit opinions (Chow and Rice 1982; Geiger et al. 1998; Carcello and Neal 2003). Other studies, however, find that clients that switch auditors after receiving a non-clean opinion do not receive improved opinions from successor auditors (Chow and Rice 1982; Krishnan 1994; Krishnan and Stephens 1995). This finding can be interpreted as either that auditor switching is unrelated to OS or that attempted OS is unsuccessful because successor auditors do not compromise independence. Consistent with the latter interpretation, Lu (2006) theoretically demonstrates that neither the threat to switch auditor nor OS impairs the predecessor auditor's or the successor auditor's independence.

In contrast to the above-mentioned studies, Lennox (2000) finds evidence of successful OS. Lennox (2000) argues that pre-switch opinions are poor proxies for the unobserved

opinions that clients would have received had they made opposite switch or retention decisions because clients are likely to switch (retain) auditors when they expect more favorable audit opinions from new (incumbent) auditors. Lennox (2000) suggests two types of OS where (1) clients switch auditors when the likelihood of receiving an unfavorable opinion is lower from a successor auditor than from the incumbent auditor (i.e., switching OS), and (2) clients retain auditors when the likelihood of receiving an unfavorable opinion is higher from a successor auditor than from the incumbent auditor (i.e., non-switching OS). That is, OS clients may or may not switch auditors comparing the predicted probabilities of receiving an unfavorable audit opinion from the two auditors.

Two recent studies also use Lennox's (2000) methodology to examine OS. Newton et al. (2016) suggest that clients are successful at shopping for clean *internal control* opinions by showing that clients would have received adverse internal control opinions more frequently if they had made opposite auditor retention or dismissal decisions. Chen, Peng, Xue, and Yang (2016) find that, using Chinese data, clients successfully pressure audit firms into switching from non-acquiescent to acquiescent audit partners and this attempt is more successful if a client is economically important to the audit firm.

Opinion Shopping to Avoid a GCO in Current Audit Environment

It is unclear whether firms engage in OS to avoid a GCO in today's audit environment where SOX introduced numerous regulatory reforms to improve audit quality and auditor independence.[4] In addition, SOX requires that the PCAOB be created to inspect all auditors of SEC-registered public firms (Section 104). Since the PCAOB inspections assess the compliance of audit firms with, among others, the standards related to audit reports, auditors

[4] For example, audit committees are now solely responsible for the appointment, compensation, retention, and oversight of independent auditors, who now must report directly to the audit committees (Section 301). SOX also requires audit committee members to be independent (Section 301) and that at least one member to be a "financial expert" (Section 407). Further, the scope of audit service is expanded by including auditor attestation of the effectiveness of ICFR for accelerated filers (Section 404).

may ensure obtaining sufficient evidence to support their audit opinions in the post-SOX period.

From the viewpoint of clients, to the extent that the reforms in SOX reduce management involvement in opportunistic auditor switching, we may fail to find evidence of OS to avoid a GCO. Furthermore, from the viewpoint of auditors, as long as the reforms increase auditor independence and protect auditors from the threat of being dismissed subsequent to the issuance of GCO reports, they may refuse to yield to client pressure to issue a clean opinion. On the other hand, managerial incentives to avoid a GCO may still affect auditor switch decisions if client firms appoint audit committee members who readily support hiring auditors preferred by managers. For example, Beck and Mauldin (2014) find that, even after SOX, chief financial officers continue to control the relationship with auditors. Similarly, Dhaliwal, Lamoreaux, Lennox, and Mauler (2015) report that managers continue to exercise significant influence over the auditor selection process, and this does not appear to be mitigated by audit committee quality. The case study of Fiolleau, Hoang, Jarmal, and Sunder (2013) and the interview results of Cohen, Krishnamoorthy, and Wright (2010) reveal similar findings. Newton et al. (2016) also find that clients are successful at shopping for clean *internal control* opinions from their auditors. In light of these studies, the OS behavior to avoid a GCO may persist post-SOX.

Taken together, to examine whether clients successfully engage in OS to avoid a GCO in the current audit environment, we posit the following hypothesis in an alternative form:

H1: Clients successfully engage in opinion shopping to avoid a going concern audit opinion.

Opinion Shopping and Subsequent Audit Quality

We next examine the effect of OS on subsequent audit quality. In the framework of Lennox (2000), a decision to switch or retain auditors is associated with OS incentives because incumbent and successor auditors react differently to client pressure to obtain a clean

audit opinion. A client may use the threat of switching to influence its incumbent auditor's audit opinion. If this threat is effective and thus the likelihood of receiving a GCO from the incumbent auditor is likely lower than from a successor auditor, the client may retain the incumbent auditor, which results in *non-switching OS*. On the other hand, if the incumbent auditor is not susceptible to the client pressure, the client may switch auditors in hopes of finding a more pliable auditor. This *switching OS* is motivated by the client's desire to appoint a less independent auditor who is more likely to yield to the client pressure.

Both cases of OS may lead to a reduced likelihood of receiving a GCO. Fewer GCOs can potentially reduce Type I errors (i.e., false alarms) or increase Type II errors (i.e., failures to warn of bankruptcy). If OS reduces Type I errors but does not increase Type II errors ex post, the OS behavior does not necessarily harm audit reporting quality (rather it improves audit reporting quality). However, if OS impairs auditor independence, the OS behavior can lead auditors to issue a clean opinion when a GCO is more appropriate, resulting in a Type II error.[5] To examine whether OS has a significant impact on Type II audit reporting errors, we propose the following hypothesis in an alternative form:

H2a: Clients that engage in opinion shopping exhibit a higher likelihood of ex post Type II errors in audit opinions than clients that do not.

We also examine the consequences of OS on audit quality in non-opinion dimensions. The purpose of OS can be beyond receiving a clean audit opinion; it can further include obtaining more favorable treatments for accounting matters from auditors. Consistent with this view, the Securities and Exchange Commission (1988) defines OS as "the search for an auditor willing to support a proposed accounting treatment designed to help a company

[5] Carson, Fargher, Geiger, Lennox, Raghunandan, and Willekens (2013) report that 40 to 50 percent of bankrupt firms in the U.S. do not receive a prior GCO. Francis (2011) reports a Type II error rate of 55 percent for the *Compustat* population over the period 1995-2002. Prior studies suggest that a Type II error is more detrimental than a Type I error because a Type II error indicates that auditors fail to serve as an adequate early warning device for the protection of investors and other accounting users (Geiger and Raghunandan 2002; Francis 2011).

achieve its reporting objectives even though that treatment might frustrate reliable reporting." As discussed above, if OS impairs auditor independence, the lack of auditor independence is likely to have implications of not only audit opinion reporting failures but also low-quality audits in non-opinion dimensions (DeFond and Zhang 2014). To examine this possibility, we propose the following hypothesis in an alternative form:

H2b: Clients that engage in opinion shopping exhibit lower audit quality in non-opinion dimensions than clients that do not.

Differential Effects on Audit Quality between Two Types of Opinion Shopping

We next examine whether switching OS and non-switching OS exhibit differential effects on audit quality. While Lennox (2000) does not separately analyze the two types of OS, we note that successor auditors under switching OS may be more influenced by client pressure than incumbent auditors under non-switching OS for the following three reasons. First, successor auditors subsequent to switching OS may be incentivized to keep their new clients until they recover start-up costs. DeAngelo (1981) suggests that auditors earn quasi-rents from maintaining clients long enough to recover high initial start-up costs incurred for new audits. To the extent that auditors are incentivized to keep new clients long enough for the initial year's sunk costs to be recovered, auditor independence is more likely to be threatened under switching OS. In contrast, incumbent auditors under non-switching OS can be less likely to acquiesce to client pressure as they have recovered the client-specific start-up costs partly or fully from the previous audit service for the client. Second, auditors can be concerned about reputation damages if they are dismissed shortly after obtaining a new client. Absent information about the true reasons for audit-contract termination, the market may interpret early termination of the contract as a problem of the auditor, not the client (Geiger and Raghunandan 2002), which may make successor auditors under switching OS more

vulnerable to the threats of dismissal.[6] Third, clients' OS incentives under switching OS can be more aggressive than under non-switching OS. Changing auditors is costly to clients because they should bear auditor searching costs and a share of the incoming auditor's start-up costs (DeAngelo 1981). Auditor switching also draws regulatory and investor scrutiny. Clients' willingness to incur such costs for switching OS may signal that their OS incentives are relatively strong. This may result in more adverse effects on audit quality.

In sum, if successor auditors under switching OS are more susceptible to client pressure and/or if clients with switching OS have stronger incentives to engage in OS, the consequences on audit quality would be more detrimental under switching OS than under non-switching OS. Thus, we propose the following hypothesis in an alternative form:

H3: The effects of opinion shopping on Type II errors and audit quality in non-opinion dimensions are stronger for clients that switch auditors than for clients that retain auditors.

SAMPLE AND RESEARCH DESIGN

Sample Selection

Our initial sample consists of all firms included in *Audit Analytics* database for the period 2004–2012 (fiscal year) for which data on audit opinions and auditor identity information are available. We select 2004 as the first year to control for the effect of Arthur Andersen's collapse in 2001 and the resulting auditor switches occurred in 2002 and 2003. Since the Andersen collapse and subsequent capacity constraints of some audit firms affected auditor switches dramatically, including this period may unduly influence our analysis.

[6] Consistent with these arguments, prior studies find that audit quality in the early years of audit engagements is lower than in the later years, using various proxies for audit quality (e.g., Geiger and Raghunandan 2002; Myers, Myers, and Omer 2003; Ghosh and Moon 2005). Another argument in prior studies for low-quality audits in the early years of engagements is a lack of familiarity with the client (rather than auditor independence), which reduces the effectiveness of audits. To examine if a lack of familiarity explains the lower audit quality for switching OS clients, our additional tests restrict the sample to clients switching auditors and test whether clients that engage in switching OS exhibit lower audit quality than other switching clients that do not engage in OS.

Next, we retrieve financial data from *Compustat* and merge them with audit-related data obtained from *Audit Analytics*. We exclude clients that belong to financial (SIC codes 60–69) and utilities (SIC codes 40–49) industries. Since GCOs are relevant only to financially distressed firms, we restrict our sample to distressed clients. Following DeFond, Raghunandan, and Subramanyam (2002) and DeFond, Lim, and Zang (2016), we define distressed clients as those that report either negative net income or negative operating cash flows.[7] Additionally, we remove auditor resignation cases from the sample because OS revolves around clients' ability to dismiss their auditors rather than auditors choosing to leave (Newton et al. 2016). The sample used for the tests of OS consists of 11,628 client-years. To test the impact of auditor switching for OS on subsequent audit quality, we obtain bankruptcy and restatement data from *Audit Analytics*.[8] The sample used in the restatement tests comprises 9,353 observations that have all required data. Finally, we estimate the model for Type II errors with 142 bankruptcy firms with all required data.

Identifying Opinion Shopping Firms

Lennox (2000) tests the scope of OS using the predicted reporting differences between a client's incumbent and successor auditor. Thus, we first estimate the probability of a client receiving a GCO under an auditor switching or non-switching decision, using the following GCO prediction probit model (Lennox 2000; DeFond et al. 2002);

$$\begin{aligned} GCO_{jt} = {} & \beta_0 + \beta_1 ACH_{jt} + \beta_2 GCOLAG_{jt} + \beta_3 TA_{jt} + \beta_4 LEV_{jt} + \beta_5 CLEV_{jt} + \beta_6 LIQUIDITY_{jt} \\ & + \beta_7 LOSS_{jt} + \beta_8 BTM_{jt} + \beta_9 FFINANCE_{jt} + \beta_{10} CFO_{jt} + \beta_{11} BIG4_{jt} + \beta_{12} RETURN_{jt} \\ & + \beta_{13} INSTOWN_{jt} + \beta_{14} VOLATILITY_{jt} + \beta_{15} GCOLAG_{jt}*ACH_{jt} \\ & + \beta_{16} TA_{jt}*ACH_{jt} + \beta_{17} LEV_{jt}*ACH_{jt} + \beta_{18} CLEV_{jt}*ACH_{jt} \\ & + \beta_{19} LIQUIDITY_{jt}*ACH_{jt} + \beta_{20} LOSS_{jt}*ACH_{jt} + \beta_{21} BTM_{jt}*ACH_{jt} \end{aligned}$$

[7] We repeat analyses using an alternative sample of distressed firms, defined as clients having negative working capital, negative retained earnings, or negative net income (Geiger, Raghunandan, and Rama 2005). We also repeat tests using a full sample. Untabulated results from these two samples are qualitatively similar to those in Tables 2-4. We use the expression "qualitatively similar" to indicate that the coefficients on the variables of interest are significant with expected signs so that inferences remain the same.

[8] We identify restatements related to misapplication of accounting principles and fraud as defined in *Audit Analytics* and exclude restatements that are due to clerical errors, following Swanquist and Whited (2015). Our results are qualitatively similar when we include all restatements in the *Audit Analytics*.

$$+ \beta_{22}FFINANCE_{jt}*ACH_{jt} + \beta_{23}CFO_{jt}*ACH_{jt} + \beta_{24}BIG4_{jt}*ACH_{jt}$$
$$+ \beta_{25}RETURN_{jt}*ACH_{jt} + \beta_{26}INSTOWN_{jt}*ACH_{jt} + \beta_{27}VOLATILITY_{jt}*ACH_{jt}$$
$$+ Year\ dummy + Industry\ dummy + \varepsilon_{jt} \quad (1)$$

where, for client firm *j* and year *t*, *GCO* equals one if the client receives a GCO, and zero otherwise. *ACH* equals one if the client dismisses its auditor, and zero otherwise. To capture the persistence of audit opinions over time, we include the prior year's audit opinion (*GCOLAG*) in Eq. (1). We also include the natural logarithm of total assets (*TA*), leverage (*LEV*), change in debt-to-total assets ratios (*CLEV*), working capital divided by lagged total assets (*LIQUIDITY*), indicator for negative net income (*LOSS*), book-to-market ratio (*BTM*), indicator for issuance of equity or debt in the subsequent year (*FFINANCE*), operating cash flows divided by total assets (*CFO*), a Big 4 indicator (*BIG4*), compounded stock return for the fiscal year (*RETURN*), the percentage of the firm's shares owned by institutional owners (*INSTOWN*), and return volatility (*VOLATILITY*), following prior studies.[9] We include the interaction terms between auditor switch indicator (*ACH*) and all the other explanatory variables to capture the reporting difference between the incumbent and successor auditors. We also include controls for year and industry fixed effects, and cluster standard errors by client. Refer to the Appendix for detailed definitions of all variables used in the model.[10]

We estimate the above model with the full distressed client sample and obtain our test variable, *P_OP*, as follows. First, using the results from Eq. (1), we compute a conditional probability that firm *j* receives a GCO at time *t*, denoted as $\Pr(GCO^{n}_{jt})$, where superscript n denotes an auditor switch decision. A firm will receive a GCO with $\Pr(GCO^{1}_{jt})$ if it switches

[9] Following Lennox (2000) and DeFond et al. (2002), we control for the prior year's audit opinion, size, financial health (measured by leverage, change in leverage, liquidity, loss, operating cash flows), book-to-market ratio, audit firm type, and return volatility. In addition, we control for future financing, because new financing is a mitigating factor that reduces the probability of bankruptcy (Mutchler, Hopwood, and Mckeown 1997; DeFond et al. 2002), stock return to control for stock performance (Chen, He, Ma, and Stice 2016), and institutional ownership because external monitoring by institutional investors could affect the likelihood of GCOs (Kaplan and Williams 2013). The control variables in Eq. (1) are more comprehensive than those in Lennox (2000). Our findings are qualitatively similar when we use exactly the same model as Lennox's (2000).

[10] In all models, we winsorize all continuous variables at the top and bottom one percent to avoid undue influences of outliers.

its auditor, and with $\Pr(GCO^0_{jt})$ if it retains its auditor. The difference in the probabilities of receiving a GCO between the successor and incumbent auditors [i.e., $\Pr(GCO^1_{jt} = 1) - \Pr(GCO^0_{jt} = 1)$] is *P_OP*. Negative (positive) *P_OP* implies the existence of scope for clients to avoid a GCO if they switch (retain) auditors because the likelihood of receiving a GCO is lower from a successor (incumbent) auditor.

Model for Opinion Shopping Test (*H1*)

To test *H1*, we examine whether auditor switching decisions are associated with OS by estimating the following auditor switching model in Eq. (2) in which we include our OS variable, *P_OP*, derived from Eq. (1) and other control variables commonly used in the prior studies in the model (Lennox 2000; Ettredge, Heintz, Li, and Scholz 2011):

$$\begin{aligned} ACH_{jt} = {} & \beta_0 + \beta_1 P\_OP_{jt} + \beta_2 TA_{jt} + \beta_3 LEV_{jt} + \beta_4 CLEV_{jt} + \beta_5 LIQUIDITY_{jt} \\ & + \beta_6 LOSS_{jt} + \beta_7 BTM_{jt} + \beta_8 FFINANCE_{jt} + \beta_9 CFO_{jt} + \beta_{10} BIG4_{jt} + \beta_{11} RETURN_{jt} \\ & + \beta_{12} INSTOWN_{jt} + \beta_{13} VOLATILITY_{jt} + \beta_{14} MISMATCH_{jt} + \beta_{15} TENURELAG_{jt} \\ & + \beta_{16} INVREC_{jt} + Industry\ dummy + Year\ dummy + \varepsilon_{jt} \end{aligned} \tag{2}$$

where, for client firm *j* and year *t*, *MISMATCH* captures the mismatch between the auditor and client following Shu (2000); *TENURELAG* is the natural logarithm of auditor tenure plus one in the previous year; *INVREC* is the sum of inventories and receivables divided by total assets; all other variables are as defined previously. A negative coefficient on *P_OP* indicates that firms tend to switch (retain) auditors when the likelihood of receiving a GCO is lower (higher) from a successor auditor than from the incumbent auditor. Thus, a negative β_1 suggests that firms engage in OS, consistent with *H1*.

If a client has a negative (positive) *P_OP* and switches (retains) its auditor, the Lennox's (2000) framework suggests that the client engages in OS. Thus, using the estimated results from Eq. (2), we create an indicator variable, *OS*, that represents the client's engagement in OS, and use this variable to test *H2a* and *H2b*. This variable has a value of one if the client dismisses (retains) its auditor in anticipation of a lower (higher) probability of

receiving a GCO from the successor auditors (i.e., if *ACH* = 1 and *P_OP* < 0 or if *ACH* = 0 and *P_OP* > 0), and zero otherwise. In addition, to test *H3*, we split *OS* into *OS(ACH)* for switching OS clients and *OS(NACH)* for non-switching OS clients. *OS(ACH)* [*OS(NACH)*] has a value of one if the client switches [retains] its auditor when the likelihood of receiving a GCO is lower [higher] from a successor auditor than from the incumbent auditor (i.e., if *ACH* = 1 and *P_OP* < 0 [if *ACH* = 0 and *P_OP* > 0]), and zero otherwise.

Model for Type II Error Test (*H2a* and *H3*)

To test *H2a*, we next examine how the OS engagement affects Type II errors in audit opinions. To investigate whether the OS engagement explains high ex post Type II reporting error rates documented in prior studies, we estimate the following model, adapted from Bruynseels, Knechel, and Willekens (2011) and DeFond et al. (2002), with a sample of bankrupt clients:

$$\begin{aligned} TYPE\ II\ ERROR_{jt} = {} & \beta_0 + \beta_1 OS_{jt} + \beta_2 ACH_{jt} + \beta_3 TA_{jt} + \beta_4 LEV_{jt} + \beta_5 CLEV_{jt} + \beta_6 LIQUIDITY_{jt} \\ & + \beta_7 LOSS_{jt} + \beta_8 BTM_{jt} + \beta_9 FFINANCE_{jt} + \beta_{10} CFO_{jt} + \beta_{11} BIG4_{jt} + \beta_{12} RETURN_{jt} \\ & + \beta_{13} INSTOWN_{jt} + \beta_{14} VOLATILITY_{jt} + \beta_{15} INVREC_{jt} + \beta_{16} RESTATE_{jt} + \beta_{17} SEG_{jt} \\ & + \beta_{18} FOREIGN_{jt} + Industry\ dummy + Year\ dummy + \varepsilon_{jt} \end{aligned} \quad (3)$$

where, for client firm *j* and year *t*, *TYPE II ERROR* is an indicator that equals one if the client does not receive a GCO but files for bankruptcy within one year from the fiscal year end, and zero otherwise; *RESTATE* is an indicator that equals one if the financial statements for the client-year are subsequently restated, and zero otherwise; *SEG* is the natural logarithm of the number of business segments; *FOREIGN* is an indicator that equals one if the client operates a foreign business, and zero otherwise; all other variables are as defined previously. Our *H2a* implies a positive coefficient on *OS*, which suggests that clients engaging in OS are more likely to result in ex post Type II errors in audit opinions. To test *H3*, we slightly modify Eq. (3) by replacing *OS* with *OS(ACH)* and *OS(NACH)*. If the effect of OS on Type II errors is

greater for switching OS clients than for non-switching OS clients, the coefficient on *OS(ACH)* would be greater than that on *OS(NACH)* in this modified model.

Models for Other Audit Quality Tests (*H2b* and *H3*)

To test *H2b*, we examine the effect of OS on audit quality in non-opinion dimensions using restatements as a proxy for audit quality. Restatements are direct and egregious measures of audit quality which indicate that the previously reported financial statements were unreliable and auditors failed to correct the misstatements. If OS leads to lower auditor independence and poorer audit quality, clients engaging in OS are more likely to misstate financial statements and issue restatements later. To test this prediction, we estimate the following model adapted from prior studies (Francis, Michas, and Yu 2013; Hennes, Leone, and Miller 2014):

$$\begin{aligned} RESTATE_{jt} \text{ or } RESTATE\_DN_{jt} = {} & \beta_0 + \beta_1 OS_{jt} + \beta_2 ACH_{jt} + \beta_3 TA_{jt} + \beta_4 LEV_{jt} + \beta_5 ROA_{jt} + \beta_6 LOSS_{jt} \\ & + \beta_7 CFO_{jt} + \beta_8 BTM_{jt} + \beta_9 ISSUE_{jt} + \beta_{10} SEG_{jt} + \beta_{11} MERGER_{jt} + \beta_{12} FOREIGN_{jt} \\ & + \beta_{13} INVREC_{jt} + \beta_{14} VOLATILITY_{jt} + \beta_{15} RETURN_{jt} + \beta_{16} BIG4_{jt} + \beta_{17} OFFICE_{jt} \\ & + \beta_{18} SPECIAL_{jt} + \text{Industry dummy} + \text{Year dummy} + \varepsilon_{jt} \end{aligned} \quad (4)$$

where, for client firm *j* and year *t*, *RESTATE* (*RESTATE_DN*) is an indicator that equals one if the financial statements (earnings) for the firm–year are misstated and thus subsequently restated (restated downward), and zero otherwise;[11] *ROA* is return on assets; *MERGER* is an indicator that equals one if the firm is engaged in a merger or acquisition, and zero otherwise; *OFFICE* is auditor practice office size measured by the logged value of aggregated client audit fees; *SPECIAL* is an indicator for auditor industry specialization; all other variables are as previously defined. Our *H2b* implies a positive coefficient on *OS* in Eq. (4), which indicates that OS clients are more likely to misstate their financial reports. In addition, to test

[11] We conduct a separate test using income-decreasing restatements (*RESTATE_DN*) because auditors tend to be more concerned about income-increasing misstatements (Kim, Chung, and Firth 2003). When *RESTATE_DN* is used as the dependent variable, we exclude income-increasing or income-neutral restatements from the sample.

H3, we estimate Eq. (4) after replacing *OS* with *OS(ACH)* and *OS(NACH)*. Our *H3* implies that the coefficient on *OS(ACH)* is greater than that on *OS(NACH)*.

EMPIRICAL RESULTS

Tests of *H1*: Evidence of Opinion Shopping

Table 1, Panel A reports the number of observations used in the audit opinion prediction model. We place client-years into one of the four bins (2 x 2) categorized based on whether auditor switching and non-switching clients receive a GCO or not in year *t* and *t-1*. For non-switching clients, the number of clients that receive a clean opinion (GCO) in both years *t* and *t-1* is 8,351 (1,335). Thus, 91% (84%) of clients that received a clean opinion (GCO) in year *t-1* continue to receive a clean opinion (GCO) in year *t*. For switching clients, the number of clients that receive a clean opinion (GCO) in both years *t* and *t-1* is 562 (185). Thus, 86% (86%) of clients that received a clean opinion (GCO) in year *t-1* continue to receive a clean opinion (GCO) in the following year from a successor auditor. This confirms the persistence of audit opinions over time (Krishnan and Stephen 1995; Lennox 2000).

Table 1, Panel B, presents descriptive statistics for the variables employed in our audit opinion and auditor switching models. The mean value of *GCO* is 0.21, which indicates that 21% of our distressed sample clients receive a GCO. *ACH* has a mean value of 0.07, which indicates that auditor dismissal occurs in 7% of our sample. We omit further discussion on the other variables because they are self-explanatory.[12]

[12] Although untabulated, the correlations among the variables used in our tests reveal the following. First, the correlation between *GCO* and *GCOLAG* is positive (coefficient=0.67) and significant at $p<0.01$. Second, *GCO* is positively correlated with *ACH* (coefficient=0.07) and significant at $p<0.01$. Second, *GCO* is negatively correlated with firm size (*TA*), liquidity (*LIQUIDITY*), book-to-market ratio (*BTM*), future financing (*FFINANCE*), operating cash flows (*CFO*), Big 4 indicator (*BIG4*), and institutional ownership (*INSTOWN*) while *GCO* is positively correlated with leverage (*LEV*), change in leverage (*CLEV*), and loss (*LOSS*), consistent with prior studies (Lennox 2000; DeFond et al. 2002; Francis and Yu 2009).

Table 1, Panel C shows the results of the regression for Eq. (1), the audit opinion model.[13] Columns (1) and (2) report the estimated coefficients and their respective z-statistics without the interaction variables and with the interaction variables, respectively. While Column (1) forces the coefficients on explanatory variables to be the same for switching and non-switching firms, Column (2) reflects the possible differences in the coefficients between these firms by adding the interaction terms between *ACH* and the explanatory variables. The insignificant coefficient on *ACH* in each column confirms prior evidence that audit opinions do not improve after auditor switches (Krishnan 1994; Krishnan and Stephen 1995). The positive and significant coefficients on *GCOLAG* indicate persistence of audit opinions over years. Further, we find that clients are more likely to receive a GCO if they have small firm size (*TA*), low liquidity (*LIQUIDITY*), a low book-to-market ratio (*BTM*), low operating cash flows (*CFO*), low stock returns (*RETURN*), poor external monitoring (*INSOWN*), and if they report a loss (*LOSS*) or do not issue equity or debt in the subsequent year (*FFINANCE*). Using the documented results in Column (2), we construct the variable of *P_OP*. This variable is the difference in the probability of receiving a GCO between successor and incumbent auditors [i.e., $\Pr(GCO^{1}_{jt} = 1) - \Pr(GCO^{0}_{jt} = 1)$], and it will be used to capture the effect of OS opportunity on auditor switching in the subsequent analyses for Eq. (2).

Table 2 shows the results on whether clients engage in OS using the auditor switching model, Eq. (2). Column (1) reveals that the coefficient on *GCOLAG* is not statistically significant, indicating that GCO in the previous year, by itself, does not significantly influence auditor switching decision. On the other hand, in Column (2), the coefficient on *P_OP* is negative and significant at $p<0.01$ (two-tailed), indicating that clients are more likely

[13] Panel C of Table 1 is similar to Table 4 of Lennox (2000). Note that we use clustered standard errors by firm to calculate t-values (or z-values) for all regression analyses in this study.

to switch (retain) auditors when the probability of receiving a GCO from a successor auditor [Pr(GCO^1_{jt} = 1)] is lower (higher) than that from the incumbent auditor [Pr(GCO^0_{jt} = 1)]. Thus, this finding supports *H1*, suggesting that distressed clients successfully engage in OS to avoid a GCO. We omit the explanation on control variables for brevity.

We conduct three robustness checks. First, we estimate Eq. (2) using the difference in the predicted response variables estimated from Eq. (1) between the auditor switching decision and non-switching decision, instead of *P_OP*. Second, we rank transform all continuous variables in Eqs. (1) and (2) to alleviate concerns associated with skewness and outliers (Kane, Richardson, and Meade 1998). Untabulated results indicate that our inferences from these two tests remain qualitatively similar. Third, to examine whether the more stringent regulatory oversight after the introduction of the PCAOB regime reduces clients' OS behavior, we collect additional data from distressed firms in years 2001-2003 and use them as the sample for the pre-PCAOB regime. We then compare the propensity to engage in OS in the pre-PCAOB period (2001-2003) and the post-PCAOB period (2004-2012). Untabulated results suggest that OS activities sharply declined in the early post-PCAOB period (2004-2006) compared to the pre-PCAOB period (2001-2003). We find, however, that the decline was only temporary, and OS activities in the late post-PCAOB period (2007-2012) returned to the pre-PCAOB period level.[14]

Tests of *H2a* and *H3*: Effect of Opinion Shopping on Type II Errors

We report the analyses of ex post errors of audit opinions in Table 3. Using bankruptcy data from *Audit Analytics*, we find that 142 firms, among our 11,628 sample firms, filed for bankruptcy within 12 months following the fiscal year end. A Type I error (i.e., false alarms)

[14] Fargher and Zhang (2008) and Feldmann and Read (2010) show that the conservative audit approach documented in the early post-SOX period reverted to the pre-SOX posture in the late post-SOX period. These findings are consistent with our finding that the decline in OS behavior in the early post-PCAOB period was temporary.

occurs when the auditor issues a GCO report and the client does not file for bankruptcy during the subsequent 12 months. A Type II error (i.e., failure to warn of bankruptcy) occurs when the auditor does not issue a GCO report and the client does file for bankruptcy during the subsequent 12 months. Table 3, Panel A reports univariate tests for the differences in Type I and II errors between clients that engage in OS (*OS* = 1) and clients that do not engage in OS (*OS* = 0). We compute Type I and II errors following Francis (2011) and find that the Type I error rate (15%) for firms that engage in OS is lower than that (27%) for firms that do not engage in OS. A Chi-square test indicates that the difference is significant at $p<0.01$, suggesting that auditors tend to make more false alarms when their clients do not engage in OS. More importantly, Type II error rate (45%) for firms that engage in OS is much higher than that (19%) for firms that do not engage in OS. The difference is also statistically significant at $p<0.01$. This provides univariate evidence that the likelihood of audit failure to warn of upcoming bankruptcy is much higher among the clients engaging in OS.

Table 3, Panel B reports the probit regression results of Eq. (3) in which we estimate the likelihood of auditors' Type II reporting errors with a sample of 142 bankruptcy firms. Column (1) shows that the coefficient on *OS* is significant at $p<0.10$. This result, consistent with the result from our univariate test in Panel A, suggests that OS clients on average exhibit a higher ex post Type II reporting error rate than non-OS clients, supporting *H2a*. When we replace *OS* with *OS(ACH)* and *OS(NACH)* in Column (2), we find that the coefficient on *OS(ACH)* is positive and significant at $p<0.01$, while the coefficient on *OS(NACH)* is insignificant, indicating that the effect of OS behavior on the Type II errors is evident for switching OS clients but not for non-switching OS clients. We also find that the sum of the coefficients on *ACH* and *OS(ACH)* is positive and significant at $p<0.01$ (untabulated). A Chi-square test reported at the bottom of the table indicates that the coefficient of *OS(ACH)* is significantly greater than that of *OS(NACH)* at $p<0.01$. This finding suggests that successor

auditors under switching OS are more likely to fail to warn of their clients' upcoming bankruptcy than incumbent auditors under non-switching OS, which supports *H3*. In terms of economic significance, the estimated coefficient on *OS(ACH),* 4.9776, (the difference in coefficients of *OS(ACH)* and *OS(NACH)*, 4.5852) in Column (2) indicates that, on average, clients switching auditors for OS exhibit a 81.7% (75.3%) higher level of Type II error rate than non-switching OS clients or clients that do not engage in OS (non-switching OS clients).

Regarding control variables, we find that auditors are less likely to incur a Type II reporting error when the client is more leveraged (*LEV*) or reports a loss (*LOSS*), suggesting that the client's higher financial distress helps reduce the reporting error, consistent with Bruynseels et al. (2011). In contrast, Type II errors are more likely for clients with increasing leverage (*CLEV*) or higher operating cash flows (*CFO*), indicating that auditors tend to inefficiently process these two signals for their GCO reporting decisions on average.

Although we do not make a formal hypothesis, to provide a holistic approach to the effect of OS behavior on audit reporting errors, we also perform a multivariate analysis for Type I errors and report the result in Column (3). For this analysis, we re-estimate Eq. (3) using a sample of 11,486 non-bankruptcy clients after replacing the dependent variable with an indicator variable for a Type I error (*TYPE I ERROR*) that equals one if the client receives a GCO but does not file for bankruptcy within one year from the fiscal year end, and zero otherwise. If audit opinions issued to OS clients are less conservative (i.e., less likely to over-report going concern problems), we expect OS clients to exhibit a lower Type I error rate than non-OS clients. As shown in Column (3), the coefficient on *OS* is negative and significant at $p<0.01$, suggesting that fewer GCOs issued to OS clients enable a reduction in Type I errors at the cost of a higher probability of Type II errors. Although untabulated for brevity, when the OS clients are split into switching OS clients [*OS(ACH)*] and non-switching OS clients [*OS(NACH)*] similar to Column (2), we find that the difference in the two coefficients is

statistically insignificant, implying that the reduction in Type I errors is not significantly different between the two groups.

Tests of *H2b* and *H3*: Effect of Opinion Shopping on Other Audit Quality

Analyses of Restatements

In Table 4, we examine the effect of OS on subsequent audit quality, using restatements as a non-opinion proxy for audit quality. Panel A presents descriptive statistics for the variables used in our restatement model, Eq. (4). Among the 9,353 sample observations, the mean value of *RESTATE* (*RESTATE_DN*) is 0.11 (0.09), indicating that about 11% (9%) of the sample firms misstate financial statements and subsequently restate them (earnings downwards).[15] Our variable of interest, *OS*, has a mean of 0.58, which indicates that about 58% of the sample firms are classified as opinion shoppers (*OS*). *OS(ACH)* has a value of 0.03, indicating that approximately 3% of the sample firms switch auditors for OS (i.e., switching OS clients), while 55% of the sample firms engage in OS by retaining their incumbent auditors (i.e., non-switching OS clients). We omit further discussion on the descriptive statistics for brevity.

We present the results from estimating Eq. (4) in Table 4, Panel B. While the coefficient on *OS* is insignificant when *RESTATE* is used as the dependent variable in Column (1), the coefficient is positive and significant at $p<0.10$ when *RESTATE_DN* is used as the dependent variable in Column (5), providing weak support for *H2b*. In Columns (2) and (6), when *OS* is replaced with *OS(ACH)* and *OS(NACH)*, we find that while the coefficients on *OS(NACH)* are insignificant, those on *OS(ACH)* are positive and significant in both columns,[16]

[15] Note that the sample size for *RESTATE_DN* reduces to 9,190 after we remove 163 income-increasing or income-neutral restatements.

[16] The difference in the coefficients of *OS(ACH)* and *OS(NACH)* is significant at $p<0.05$ in Column (2) and significant at $p<0.10$ in one-tailed test in Column (6). These statistics are reported at the bottom of Panel B in respective columns. The sum of the coefficients on *ACH* and *OS(ACH)* is positive and significant at $p<0.05$ in both Columns (2) and (6).

indicating that switching OS clients are more likely to misstate their financial statements than non-switching OS clients or clients that do not engage in OS. These results are consistent with *H3* that audit quality of successor auditors under switching OS is poorer than that of incumbent auditors under non-switching OS. In terms of economic significance, the coefficient on *OS(ACH)*, 0.3141 (the difference in coefficients of *OS(ACH)* and *OS(NACH)*, 0.2863) in Column (2) suggests that, on average, clients switching auditors for OS exhibit a 15.6% (13.0%) higher likelihood of misstatements than non-switching OS clients or clients that do not engage in OS (non-switching OS clients).

Since auditor switching and non-switching clients may have inherent differences in firm characteristics which may not be properly captured by our control variables, we repeat the analysis after restricting the sample to clients that change auditors and report the results in Columns (3) and (7). We find that the coefficient on *OS(ACH)* is positive and significant at $p<0.05$ in both columns. In Columns (4) and (8), we repeat the analysis after restricting the sample to firms that retain auditors and report the results. In these two columns, however, we do not find evidence suggesting that clients retaining auditors for OS [i.e., *OS(NACH)* = 1] are more likely to misstate financial reports than other clients retaining auditors. We do not discuss control variables for brevity, but we find all significant coefficients in Panel B have expected signs consistent with prior studies.

Analyses of Successor Auditor Characteristics

To provide insights into auditors that frequently accept switching OS clients, we perform several additional analyses. We first compute the proportion of switching OS clients in total clients for each audit firm and split audit firms into two groups based on the median value of this ratio.[17] We then compare their new clients' auditor switching patterns. The

[17] An audit firm is classified into *Audit Firms with Higher (Lower) Proportion of Switching OS Clients* if the ratio is above (below) the audit firm sample median. To avoid a small deflator problem, we retain audit firms

results reported in Panel A of Table 5 indicate that the average proportion of switching OS clients for audit firms that have a higher proportion of switching OS clients [Group (1)] is 0.049, while the average for audit firms with a lower proportion of switching OS clients [Group (2)] is 0.012 (Row A). Panel A also indicates that Group (1) audit firms have a significantly higher proportion of downgrade auditor switching clients (Row B) and a lower proportion of upgrade auditor switching clients (Row C). It also shows that Group (1) audit firms have a higher proportion of low-parallel auditor switching clients (Row E) and a lower proportion of high-parallel auditor switching clients (Row D). To examine how the economic importance of switching OS clients differs between the two groups, we calculate the ratio of the audit fee revenues from switching OS clients to the total audit fee revenues of the audit firm for the two groups. We find that switching OS clients' economic importance is on average significantly higher for Group (1) audit firms relative to Group (2) audit firms (Row F).

The results suggest that audit firms that more frequently accept switching OS clients tend to be non-Big 4 auditors who are more likely to accept new clients making downgrade auditor switches or low-parallel auditor switches. These audit firms also tend to have a greater economic dependence on switching OS clients. Given that the actual number of Type II errors is small (Francis 2011), non-Big 4 auditors whose reputational capital is weak, pocket for litigation damages is not deep (DeAngelo 1981), and economic importance of switching OS clients is relatively larger, are more likely to accept switching OS clients despite the higher litigation risk associated with accepting these clients.[18] Although untabulated for brevity, we repeat our analyses using audit offices and find that audit offices

with at least five distressed clients in this analysis. The number of audit firms in each group is 107.

[18] We repeat descriptive analyses similar to Panel A using only auditor switching clients and find qualitatively similar results. Specifically, we find that audit firms that more frequently accept switching OS clients tend to be non-Big 4 auditors who have a greater economic dependence on new OS clients.

that more frequently accept switching OS clients are more likely to accept OS clients making downgrade auditor switches or low-parallel auditor switches.

Next, we compare the audit quality of auditors that have a higher and a lower proportion of switching OS clients at the audit firm- and office-level. The summary results are presented in Panel B of Table 5. In the audit firm-level, the clients of audit firms that have a higher proportion of switching OS clients [Group (1)] exhibit a higher likelihood of restatements (Row A), relative to the clients of audit firms that have a lower proportion of switching OS clients [Group (2)]. We find similar results when we remove switching OS clients from the analysis (Row B), suggesting that a higher likelihood of restatements for the clients of Group (1) is not only observed from switching OS clients but also from other clients. We find similar evidence at the audit office-level in Panel B. Furthermore, when we compare the magnitude of absolute discretionary accruals in untabulated analyses, we find that the clients of Group (1) audit firms and offices exhibit a larger magnitude of discretionary accruals, compared to the clients of Group (2) audit firms and offices. Taken together, the results reported in Panel B of Table 5 suggest that audit firms and offices that more frequently accept switching OS clients tend to exhibit poorer audit quality not only for switching OS clients but also for other clients.

Tests with Propensity Score Matched Sample

While we find that switching OS clients exhibit poorer audit quality, it is possible that the difference in firm characteristics between treatment firms (i.e. switching OS clients) and control firms (i.e. non-OS clients or non-switching OS clients) drives these results. In other words, if the control firms do not share similar firm characteristics with the treatment firms, this difference may introduce selection bias in evaluating the consequences of the treatment effect. To mitigate this concern, we perform a matched-sample analysis based on propensity score matching (PSM) following Lawrence, Minutti-Meza, and Zhang (2011).

We first run a probit model that estimates the probability of switching auditors for OS, using several firm characteristics variables extracted from the restatement model, Eq. (4).[19] We then match each treatment firm (i.e., a switching OS client) with a control firm (i.e., a non-OS client or a non-switching OS client) that has the closest propensity score, without replacement within a maximum caliper distance of 0.05. As a result, we successfully match 309 treatment firms with control firms.[20]

Table 6, Panel A presents the mean differences in independent variables between the treatment and control samples before and after PSM. Before the matching, one can notice that two samples are different in many dimensions. After PSM, however, we find that none of these firm characteristics are significantly different between the two samples, indicating that our matching is effective.

Panel B of Table 6 presents the result of restatement analysis using the matched samples. To conserve space, we only report the coefficients for the variables of interest, *OS(ACH)* and *OS(NACH)*. The results are largely consistent with our prior findings. Panel B shows that the coefficient on *OS(ACH)* is positive and significant at $p<0.01$ for both dependent variables, *RESTATE* and *RESATE_DN*, while the coefficient on *OS(NACH)* is insignificant in both columns. The difference in coefficients of *OS(ACH)* and *OS(NACH)* is significant at $p<0.01$ in both columns. Overall, the results suggest that deteriorated audit quality subsequent to switching OS is unlikely to be attributable to the difference in clients' firm characteristics.

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[19] Specifically, we estimate the probability of switching auditors for OS by regressing *OS_ACH* on a set of firm characteristics that influence restatements using the models below:

$$OS\_ACH_{jt} = \alpha_0 + \alpha_1 TA_{jt} + \alpha_2 LEV_{jt} + \alpha_3 ROA_{jt} + \alpha_4 LOSS_{jt} + \alpha_5 CFO_{jt} + \alpha_6 BTM_{jt} + \alpha_7 ISSUE_{jt} + \alpha_8 SEG_{jt} + \alpha_9 MERGER_{jt} + \alpha_{10} FOREIGN_{jt} + \alpha_{11} INVREC_{jt} + \beta_{12} VOLATILITY_{jt} + \beta_{13} RETURN_{jt} + \beta_{14} BIG4_{jt} + \beta_{15} OFFICE_{jt} + \beta_{16} SPECIAL_{jt} + Industry\ dummy + Year\ dummy + \varepsilon_{jt,}$$

where all variables are as defined previously.

[20] Our results are robust to using alternative caliper widths of 0.03, 0.1, or 0.2. We are not able to perform matched sample tests for ex post Type II errors because the number of treatment firms (switching OS bankruptcy clients) or control firms (other bankruptcy clients) is not enough to perform a meaningful regression analysis.

Sensitivity and Additional Analyses

We perform several robustness checks and additional analyses. First, since we define non-switching OS clients broadly as all clients with *ACH* = 0 and *P_OP* > 0, some clients that retain their auditors for non-OS purposes can be misclassified into this group. To alleviate this concern, we re-do analyses after refining this group by excluding clients that are likely to retain auditors for reasons other than OS.[21] In so doing, we remove all non-switching clients that meet any of the following three criteria from the sample: (1) Clients with very long auditor tenure, defined as clients in the top decile of the auditor tenure. These clients may retain auditors because their accumulated client-specific knowledge over time enables high-quality service; (2) clients that pay substantially discounted audit fees, defined as clients in the bottom decile of abnormal audit fees, because these clients may keep auditors to continuously pay low audit fees; and (3) clients whose incumbent auditor is an industry specialist auditor, defined as *SPECIAL* in the Appendix, because these clients may retain auditors to benefit from their industry expertise. As reported in Panel A of Table 7, we continue to find that the coefficients on *OS(ACH)* are significantly positive in Columns (1) and (2), indicating the adverse effects of switching OS on Type II errors and restatements. In addition, we do not find evidence suggesting that clients retaining auditors for OS are more likely to misstate financial reports than other non-OS clients.[22]

Second, it is plausible that when the value of *P_OP* is close to zero, the reporting difference between incumbent and successor auditors is small and thus the incentives for OS can be weak. To mitigate this concern, we repeat our analysis for audit quality using an

[21] We thank the editor, Rani Hoitash, and an anonymous reviewer for suggesting this analysis.

[22] Alternatively, we estimate a model that predicts a probability of auditor switching, and exclude clients whose firm characteristics suggest a high likelihood of auditor retention. These clients are more likely to keep auditors for non-OS purposes because regardless of OS consideration, these clients have firm characteristics that are unlikely to trigger auditor switching. For this analysis, we estimate the auditor switching model in Column (1) of Table 2, obtain the predicted value of *ACH* for all observations, and exclude clients in the bottom quartile of the predicted value of *ACH*. Untabulated results from the Type II error rate and misstatement tests provide evidence consistent with the findings in Panel A, Table 7.

alternative definition of OS which reclassifies 10% of the sample firms with *P_OP* just above and below the borderline (*P_OP* = 0) as non-OS firms.[23] As a result, 584 observations that have *P_OP* just above zero and *ACH* = 0 or have *P_OP* just below zero and *ACH* = 1 are reclassified from OS to non-OS firms. Although untabulated, we continue to find the adverse effects of auditor switching for OS on audit quality.

Third, we attempt to reconcile our finding with that of Newton et al. (2016). When a sensitivity test of Newton et al. (2016, 617) controls for a going concern opinion shopping variable (*GCSHOP*) in their model for internal control opinion shopping, they find that this variable is insignificantly associated with auditor retention/switch decisions, which appears inconsistent with our finding in Table 2. Since Newton et al. (2016) use only accelerated filers (i.e., firms having a public float of at least $75 million) for their sample and do not limit the sample to distressed firms, we examine whether the inconsistent findings are attributable to the use of different samples. Ex ante we expect that OS to avoid a GCO would be more prevalent for non-accelerated filers for the following reasons. First, because the vast majority of GCOs are issued to non-accelerated filers (Carson et al. 2013), these firms could have stronger incentives to engage in OS.[24] Second, since an auditor's attestation of ICFR under the SOX Section 404(b) is required only for accelerated filers, the relative importance of GCOs in clients' auditor retention/switch decisions can be greater for non-accelerated filers. Moreover, from auditors' perspectives, to the extent that the attestation of ICFR reduces uncertainty regarding the client's financial statement reliability, the exemption from Section

[23] Our results are qualitatively similar when those 10% observations are excluded from the sample. The results are also qualitatively similar when we reclassify or exclude 5% or 20% of the sample firms near *P_OP* = 0.

[24] Carson et al. (2013) report that among 88,359 firm-year observations from *Audit Analytics* over 2000-2010, 36,583 non-accelerated filers received 13,426 GCOs (36.7%), while 51,776 accelerated filers received only 990 GCOs (1.9%). Thus, the likelihood that a non-accelerated filer receives a GCO is about 19 times greater than that of an accelerated filer.

404(b) could make it more challenging for auditors to evaluate a non-accelerated filer's going concern.

To examine this possibility, we repeat our tests using non-accelerated filers and report the results in Panel B of Table 7. We find that the coefficient on *P_OP* is negative and significant in Column (1) of Panel B. In addition, the coefficient on *OS(ACH)* is significant for *Type II errors* and insignificant for *RESTATE* in Columns (2) and (3). To complement these findings, when we conduct the *RESTATE* test using a propensity score matched sample for non-accelerated filers, we find that the coefficient on *OS(ACH)* is significantly positive.[25] Thus, the insignificant coefficient on *OS(ACH)* for the test with *RESTATE* in Panel B appears attributable to the failure to fully control for firm characteristics. In untabulated analyses, we repeat the test in Column (1) using accelerated filers and find that the coefficient on *P_OP* is insignificant, consistent with the finding of Newton et al. (2016). Overall, these results suggest that our finding in Table 2 is largely driven by non-accelerated filers and the adverse effect of OS on audit quality is more prevalent for non-accelerated filers.

Fourth, we examine whether strong corporate governance, using institutional ownership as a proxy for the strength of governance, constrains OS behavior and its adverse effects. Although untabulated, we find that successful OS and the negative effect of switching OS on audit quality are more pronounced for clients with a low level of institutional ownership. This evidence implies that corporate governance mechanism plays a role in mitigating the incidences of successful OS and the adverse effect of switching OS on subsequent audit quality.

Finally, we examine whether lower audit quality caused by switching OS diminishes over time as successor auditors gradually recover start-up costs. For this purpose, we

[25] When we conduct the *RESTATE* test with accelerated files using both a unmatched sample and a PSM sample in untabulated analyses, the coefficients on *OS(ACH)* are statistically insignificant.

compare audit quality (measured by restatement and discretionary accruals) for switching OS clients in the first vs. second year and in the first two years vs. subsequent two years. Untabulated univariate tests indicate that the initial adverse impact of switching OS on audit quality fades as time passes. Interestingly, we do not find such a significant trend for other non-OS switching clients.

CONCLUSION

We employ the Lennox's (2000) framework to identify OS engagements to avoid a GCO and find evidence suggesting that clients successfully engage in OS. We further document that the adverse effect of OS on ex post Type II audit opinion errors and other audit quality is asymmetric; that is, salient for clients switching auditors for OS but not for clients retaining auditors for OS. This asymmetric effect is noteworthy in understanding the consequences of distressed firms' OS to avoid a GCO.

This study holds important implications for several parties. For regulators, our evidence is consistent with the concern that auditor switching for OS impairs auditor independence, highlighting the need to develop effective mechanisms that curb opportunistic auditor switches. For investors and audit committees, our findings suggest that the reliability of audit opinions and audit quality are hampered by clients' OS.

This study is subject to several caveats. First, since the auditor switching model developed by Lennox (2000) bases its prediction on a set of fixed determinant variables, potential measurement errors and omitted variables could influence our findings. Similar concerns are also applicable to our models for audit quality tests. Second, while we examine the average effect of auditor switching for OS on audit quality, the effect may further vary depending on some client- and auditor-specific characteristics. Investigating this issue would shed additional light on the conditions under which switching for OS is more detrimental.

Third, in light of important changes in the new standards SAS No. 132, *The Auditor's Consideration of an Entity's Ability to Continue as a Going Concern*, and FASB Accounting Standards Update (ASU) 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, it would be interesting to examine how the new standards influence a client's OS behavior and its effects on audit quality.[26] We leave these questions to future research.

[26] ASU 2014-15 requires management to assess an entity's ability to continue as a going concern and to provide related footnote disclosures. Based on this, SAS No. 132, which will be effective for audits for periods ending on or after December 15, 2017, requires auditors to obtain sufficient appropriate audit evidence on management's use of the going concern basis of accounting, and to conclude on the appropriateness of the management assessment. In addition, the definition of the going concern period has changed from a period of time not to exceed one year beyond the date of the financial statements to the period of time required by the applicable financial reporting framework, or if no such requirement exists, within one year after the date the financials are issued.

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Appendix: Variable Definitions

Part A. Audit opinion and auditor switching models

Variable	Definition
GCO	Indicator that equals one if the firm receives a going concern opinion, and zero otherwise;
GCOLAG	Indicator that equals one if the firm receives a going concern opinion in the prior year, and zero otherwise;
ACH	Indicator that equals one if the firm dismisses its auditor, and zero otherwise;
P_OP	Opinion shopping variable of Lennox (2000), difference in the probability of receiving a GCO between the successor and incumbent auditors [i.e., Pr(GCO^1 = 1) – Pr(GCO^0 = 1)];
TA	Natural logarithm of total assets in thousands of dollars;
LEV	Ratio of debt to total assets;
CLEV	Change in the debt-to-total assets ratios from the prior year to the current year;
LIQUIDITY	Working capital (current assets minus current liabilities) divided by lagged total assets;
LOSS	Indicator that equals one if the firm reports a net loss, and zero otherwise;
BTM	Book-to-market ratio;
FFINANCE	Indicator that equals one if the firm issues equity or debt in the subsequent year, and zero otherwise;
CFO	Operating cash flows divided by total assets at fiscal year end;
BIG4	Indicator that equals one if the auditor is a Big 4 firm, and zero otherwise;
RETURN	Compounded stock return over the fiscal year;
INSTOWN	The percentage of the firm's shares owned by institutional owners;
VOLATILITY	Standard deviation of the residual from the market model over the fiscal year;
MISMATCH	A measure of mismatch of the auditor and client in the previous year following Shu (2000);
TENURELAG	Natural logarithm of auditor tenure plus one in the previous year;
INVREC	Sum of inventories and receivables divided by total assets.

Part B. Ex-post type II error model

Variable	Definition
TYPE I ERRORS	Indicator that equals one if the firm receives a going concern opinion but does not file for bankruptcy within one year from fiscal year end, and zero otherwise;
TYPE II ERRORS	Indicator that equals one if the firm does not receive a going concern opinion but files for bankruptcy within one year from fiscal year end, and zero otherwise;
OS	Indicator that equals one if the firm dismisses (retains) its auditor in anticipation of a lower (higher) probability of receiving a GCO from the successor auditors (i.e., if *ACH* = 1 (*ACH* = 0) and *P_OP* < 0 (*P_OP* > 0)), and zero otherwise;
OS(ACH)	Indicator that equals one if the firm dismisses its auditor in anticipation of a lower probability of receiving a GCO from the successor auditors (i.e., if *ACH* = 1 and *P_OP* < 0), and zero otherwise;
OS(NACH)	Indicator that equals one if the firm retains its auditor in anticipation of a higher

	probability of receiving a GCO from the successor auditors (i.e., if *ACH* = 0 and *P_OP* > 0), and zero otherwise;
RESTATE	Indicator that equals one if the earnings for the firm–year are subsequently restated, and zero otherwise.
SEG	Natural logarithm of the number of business segments;
FOREIGN	Indicator that equals one if the firm operates a foreign business, and zero otherwise.

Part C. Restatement model

Variable	Definition
RESTATE_DN	Indicator that equals one if the earnings for the firm–year are subsequently restated downward, and zero otherwise;
ROA	Ratio of net income to total assets;
ISSUE	Indicator that equals one if the sum of debt or equity issued during the past three years is more than 5% of total assets, and zero otherwise;
MERGER	Indicator that equals one if the firm is engaged in a merger or acquisition, and zero otherwise;
OFFICE	Auditor practice office size measured by the natural logarithm of aggregated client audit fees in thousands of dollars;
SPECIAL	Indicator that equals one if the auditor's industry (based on two-digit SIC code) national market share is the largest among audit firms and the auditor's industry-MSA market share is the largest among audit offices in the MSA, and zero otherwise.

Table 1
Audit Opinion Prediction Model

Panel A: Audit opinions of switching and non-switching clients

	Switching clients (N = 865)			Non-Switching clients (N =10,763)		
	GCO_{t-1}=0	GCO_{t-1}=1	Total	GCO_{t-1}=0	GCO_{t-1}=1	Total
GCO_t=0	562	29	591	8,351	246	8,597
GCO_t=1	89	185	274	831	1,335	2,166
Total	651	214	865	9,182	1,581	10,763

Panel B: Descriptive statistics for audit opinion and auditor switching models

Variable	Mean	Standard Deviation	5%	25%	Median	75%	95%
GCO	0.21	0.41	0.00	0.00	0.00	0.00	1.00
GCOLAG	0.15	0.36	0.00	0.00	0.00	0.00	1.00
ACH	0.07	0.26	0.00	0.00	0.00	0.00	1.00
P_OP	0.00	0.03	-0.05	-0.01	0.00	0.01	0.05
TA	10.94	2.43	6.33	9.66	11.13	12.52	14.77
LEV	0.40	0.89	0.00	0.00	0.13	0.39	1.69
CLEV	0.16	1.08	-0.25	-0.01	0.00	0.08	0.69
LIQUIDITY	0.11	1.28	-2.20	0.03	0.25	0.51	1.33
LOSS	0.91	0.29	0.00	1.00	1.00	1.00	1.00
BTM	0.39	1.17	-1.07	0.09	0.37	0.80	1.94
FFINANCE	0.70	0.46	0.00	0.00	1.00	1.00	1.00
CFO	-0.37	0.93	-2.04	-0.33	-0.06	0.03	0.14
BIG4	0.50	0.50	0.00	0.00	1.00	1.00	1.00
RETURN	0.15	0.80	-0.79	-0.34	0.09	0.35	2.38
INSTOWN	0.32	0.33	0.00	0.00	0.21	0.58	0.96
VOLATILITY	0.11	0.06	0.01	0.07	0.11	0.14	0.23
MISMATCH	0.22	0.42	0.00	0.00	0.00	0.00	1.00
TENURELAG	1.73	0.83	0.00	1.10	1.79	2.30	2.94
INVREC	0.24	0.22	0.00	0.05	0.18	0.37	0.67

Table 1 (continued)

Panel C: Going concern opinion model

Dep. =	*GCO*			
	(1)		(2)	
Variables	Coeff.	Z-statistics	Coeff.	Z-statistics
ACH	0.0073	0.10	0.2679	0.42
GCOLAG	1.6773	28.20***	1.6880	25.46***
TA	-0.1716	-8.92***	-0.1734	-8.87***
LEV	0.0761	0.80	0.0677	0.65
CLEV	0.0418	0.49	0.1199	1.41
LIQUIDITY	-0.2881	-8.05***	-0.3082	-7.75***
LOSS	0.4791	5.08***	0.4688	4.90***
BTM	-0.1096	-4.38***	-0.1097	-3.94***
FFINANCE	-0.4647	-9.93***	-0.4734	-9.87***
CFO	-0.3649	-6.21***	-0.3639	-5.60***
BIG4	0.0612	1.24	0.0796	1.55
RETURN	-0.1240	-3.82***	-0.1174	-3.56***
INSTOWN	-0.6382	-6.04***	-0.6719	-6.22***
VOLATILITY	-0.0339	-0.11	-0.1300	-0.40
*GCOLAG*ACH*			-0.0242	-0.13
*TA*ACH*			-0.0512	-1.04
*LEV*ACH*			0.2440	0.95
*CLEV*ACH*			-0.4430	-2.21**
*LIQUIDITY*ACH*			0.0890	1.10
*LOSS*ACH*			0.0178	0.05
*BTM*ACH*			0.0133	0.17
*FFINANCE*ACH*			0.1208	0.88
*CFO*ACH*			0.0288	0.17
*BIG4*ACH*			-0.2036	-1.00
*RETURN*ACH*			-0.0534	-0.66
*INSTOWN*ACH*			0.6535	1.73*
*VOLATILITY*ACH*			0.7572	0.68
Intercept	0.6001	2.05**	0.6353	2.16**
Year Effects	Yes		Yes	
Industry Effects	Yes		Yes	
Observations	11,628		11,628	
Pseudo R^2	0.5691		0.5712	

Table 1 reports descriptive statistics and regression results of audit opinion prediction model. Panel A reports the distribution of audit opinions for auditor switching and non-switching firms. Panel B reports descriptive statistics for the variables used in audit opinion and auditor switching models. Panel C presents the regression results of audit opinion prediction model, Eq. (1). For detailed definitions of variables, refer to the Appendix. Using the results from Column (2) of Panel C, we predict the difference in the likelihood of receiving a GCO between a successor auditor and the incumbent auditor (P_OP_{jt}). When estimating the coefficients' standard errors, we use a firm clustering procedure that accounts for dependence between yearly observations relating to the same company. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively.

Table 2
Evidence of Opinion Shopping from Auditor Switching Model

Dep. =	*ACH*			
	(1)		(2)	
Variables	Coeff.	Z-statistics	Coeff.	Z-statistics
Test Variables				
P_OP			-2.2948	-3.36***
Control Variables				
GCOLAG	0.0816	1.44		
TA	-0.0031	-0.22	-0.0194	-1.28
LEV	0.0259	0.80	0.0588	1.82*
CLEV	-0.0017	-0.09	-0.0293	-1.53
LIQUIDITY	0.0057	0.30	0.0287	1.39
LOSS	0.1326	2.03**	0.1377	2.10**
BTM	0.0215	1.21	0.0215	1.23
FFINANCE	-0.0611	-1.44	-0.0264	-0.60
CFO	-0.0086	-0.31	-0.0110	-0.40
BIG4	-0.5625	-10.83***	-0.6199	-11.39***
RETURN	-0.0047	-0.15	-0.0211	-0.67
INSTOWN	-0.0595	-0.70	0.0577	0.61
VOLATILITY	-0.4033	-1.31	-0.1128	-0.35
MISMATCH	-0.0045	-0.09	-0.0221	-0.45
TENURELAG	-0.0270	-1.07	-0.0086	-0.35
INVREC	0.2293	2.62***	0.2160	2.47**
Intercept	-5.0829	-27.77***	-4.9783	-24.52***
Year Effects	Yes		Yes	
Industry Effects	Yes		Yes	
Observations	11,628		11,628	
Pseudo R^2	0.0704		0.0718	

Table 2 reports evidence of opinion shopping from the auditor switching model, Eq. (2), based on Lennox (2000). For detailed definitions of variables, refer to the Appendix. When estimating the coefficients' standard errors, we use a clustering procedure that accounts for dependence between yearly observations relating to the same company. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively.

Table 3
Ex post Errors of Audit Opinions

Panel A: Univariate tests for the differences in Type I and II errors

Variable	Total	*OS*=1 (1)	*OS*=0 (2)	Differences (1) - (2)	P-value
Total Sample (A)	11,628	6,644	4,984	1,660	-
No. of Bankrupt firms (B)	142	58	84	-26	-
No. of GCO firms (C)	2,440	1,041	1,399	-358	-
Type I error: Auditor issues GCO and client survives (D)	2,340	1,009	1,331	-322	-
Type II error: Auditor fails to issue a GCO and client goes bankrupt (E)	42	26	16	10	-
Type I error rate [D/(A-B)]	0.20	0.15	0.27	-0.12	0.0000
Type II error rate [E/(B)]	0.30	0.45	0.19	0.26	0.0000

Table 3 (continued)

Panel B: Multivariate tests for ex post errors of auditor opinions

Dep. =	*Type II Errors*				*Type I Errors*	
	(1)		(2)		(3)	
Variables	Coeff.	Z-statistics	Coeff.	Z-statistics	Coeff.	Z-statistics
Test Variables						
OS	0.8567*	1.66			-0.2280***	-4.66
OS(ACH)			4.9776***	3.17		
OS(NACH)			0.3924	0.68		
Control Variables						
ACH	0.1244	0.18	-3.1716**	-2.26	0.0421	0.69
TA	0.0822	0.56	0.0269	0.18	-0.2755***	-11.66
LEV	-2.1875***	-3.48	-2.0615***	-3.42	0.3417***	2.78
CLEV	3.4541***	4.72	3.4305***	4.63	-0.2517***	-4.81
LIQUIDITY	0.6563**	2.15	1.1346***	2.85	-0.2929***	-7.79
LOSS	-0.9951	-1.35	-1.4998*	-1.93	0.4234***	4.94
BTM	0.0212	0.29	0.0303	0.43	-0.1277***	-4.42
FFINANCE	-0.8654*	-1.71	-0.7996	-1.54	-0.3045***	-5.82
CFO	2.3316***	3.81	2.5195***	3.77	-0.3339***	-4.99
BIG4	0.5446	1.19	0.4889	1.04	-0.0949	-1.45
RETURN	-0.3691	-0.91	-0.4159	-0.98	-0.1161***	-3.64
INSTOWN	-0.0370	-0.05	0.3608	0.45	-0.5367***	-4.02
VOLATILITY	1.7231	0.60	3.0539	1.03	0.6803*	1.73
INVREC	-1.0723	-1.10	-0.8411	-0.84	-0.2963**	-1.97
RESTATE	1.2278*	1.74	1.0698	1.64	-0.0312	-0.43
SEG	0.0794	0.18	0.0420	0.10	0.0128	0.17
FOREIGN	-0.0661	-0.14	-0.0747	-0.15	-0.1249*	-1.96
Intercept	-3.2139	-1.44	-1.9314	-0.84	2.2153***	6.33
Year Effects	Yes		Yes		Yes	
Industry Effects	Yes		Yes		Yes	
Observations	142		142		11,486	
Pseudo R^2	0.4867		0.5155		0.4876	
Chi^2-Test for *OS(ACH) = OS(NACH)*			7.38			
(p-value)			(0.0066)			

Table 3 presents the analyses of ex post errors of audit opinions. Panel A reports univariate test for the difference in Type I and II errors. Columns (1) and (2) of Panel B report the probit regression results of the Type II errors model, Eq. (3), using bankruptcy sample firms that file for bankruptcy within one year from the fiscal year end. Among 142 bankrupt firms, the numbers of firms categorized as *OS, OS(ACH),* and *OS(NACH)* are 58, 5, and 53, respectively. Column (3) of Panel B reports the probit regression results of the Type I errors analysis using a sample of 11,486 non-bankruptcy clients after replacing the dependent variable with an indicator variable for a Type I error (*TYPE I ERROR*). For detailed definitions of variables, refer to the Appendix. When estimating the coefficients' standard errors, we use a firm clustering procedure that accounts for dependence between yearly observations relating to the same company. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively.

Table 4
Opinion Shopping and Subsequent Restatement

Panel A: Descriptive statistics for restatement model (N = 9,353)

Variable	Mean	Standard Deviation	5%	25%	Median	75%	95%
RESTATE	0.11	0.32	0.00	0.00	0.00	0.00	1.00
RESTATE_DN	0.09	0.29	0.00	0.00	0.00	0.00	1.00
OS	0.58	0.49	0.00	0.00	1.00	1.00	1.00
OS(ACH)	0.03	0.18	0.00	0.00	0.00	0.00	0.00
OS(NACH)	0.55	0.50	0.00	0.00	1.00	1.00	1.00
ACH	0.08	0.27	0.00	0.00	0.00	0.00	1.00
TA	10.96	2.36	6.50	9.71	11.12	12.47	14.70
LEV	0.39	0.85	0.00	0.00	0.13	0.39	1.56
ROA	-0.32	0.36	-0.99	-0.53	-0.16	-0.03	0.04
LOSS	0.91	0.29	0.00	1.00	1.00	1.00	1.00
CFO	-0.35	0.90	-1.88	-0.32	-0.05	0.03	0.14
BTM	0.39	1.15	-1.05	0.10	0.37	0.78	1.91
ISSUE	0.75	0.43	0.00	1.00	1.00	1.00	1.00
SEG	0.89	0.37	0.69	0.69	0.69	0.69	1.79
MERGER	0.04	0.19	0.00	0.00	0.00	0.00	0.00
FOREIGN	0.31	0.46	0.00	0.00	0.00	1.00	1.00
INVREC	0.24	0.21	0.00	0.05	0.19	0.37	0.67
VOLATILITY	0.11	0.07	0.01	0.06	0.11	0.14	0.24
RETURN	0.20	0.86	-0.79	-0.32	0.09	0.40	2.38
BIG4	0.51	0.50	0.00	0.00	1.00	1.00	1.00
OFFICE	9.14	2.09	5.58	7.54	9.21	10.97	12.02
SPECIAL	0.07	0.26	0.00	0.00	0.00	0.00	1.00

Table 4 (continued)

Panel B: Restatement analyses

Dep. =	*RESTATE*				*RESTATE_DN*			
	Full Sample		Auditor switching Sample	Auditor non-switching Sample	Full Sample		Auditor switching Sample	Auditor non-switching Sample
Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Test Variables								
OS	0.0622				0.0725*			
	(1.51)				(1.68)			
OS(ACH)		0.3141**	0.3627**			0.2684**	0.3243**	
		(2.43)	(2.26)			(2.01)	(1.97)	
OS(NACH)		0.0278		0.0261		0.0444		0.0444
		(0.60)		(0.56)		(0.90)		(0.89)
Control Variables								
ACH	0.0109	-0.1237			0.0500	-0.0547		
	(0.17)	(-1.29)			(0.74)	(-0.55)		
TA	0.1113***	0.1126***	0.0599	0.1191***	0.1025***	0.1034***	0.0377	0.1115***
	(6.63)	(6.69)	(1.35)	(6.69)	(5.76)	(5.81)	(0.86)	(5.91)
LEV	0.0433	0.0413	-0.0848	0.0580*	0.0462	0.0445	-0.0816	0.0614*
	(1.51)	(1.43)	(-1.11)	(1.88)	(1.51)	(1.45)	(-1.03)	(1.87)
ROA	-0.0502*	-0.0449	0.0211	-0.0504	-0.0410	-0.0368	0.0502	-0.0478
	(-1.71)	(-1.51)	(0.32)	(-1.55)	(-1.30)	(-1.15)	(0.74)	(-1.37)
LOSS	-0.0917	-0.0883	-0.2648	-0.0684	-0.0731	-0.0705	-0.2793	-0.0460
	(-1.38)	(-1.33)	(-1.30)	(-0.98)	(-1.07)	(-1.03)	(-1.36)	(-0.64)
CFO	-0.0903***	-0.0952***	-0.1681***	-0.0847***	-0.1004***	-0.1042***	-0.1786***	-0.0911***
	(-3.52)	(-3.65)	(-2.80)	(-2.99)	(-3.67)	(-3.75)	(-2.97)	(-2.94)
BTM	0.0028	0.0043	-0.0778	0.0123	0.0028	0.0041	-0.0701	0.0110
	(0.14)	(0.21)	(-1.28)	(0.59)	(0.13)	(0.20)	(-1.11)	(0.50)
ISSUE	-0.0617	-0.0512	0.1143	-0.0617	-0.0563	-0.0476	0.0760	-0.0542
	(-1.35)	(-1.11)	(0.84)	(-1.27)	(-1.17)	(-0.98)	(0.55)	(-1.05)
SEG	0.0517	0.0506	0.0328	0.0549	0.0434	0.0425	0.0715	0.0437
	(0.87)	(0.85)	(0.18)	(0.89)	(0.70)	(0.69)	(0.38)	(0.68)
MERGER	-0.0658	-0.0692	0.9302***	-0.1293	-0.0817	-0.0847	0.9871***	-0.1583
	(-0.67)	(-0.71)	(2.67)	(-1.27)	(-0.78)	(-0.81)	(2.83)	(-1.45)
FOREIGN	0.0546	0.0597	-0.0335	0.0560	0.1102*	0.1143**	0.0683	0.1073*
	(1.00)	(1.10)	(-0.21)	(1.00)	(1.92)	(1.99)	(0.42)	(1.82)
INVREC	0.1989*	0.1977*	-0.0397	0.2290*	0.3177***	0.3161***	-0.0403	0.3697***
	(1.72)	(1.71)	(-0.15)	(1.89)	(2.66)	(2.65)	(-0.15)	(2.93)
VOLATILITY	0.3786	0.4792	-0.8466	0.5850	0.2508	0.3342	-1.0791	0.4429
	(1.08)	(1.35)	(-0.69)	(1.58)	(0.68)	(0.89)	(-0.85)	(1.14)

RETURN	0.0079	0.0024	-0.1070	0.0046	0.0187	0.0143	-0.1421	0.0218
	(0.27)	(0.08)	(-0.97)	(0.15)	(0.61)	(0.47)	(-1.17)	(0.69)
BIG4	-0.0855	-0.0980	0.1258	-0.1327	-0.0728	-0.0834	0.1292	-0.1186
	(-1.11)	(-1.26)	(0.61)	(-1.61)	(-0.88)	(-1.00)	(0.63)	(-1.34)
OFFICE	-0.0557***	-0.0557***	-0.0914**	-0.0513***	-0.0563***	-0.0562***	-0.0921**	-0.0515**
	(-3.05)	(-3.04)	(-1.97)	(-2.60)	(-2.90)	(-2.89)	(-2.01)	(-2.46)
SPECIAL	0.0991	0.1000	-0.6902	0.1129	0.1062	0.1070	-0.6243	0.1183
	(1.24)	(1.25)	(-1.54)	(1.39)	(1.30)	(1.31)	(-1.41)	(1.43)
Intercept	-6.0148***	-6.0202***	-0.5475	-5.7939***	-5.6674***	-5.6717***	-0.3339	-5.8465***
	(-21.26)	(-24.67)	(-0.86)	(-18.83)	(-18.55)	(-18.62)	(-0.53)	(-18.73)
Year Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	9,353	9,353	763	8,590	9,190	9,190	756	8,434
Pseudo R^2	0.0379	0.0386	0.0818	0.0425	0.0414	0.0418	0.0859	0.046
Chi^2-Test for *OS(ACH) = OS(NACH)*		3.88				2.18		
(p-value)		(0.0489)				(0.1401)		

Table 4 provides analyses of the effect of opinion shopping on subsequent audit quality measured by restatements. Panel A reports descriptive statistics for the variables used in the restatement model, Eq. (4). Panel B presents the regression results of Eq. (4). For the detailed definitions of variables, refer to the Appendix. For the tests using an indicator for income-decreasing restatements as the dependent variable, we exclude income-increasing and income-neutral restatement from the full sample. When estimating the coefficients' standard errors, we use a firm clustering procedure that accounts for dependence between yearly observations relating to the same company. z-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively.

Table 5
Analyses of Auditor Characteristics

Panel A: Client auditor switching pattern for audit firms that more or less frequently accept OS clients

	Group (1) *Audit Firms with Higher Proportion of Switching OS Clients* (*Number of audit firms*=107)	Group (2) *Audit Firms with Lower Proportion of Switching OS Clients* (*Number of audit firms*=107)	(1)–(2)	
	Mean	Mean	Difference	t-value
A. *Proportion of Switching* OS *Clients*	0.049	0.012	0.037	11.74***
B. *Proportion of Clients Switching from a Big 4 to a Non-Big 4*	0.031	0.005	0.026	10.64***
C. *Proportion of Clients Switching from a Non-Big 4 to a Big4*	0.002	0.008	-0.006	-4.73***
D. *Proportion of Clients Switching from a Big 4 to a Big4*	0.009	0.015	-0.006	-2.89***
E. *Proportion of Clients Switching from a Non-Big4 to a Non-Big4*	0.065	0.012	0.053	15.22***
F. *Economic Importance of Switching OS Clients*	0.045	0.011	0.034	49.69***

Panel B: Frequency of restatements of clients of audit firms and offices that more or less frequently accept OS clients

	Audit Firm Sample (*Number of audit firms* = 207)			Audit Office Sample (*Number of audit offices* = 444)		
	Group (1) *Audit Firms with Higher Proportion of Switching OS Clients*	Group (2) *Audit Firms with Lower Proportion of Switching OS Clients*	(1)–(2)	Group (1) *Audit Offices with Higher Proportion of Switching OS Clients*	Group (2) *Audit Offices with Lower Proportion of Switching OS Clients*	(1)–(2)
	Mean	Mean	Difference (t-value)	Mean	Mean	Difference (t-value)
A. *Full sample*	0.117	0.104	0.012 (1.88*)	0.117	0.104	0.013 (1.92*)
B. *Switching OS clients Removed*	0.115	0.104	0.011 (1.61†)	0.114	0.104	0.010 (1.50†)

Table 5 provides analyses of the characteristics of audit firms and audit offices that more [Group (1)] or less frequently [Group (2)] accept OS clients. Panel A compares client auditor switching patterns across the two groups of audit firms. Panel B compares the frequency of restatements across the two groups of audit firms and offices. * and *** indicate significance at the 10% and 1% levels (two-tailed). † indicates significance at the 10% level (one-tailed).

Table 6

Tests with Propensity Score Matched Sample

Panel A: Differences in firm characteristics between treatment and control firms

Variable	Unmatched Sample			Propensity Score Matched Sample		
	Treatment Sample (N=314)	Control Sample (N=9,039)	Mean Difference	Treatment Sample (N=309)	Control Sample (N=309)	Mean Difference
	Mean	Mean	P-value	Mean	Mean	P-value
TA	9.412	11.015	0.000***	9.472	9.510	0.866
LEV	0.843	0.372	0.000***	0.823	0.882	0.613
ROA	-0.474	-0.310	0.000***	-0.467	-0.474	0.846
LOSS	0.927	0.906	0.209	0.926	0.896	0.204
CFO	-0.651	-0.350	0.000***	-0.635	-0.632	0.979
BTM	-0.052	0.400	0.000***	-0.042	-0.027	0.898
ISSUE	0.583	0.760	0.000***	0.592	0.602	0.806
SEG	0.865	0.894	0.166	0.865	0.899	0.250
MERGER	0.019	0.039	0.081*	0.020	0.030	0.422
FOREIGN	0.178	0.315	0.000***	0.181	0.173	0.793
INVREC	0.243	0.238	0.673	0.240	0.249	0.670
VOLATILITY	0.072	0.111	0.000***	0.073	0.076	0.505
RETURN	0.375	0.191	0.000***	0.374	0.376	0.981
BIG4	0.261	0.523	0.000***	0.265	0.262	0.927
OFFICE	7.841	9.188	0.000***	7.895	7.813	0.614
SPECIAL	0.022	0.076	0.000***	0.023	0.023	1.000

Panel B: Restatement analyses with matched sample

Dep.=	*RESTATE*	*RESTATE_DN*
Variables	(1)	(2)
Test Variables		
OS(ACH)	**4.5473*** **	**4.5530*** **
	(18.33)	**(11.33)**
OS(NACH)	**-0.2947**	**-0.2899**
	(-1.46)	**(-1.37)**
Control Variables	Yes	Yes
Year Effects	Yes	Yes
Industry Effects	Yes	Yes
Observations	618	604
Pseudo R^2	0.085	0.1116
Chi^2-Test for *OS(ACH) = OS(NACH)*	240.89	111.54
(p-value)	(0.0000)	(0.0000)

Table 6 reports the results of restatement analyses for the propensity score matched sample. For simplicity, we tabulate the coefficients on the variables of interest only. Panel A provides mean differences in independent variables of the restatement model between the treatment and control samples before and after propensity score matching. Panels B reports regression results of restatements using propensity-matched samples. To obtain matched samples, the propensity score is calculated from the logistic model where the dependent variable is equal to one if the firm dismisses its auditor in anticipation of a lower probability of receiving a GCO from the successor auditors, and zero otherwise and the independent variables are extracted from the restatement model. Variable definitions are provided in the Appendix. When estimating the coefficients' standard errors, we use a clustering procedure that accounts for dependence between yearly observations relating to the same company (z-statistics are reported in parentheses). *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively.

Table 7 Sensitivity and Additional Analyses

Panel A: Tests with refined non-switching opinion shopping sample

Dep.=	*Type II Errors*	*RESTATE*
Variables	(1)	(2)
Test Variables		
OS(ACH)	**5.5627*** **	**0.3011** **
	(3.12)	**(2.22)**
OS(NACH)	**1.5294***	**0.0598**
	(1.82)	**(0.92)**
Control Variables	Yes	Yes
Year Effects	Yes	Yes
Industry Effects	Yes	Yes
Observations	112	7,142
Pseudo R^2	0.6932	0.0429
Chi^2-Test for *OS(ACH) = OS(NACH)*	5.33	2.08
(p-value)	(0.0210)	(0.1490)

Panel B: Tests with non-accelerated filers

Dep.=	*ACH*	*Type II Errors*	*RESTATE*
Variables	(1)	(2)	(3)
Test Variables			
P_OP	**-2.1682*** **		
	(-2.79)		
OS(ACH)		**57.1107 *** **	**0.1018**
		(17.77)	**(0.65)**
OS(NACH)		**0.0446**	**-0.1430***
		(0.10)	**(-1.68)**
Control Variables	Yes	Yes	Yes
Year Effects	Yes	Yes	Yes
Industry Effects	Yes	Yes	Yes
Observations	5,924	68	4,733
Pseudo R^2	0.0494	0.6733	0.0516
Chi^2-Test for *OS(ACH) = OS(NACH)*		321.95.	1.50
(p-value)		(0.0000)	(0.2214)

Table 7 provides various robustness and additional analyses. For simplicity, we tabulate the coefficients on the variables of interest only. When estimating the coefficients' standard errors, we use a clustering procedure that accounts for dependence between yearly observations relating to the same company (z-statistics are reported in parentheses). *, **, and *** indicate significance at the 10%, 5%, and 1% levels (two-tailed), respectively. Panel A reports the results when we refine non-switching OS clients by excluding clients that are likely to retain auditors for reasons other than OS. Panel B reports the results from non-accelerated filers.