Auditor Dismissals, Transparency, and Dealing with Opacity

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ABSTRACT

Motivated by the ambiguity of auditor dismissal disclosures, this study informs about an alternative signal – the timing of the dismissal – for inferring the implications of dismissals. When dividing the reporting year into five dismissal periods, we find largely monotonic increases in the probability of future restatements, material weaknesses, and delistings across the five periods. Firms that dismiss auditors after the second fiscal quarter have markedly higher rates of future restatements, material weaknesses, and delistings compared to firms that dismiss auditors shortly after filing the prior year's 10-K. Incremental to other predictors, the period of the dismissal has predictive power for restatements and material weaknesses but not for delistings. In contrast, mandatory disclosures about the circumstances of the dismissals have little incremental predictive power. Stock price drifts following the mandatory disclosures indicate that the market tends to underreact to them.

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I. INTRODUCTION

The reasons behind auditor changes are often unclear. On one hand, a change could reflect management's desire to obtain a higher quality or more cost-effective audit. On the other hand, it could reflect management's attempts to conceal problems with accounting practices, internal controls, or ability to remain a going concern. To help capital markets discern the implications of auditor changes, Item 304 of SEC Regulation S-K requires registrants to disclose whether the change was a company-initiated "dismissal" or an auditor-initiated "resignation," and disclose additional information about disagreements and negative audit circumstances. Registrants must also request a public statement from the departing auditor about the veracity of the registrant's disclosure.

Registrants describe the vast majority of auditor changes as dismissals rather than as resignations. Resignations are clear signals of accounting problems or heightened audit risk because auditors typically have little incentive to drop healthy, low-risk clients (Bockus and Gigler 1998). Ghosh and Tang (2015) find that resignations are often followed by revelations of internal control problems, class-action lawsuits, and delistings.

In contrast, dismissals are more ambiguous signals. It is often unclear whether management is trying to conceal problems or achieve higher audit quality or cost savings. Disclosure regulations have been amended several times in attempts to elicit more transparency about the reasons behind dismissals, but the majority of dismissal disclosures continue to provide little or no information about reasons or circumstances. When reasons are provided, Sankaguruswamy and Whisenant (2004) find that they tend to involve seemingly innocuous factors such as mergers, audit fees, or desire for a larger or geographically closer auditor. Prior research tends not to find stock market reaction to the filing of dismissal disclosures (Griffin and

Lont 2010), indicating that they tend to convey little credible information about the reasons for the dismissal or the implications of the dismissal.

Because of their prevalence and ambiguity, our study focuses on dismissals and examines their association with adverse future outcomes. The future outcomes we examine are restatements, material control weaknesses, delistings, and stock performance. In particular, we examine the ability of a readily transparent attribute of the dismissal – the timing within the reporting year – to signal which dismissals will be associated with adverse outcomes. An advantage of this attribute is that it does not depend on disclosures from the client or auditor about the circumstances of the dismissal.

After dividing the reporting year into five dismissal periods, we find largely monotonic increases in the probability of future restatements, material weaknesses, and delistings across the five periods. Despite this linkage between dismissal timing and future negative events, firms are not increasingly likely to disclose negative circumstances about the dismissal across the five periods. After controlling for the disclosed negative circumstances as well as other potential predictors of the future adverse events, we find that dismissal timing has incremental predictive power for restatements and material weaknesses, but not for delistings.

The end of the second fiscal quarter sharply separates innocuous from suspicious dismissals. Dismissals occurring after the second fiscal quarter entail a level of future restatement risk close to that of auditor *resignations*. Incremental to other predictors, dismissals occurring after the second fiscal quarter roughly double the odds of a restatement and more than quadruple the odds of a material weakness over the next two years. In contrast, we find that the negative circumstances discussed in dismissal disclosures have no incremental predictive power for future restatements or material weaknesses. For delistings, we find that one particular

negative circumstance – discussion of a going concern opinion – has incremental predictive power.

Finally, we find evidence that equity markets tend to underreact to dismissal announcements. Dismissal firms display significantly negative stock price drifts over the six months and one year following the dismissal announcements, with means of -2.5 and -2.9 percent and medians of -4.3 and -7.9 percent. When partitioning the dismissals by their timing within the reporting year, the partitions' mean and median subsequent returns tend to be negative, with statistically negative means or medians found for several periods and horizons. The existence of negative drifts indicates that stock prices tend not to fully impound the negative implications of dismissal announcements.

The findings help capital market participants understand and deal with the ambiguity and opaqueness of auditor dismissals. Quantifying how dismissal timing maps into future adverse outcomes can help securities regulators more optimally allocate their firm monitoring activities and assess whether dismissal disclosures are achieving their desired purpose. The evidence may also help auditors in assessing the risk posed by new and unfamiliar potential clients. Improved understanding of the implications of dismissals and dismissal timing by investors and analysts may help to correct the capital market inefficiencies identified in the study.

II. BACKGROUND AND LITERATURE REVIEW

Regulatory background

SEC Regulation S-K, Item 304 (17 CFR 229.304) specifies disclosure requirements for auditor changes. A registrant is required to disclose in an Item 4.01 8-K whether it dismissed the auditor or whether the auditor resigned (or neglected to stand for re-appointment). The registrant must also disclose the following negative audit-related events if they have occurred in the past two fiscal years or subsequent interim periods: 1) adverse or modified audit opinions for the

current or past financial statements, 2) resolved or unresolved disagreements with the auditor that, if not resolved, would have been included in the auditor's report,[1] and 3) other "reportable events" that are similar to disagreements. These other reportable events are cases in which the auditor has notified management that 1) poor internal controls prevented the development of reliable financial statements, 2) the auditor was unable to rely on management representations or unwilling to be associated with the financial statements, 3) the auditor needed to significantly expand audit scope, but was unable to do so, or 4) the auditor became aware of information that may materially affect the fairness or reliability of past or current financial statements, but was unable to resolve the issue.[2] The 8-K must be filed within four business days of the auditor change (SEC 2004, Release No. 33-8400). Registrants must also request that the former auditor publish an exhibit letter through the SEC agreeing or disagreeing with the statements in the registrant's 8-K.

A form of this regulation was first implemented in 1971, and was amended several times between 1974 and 1989 in attempts to elicit more transparency about the reasons behind auditor changes. The exposure draft for the original 1971 regulation simply proposed an open-ended explanation of the reasons for the change, along with a request to the former accountant to provide its understanding of the reasons to the SEC (Journal of Accountancy 1971a). However, due to AICPA concerns about the subjectivity of such a disclosure (Journal of Accountancy

[1] The disagreements could involve accounting practices, disclosures, or audit scope or procedure. To be reportable, the disagreements must occur "between personnel of the registrant responsible for presentation of its financial statements and personnel of the accounting firm responsible for rendering its report" (§ 17 CFR 229.304(a)(1)(iv)).
[2] Prior to 1988, the SEC considered reportable events to be a form of disagreement. In 1988, the SEC distinguished disagreements and reportable events as follows: "'Disagreements' and 'reportable events' are similar in that they involve situations where the position of management may be considered to be generally at odds with that of the auditor. With a reportable 'disagreement' the differing positions of management and the auditor have been expressed, either orally or in writing. A reportable event, however, requires only that the accountant advise the registrant of its concerns. If, therefore, the auditor is dismissed, resigns or declines to stand for re-election before the registrant responds (to either agree or disagree) to the auditor's concern, the event must be reported" (SEC 1988, 874).

1971b), the final 1971 rule imposed the more limited and objective requirement to disclose disagreements between the auditor and client. Contrary to the SEC's wishes, registrants interpreted "disagreement" narrowly, prompting the SEC to broaden the definition in Accounting Series Release (ASR) No. 165 in 1974. ASR No. 165 cited the "reportable events" discussed above as examples of disagreements that should be disclosed (Kay 1976, 79). However, the SEC again was not satisfied with the resulting level of disclosure, and in 1977 again proposed an open-ended requirement to report the reasons for an auditor change (Journal of Accountancy 1977). The AICPA again opposed the proposal and the SEC relented (Journal of Accountancy 1978).[3]

The last major amendment to the disclosure content occurred in 1988. Due to concerns that registrants still were not disclosing the reportable events cited in ASR No. 165, the SEC elevated the importance of the reportable event requirements, codifying them directly into section 304 of the Code of Federal Regulations rather than keeping them relegated to ASR No. 165 (SEC 1988). More importantly, the 1988 amendments required registrants to disclose whether the switch was a client-initiated dismissal or an auditor-initiated resignation (or refusal to stand for re-appointment). The SEC hoped that "disclosure of this information, when coupled with other disclosures, could provide some indication of whether the accountant was resigning from a troublesome or potentially troublesome audit" (SEC 1987, 812).

Calls for more transparency about the reasons behind auditor changes have continued in the decades following this regulation, including from audit firms themselves (Grothe and Weirich 2007), as public companies continue to infrequently disclose negative circumstances when changing auditors. In our sample of auditor changes from 2000 to 2013, 83 percent of

[3] Sriram (1987) contains an expanded discussion of the regulation's history through 1986.

auditor changes are characterized as dismissals rather than resignations. Only 24 percent of dismissals are accompanied by acknowledgements of disagreements, reportable events, or other negative circumstances. Thus, on their face, the disclosures for the majority of dismissals give the impression of innocuous circumstances. This study provides evidence about the accuracy of this impression. Furthermore, in light of the difficulty of mandating transparent disclosure, the study examines how the timing of the dismissal reveals information about the underlying circumstances and whether stock prices impound this information.

Literature Review

Consistent with a lack of information in dismissal disclosures, prior studies generally find no evidence of market reaction. Early studies could not distinguish between dismissals and resignations, and found no announcement reaction to auditor switch announcements as a group (Johnson and Lys 1990; Dhaliwal, Schatzberg, and Trombley 1993; Klock 1994). Subsequent studies continued to find no negative reaction to dismissal announcements after separating them from resignations (Sankaraguruswamy and Whisenant 2004; Knechel, Naiker, and Pacheco 2007; Griffin and Lont 2010), except among the small minority of dismissals that involved reportable events (Whisenant, Sankaraguruswamy, and Raghunandan 2003) or that had delays in the auditor's exhibit letter (Krishnan 2002).[4]

Other studies examine real events following auditor switches, which likely are manifestations of underlying problems or tensions that may have caused the switch. The studies tend to focus on resignations. Ghosh and Tang (2015) find higher rates of class-action lawsuits, internal control problems, and delistings in the three years following resignations. Raghunandan

[4] Evidence of negative market reaction to *resignations* is found in DeFond, Ettredge, and Smith (1997), Wells and Loudder (1997), and Shu (2000). However, Beneish, Hopkins, Jansen, and Martin (2005) find evidence of a negative reaction only when resignations are accompanied by disagreements or reportable events.

and Rama (1999) find that a Big N audit firm is less likely to be the successor after a resignation. When the successor following a resignation is a non-Big N firm, Catanach, Irving, Williams, and Walker (2011) find subsequent deterioration in financial performance and higher rates of bankruptcies or delistings. Without distinguishing between dismissals and resignations, Romanus, Maher, and Fleming (2008) find that switches from specialist to non-specialist auditors increases the likelihood of future restatement.[5]

In contrast to these studies, we focus on real events following dismissals. Dismissals are the most common type of auditor switch and have the most ambiguity surrounding their underlying reasons. We examine the ability of dismissal *timing* to inform about the underlying circumstances of the dismissal, and examine the informativeness of dismissal timing incremental to other attributes of the dismissal.

Two prior studies have examined the predictive ability of auditor switch timing to a limited extent. Schwartz and Soo (1996) find that auditor switches occurring during the fourth quarter or year-end audit fieldwork predict losses, modified audit opinions, and later filings of earnings announcements and audit reports. Schwartz and Soo (1996) do not distinguish between dismissals and resignations. Focusing on resignations, Cattanach et al. (2011) find that those occurring during the period of year-end audit fieldwork are more predictive of non-Big N successors compared to those occurring earlier. Unlike these two studies, we focus on dismissals because there is more ambiguity about their implications. Whereas the two studies focus on switches that occur extremely late in the reporting year, we measure dismissal timing more

[5] Other studies examine real events that *precede* auditor switches. Hennes, Leone, and Miller (2014), Huang and Scholz (2012), and Mande and Son (2013) find that restatements increase the likelihood of auditor switches. Hennes et al. (2014) focus on dismissals, Huang and Scholz (2012) focus on resignations, and Mande and Son (2014) focus on dismissals and resignations as a group. DeFond and Subramanyan (1998) find that discretionary accruals are significantly negative in the year preceding dismissals and resignations, consistent with the former auditors demanding more conservative accounting choices than what management desired.

granularly. It is important to understand the signaling value of early and mid-year dismissals because relatively few dismissals occur extremely late in the reporting year. We also examine a different set of future events: restatements, material weaknesses, and delistings. Finally, we examine whether stock prices properly impound the implications of dismissals.

As discussed further in the next section, we argue that later dismissals are more likely among clients that are aware of existing accounting problems or impending action by the auditor. A concurrent study by Cassell, Hansen, Myers, and Seidel (2016) finds that auditor switches during the fourth quarter or year-end fieldwork are associated with future restatements (their study does not distinguish between dismissals and resignations). The authors offer an alternative explanation for their results: following a late switch, the successor auditor has insufficient time to discover accounting errors in the first audit it conducts, resulting in restatements in subsequent years. This explanation thus reverses the direction of causality that we propose. Cassell et al. (2016) propose that late switches cause restatements, in contrast to our hypothesis that pressure to restate causes late switches.

In a sensitivity analysis, Cassel et al. (2016) attempt to eliminate endogeneity and explicitly test their contention that late-year switches cause restatements by using a sample of exogenous auditor switches related to Arthur Andersen's collapse. The test yields mixed evidence that late-year switches cause restatements. In this subsample, late-year switches are not related to future restatements on average, but when interacting late-year switches with firm complexity, the interaction term is significantly related to future restatements.

Our study employs a different identification strategy to test for causality in the other direction. We require that the future announced restatements stretch back to a period ended

before the auditor dismissal date.[6] Late switches could not be the original cause of these restatements because the accounting errors existed before the switch occurred. We thus test the predictive power of dismissal timing for restatements that cannot have been *originally* caused by late succession. Evidence of such predictive power would support our contention that pressure to restate causes late switches. Another difference between our study and Cassel et al. (2016) is that we examine future material weaknesses and delistings in addition to restatements. Endogeneity is less of a concern with these events because auditor detection failure is not their fundamental cause, and thus it is less plausible that the successor auditor's time crunch could cause these events.

III. HYPOTHESIS DEVELOPMENT

As shown in the next section, the most common time to dismiss an auditor is in the 30 days following the 10-K filing date. This time period is when the previous year's audit engagement contract comes up for renewal. Engagement or dismissal decisions need to be made shortly after the 10-K filing date to give an auditor time to review the first quarter 10-Q. Engagement contracts typically cover the entire reporting year. Thus, dismissals that occur after the early-year engagement renewal period are typically cases in which the client is reversing its original choice of auditor for the year. Such a reversal could occur as management grows in awareness of accounting problems or as conflicts with the auditor sharpen.

Thus, we expect that the probability of underlying accounting problems increases with the lateness of dismissals. The later in the reporting year that the dismissal occurs, the less time the new auditor has to plan and conduct the audit. As the year goes on, managers would likely

[6] We also remove post-Enron dismissals of Arthur Andersen and other dismissals that are unlikely to result from auditor-manager conflict, as discussed further in the sample selection section.

become increasingly concerned that a dismissal would compromise audit quality, in either substance or appearance, thus increasing management's incentive not to dismiss auditors. The dismissals that do occur later in the year, therefore, would tend to be driven by strong countervailing incentives, such as management's more crystallized understanding of conflicts with the auditor.

Management might not report the conflicts in the 8-K dismissal disclosure because of outright non-compliance with the 8-K regulation or because the conflicts have not yet definitively sharpened into reportable events. For example, management may be aware that the auditor is on a path toward finding a problem, but no direct communications about the problem have occurred. Thus, we hypothesize that, incremental to the information about disagreements and reportable events included in dismissal 8-Ks, dismissal timing will be informative for future restatements, material weaknesses, and adverse delistings:

> *H1: Later dismissals are associated with a higher incidence of future* ***restatements*** *compared to earlier dismissals, ceteris paribus.*
>
> *H2: Later dismissals are associated with a higher incidence of future* ***material weaknesses in internal control*** *compared to earlier dismissals, ceteris paribus.*
>
> *H3: Later dismissals are associated with a higher incidence of future* ***adverse delistings*** *compared to earlier dismissals, ceteris paribus.*

The hypotheses may not hold for two reasons. First, auditing standards require the dismissed auditor to communicate concerns about the client to the new auditor and share workpapers (AU Section 315). Although the communications are subject to the client's permission, our discussions with auditors indicate that the communications tend to be more informative than what is typically revealed through the public 8-K process. The communications may reduce clients' incentive to dismiss auditors to conceal problems, because clients may believe that the dismissed auditor would convey negative findings to a new auditor anyway.

Second, even if problem concealment is the driving force behind later-period dismissals, H1 and H2 may not hold if the new auditor does not require restatement or disclosure of material weaknesses. The new auditor may not require restatement or disclosure of material weaknesses because it fails to detect the problems, or because it acquiesces to the client's preferences (Dye 1991). Clients that dismiss auditors later in the year may be more likely to engage in "opinion shopping" and thus avoid reporting restatements or material weaknesses by finding an agreeable new auditor.

The final hypothesis concerns whether investors are aware of the implications of dismissals and dismissal timing. We assess whether the stock market efficiently prices the implications of auditor dismissals by examining price drifts in the six months, one year, and two years following the dismissal announcements. Systematically negative (positive) drifts following the dismissal announcement would indicate that the market was late to recognize the negative (positive) valuation implications of the dismissal. Given that the dismissals and their timing are publicly observable, we have no strong *ex ante* reason to believe that the market would misprice the signals in one direction or the other. Thus, we state the hypothesis about subsequent stock price drifts in null form:

> *H4: After controlling for risk, stock prices do not systematically drift downward or upward following dismissal announcements.*

IV. SAMPLE

Table 1 outlines the sample selection procedures. Using Audit Analytics, we identify 16,096 auditor dismissals announced between 2000 and 2013. We retain dismissals falling within fiscal years 2001-2012 that have a match to SEC Edgar for 10-K and 10-Q filing dates, as well as a match to Compustat and CRSP, leaving 3,976 dismissals. We remove dismissals involving

shell companies and subsidiaries and keep only the first dismissal announced within a fiscal year, leaving 3,233.

Next we isolate dismissals that have ambiguous implications for the client's reporting quality or financial health. We remove cases when the client disclosed verifiably exogenous reasons for the dismissal.[7] In addition, we argue that dismissals have minimal signaling value when the 10-K filing is more than 15 days overdue. Instead, the overdue 10-K itself represents the primary signal of accounting problems, and thus we exclude these dismissals.[8] Similarly, we exclude dismissals preceded by a restatement in the prior year, because the restatement represents an earlier signal of a problematic firm.

Lastly, to validly measure dismissal timing within the reporting year, we require a beginning 10-K filing date and eliminate reporting years with unusual timing features such as changes in fiscal year end. The final base sample is 1,820 dismissals. Further sample reductions occur in each analysis because of additional data requirements.

To select a matched control sample, we identify firms that have no auditor change in the current fiscal year or following two reporting years, and apply the same data requirements involving SEC Edgar, Compustat, CRSP, and unusual fiscal years. As in the treatment sample, we exclude potential control firm years when the 10-K is more than 15 days overdue. We match control observations to treatment observations based on Fama-French 17 industry, size (total assets) and annual return on assets (ROA). After matching on industry, we identify the closest 16 control firms based on size in the fiscal year ended prior to the treatment firm's dismissal announcement date, and then select the closest ROA. We use this matching procedure rather than

[7] These reasons are the fall of Arthur Andersen; company or audit firm mergers; or auditors that are unregistered, under regulatory investigation or banishment, or exiting public company audits.
[8] Cao, Chen, and Higgs (2016) find that late filings are associated with a higher likelihood of future restatement.

propensity-score matching because restatements and delistings can cluster by industry. It is also difficult to empirically predict auditor switches, and thus a powerful model for generating propensity scores is not available.

V. RESEARCH DESIGN

Timing of Dismissals

We first examine patterns in the timing of auditor switches within the reporting year, focusing on activity around 10-K filing and quarter-end dates. Panels A and B of Figure 1 plot auditor dismissal and resignation announcements by day, as a percentage of total sample dismissals or resignations, over days (-30, +90) relative to the 10-K filing date (day 0). Dismissal activity trends sharply upward at the 10-K filing date and remains relatively high over the next 30 days. The high volume of dismissals during this window is not surprising because this is the time of year when audit engagement contracts come up for renewal. Resignations are also somewhat higher during this time period, but the pattern is not as pronounced (Panel B). Untabulated analysis reveals no evidence of spikes in dismissals or resignations around 10-Q filing dates.

Figure 2 plots the daily dismissal activity over the 90 days of each fiscal quarter. The highest activity occurs near the end of the first and beginning of the second fiscal quarter, reflecting the high dismissal rate following 10-K filings observed in Figure 1. Dismissals decline over the third quarter, fourth quarter, and beginning of next year's first quarter (during year-end audit fieldwork), which is consistent with clients' growing reluctance to dismiss auditors as the reporting year progresses.

Given the spike in dismissals after 10-K filing dates and the trend in dismissals over the remainder of the reporting year, we measure the timing of dismissals by dividing a reporting year into five periods:

- Period 1. The 10-K filing date and the following 30 days
- Period 2. The second fiscal quarter, excluding any days in Period 1
- Period 3. The third fiscal quarter
- Period 4. The fourth fiscal quarter
- Period 5. Next year's first fiscal quarter up to the earlier of (1) the day before the 10-K filing date or (2) 15 days following the 10-K filing deadline.

Period 5 covers the period of year-end audit fieldwork. As discussed in the previous section, when the 10-K filing is delayed by more than 15 days, we omit auditor changes occurring after this point (effectively ending Period 5 at this point instead of at the later filing date).

We generally assign an auditor change to a period using filing date of the Item 4.01 8-K that announces the change. However, sometimes clients announce an auditor change before it becomes effective. These pre-announcements are typically cases when the auditor change will not occur until the year-end audit concludes (10 percent of sample dismissals). For these cases, we assign the auditor change to Period 1 because this is effectively an early-year auditor change, and it is less likely that accounting problems drive these planned changes.[9]

Since 2004, SEC registrants have been required to issue an Item 4.01 8-K auditor change notice within four business days of the triggering event. To ensure accurate announcement dates, we manually verify all announcement dates in Audit Analytics that are outside of days (0, 7) relative to the Audit Analytics' "effective date" of the auditor switch. We conduct this

[9] We identified these cases by comparing Audit Analytics' dismissal announcement dates to dismissal effective dates (i.e. comparing file_date to dismiss_date in the Audit Analytics database). We also identified these cases by cross-checking with the auditors listed on Compustat from one year to the next. As an additional check for accuracy in assigning periods, we verified proper assignment for all dismissals assigned to period 5.

verification because sometimes the Audit Analytics' announcement date reflects when the firm announces the new auditor's engagement rather than the old auditor's dismissal.[10]

Dismissals and Future Adverse Events

Regressions incorporating control firms

To test H1-H3, we examine trends in the rate of future adverse events across dismissal periods. The trend across periods is examined on a univariate and multivariate basis both within dismissal firms and relative to control firms. Control firms are assigned a pseudo-dismissal period equal to that of the matched dismissal firm. Logistic regressions that incorporate the control firms have the following structure:

$$\text{Future Event Indicator}_i = \beta_0 + \beta_1 \text{PERIOD}_i * \text{DISMISS}_i + \beta_2 \text{PERIOD}_i + \beta_3 \text{DISMISS}_i + \boldsymbol{\beta}\mathbf{CONTROLS}_i + \varepsilon_i \quad (1)$$

where PERIOD equals firm i's auditor dismissal period, ranging from 1 to 5 as previously defined. DISMISS is an indicator variable equal to 1 for the dismissal firm and 0 for the matched control firm. A positive and statistically significant β_1 estimate indicates that, compared to control firms, the dismissal treatment firms exhibit a more pronounced upsloping trend in the odds of a future adverse event across dismissal periods.

When a restatement indicator serves as the dependent variable (H1), it equals 1 if the firm announces a restatement in the two years after the dismissal date. Importantly, we set the restatement indicator equal to 0 unless the restatement affects periods before the effective date of the auditor dismissal. Thus, any detected relation between dismissal timing and future

[10] After manually correcting the announcement dates to reflect the (earlier) dismissal date, we find that 3 percent of dismissals are announced more than seven days after the dismissal effective date. In some cases, the four-business-day regulation was not yet in place. In other cases, the firm simply may not have complied with the regulation, or the Audit Analytics' effective date may not reflect the actual dismissal decision date. Based on our reading of 8-K announcements, Audit Analytics' "effective date" could mean the date that the client made its dismissal decision, the date when the auditor was notified, or the date when the audit work ceased.

restatements cannot be due to accounting errors that were originally caused by the successor auditor's lack of time.

When a future material weakness indicator serves as the dependent variable (H2), it equals 1 if the firm announces a material weakness in internal controls in the two years following an auditor dismissal announcement. The sample for this test is restricted to firms that obtain an auditor's attestation of management's internal control assessment under SOX 404. These firms would be the most likely to experience conflicts with the auditor over internal controls, possibly leading to dismissals. The SOX 404 auditor attestations are required for accelerated filers beginning in 2004.

When a future delisting indicator serves as the dependent variable (H3), it equals 1 if the firm delists due to adverse reasons in the two years after the dismissal date. Adverse reasons are identified using the "dropped" category of delisting codes on CRSP (500 range) and include bankruptcy, unacceptably low stock price, insufficient capital, delinquent filings, and moves to over-the-counter trading. Due to ambiguity about causes of the delisting, we do not classify as adverse those delistings in the "dropped" category related to an insufficient number of shareholders, going private, a move to another major exchange, and "no reason given." We also do not classify as adverse those delistings in the following CRSP categories: merger, exchange, liquidation, expiration, or "became foreign."

We measure most control variables as three-year averages, ending with the most recent fiscal year ended prior to the dismissal. The three-year averages are intended to reflect conditions at the time accounting errors occurred, or the conditions that led to delistings or material weaknesses in internal control. The suffix _AVE denotes that a variable is a three-year average. If data is missing for any of the prior three years, the average is based on the years

available. The Appendix contains detailed variable definitions. All continuous variables are winsorized at the 1st and 99th percentiles.

We expect higher probabilities of restatements, material weaknesses, and delistings for firms that have more distressed, volatile, or complex operations. Thus, we expect restatements, material weaknesses, and delistings to be positively related to the three-year average of the following annual variables: loss indicator (LOSS), debt-to-assets ratio (LEVERAGE), mergers and acquisitions indicator (M&A), new debt or equity issuance (DE_ISSUANCE), market-to-book ratio (MTOB), total absolute operating accruals (ACCRUALS), going concern opinion indicator (GOING_CONCERN), restructuring charges (RESTRUCT), and a foreign operations indicator (FOREIGN_TRANS). We expect a lower probability of restatements, material weaknesses, and delistings for more mature and profitable firms as reflected in the three-year averages of logged assets (SIZE), annual ROA (ROA), and a big N auditor indicator (BIGN).

We also include some control variables that are uniquely relevant to a particular type of future event. In the restatement and material weakness regressions, we control for survivorship by including the number of quarters of Compustat data available for the firm in the two years following the dismissal (NQTRS). We expect NQTRS to be positively related to restatements and material weaknesses because the more times that firms undergo the quarterly closing process, the more opportunities there are to discover accounting errors or material weaknesses. In the material weakness regression, we control for prior SOX 404 material weaknesses (those disclosed for the fiscal year ended prior to the dismissal announcement). We also control for prior material weaknesses in a robustness test of the restatements regression, but not in the main analysis because the variable causes sample attrition. In the delisting regression, we control for two attributes of the stock price that could lead to delisting: the abnormal buy-and-hold stock

return in the year leading up to the dismissal announcement (PRE_RET) and the natural log of the stock price one day before the dismissal announcement (PRICE). We expect both variables to be negatively related to future adverse delistings.

Regressions incorporating other dismissal information

To test the predictive power of dismissal timing incremental to information disclosed in the dismissal 8-K and other attributes of the dismissals, we omit control firms because they have no actual dismissals. The logistic regressions have the following structure:

$$\text{Future Event Indicator}_i = \beta_0 + \beta_1 \text{PERIOD}_i + \beta_2 \text{NEG\_CIRC}_i + \beta_3 \text{DELAY\_SUCCESSOR}_i + \beta_4 \text{IMMEDIATE\_UP}_i + \beta_5 \text{IMMEDIATE\_DOWN}_i + \boldsymbol{\beta}\mathbf{CONTROLS}_i + \varepsilon_i \quad (2)$$

NEG_CIRC is an indicator variable capturing whether negative circumstances are disclosed in the client's 8-K dismissal announcement or auditor's verification letter, as identified by Audit Analytics. Negative circumstances include the disagreements and reportable conditions described in Section II as well as mentions of SEC investigations, restatements, and disagreements between the client's dismissal disclosure and the auditor's verification letter (the Appendix contains a full list of negative circumstances under the definition of NEG_CIRC). We expect NEG_CIRC to be positively related to future adverse events. After controlling for NEG_CIRC, the coefficient on PERIOD reflects whether dismissal timing predicts future adverse events incremental to the negative information disclosed by clients and auditors.

The second dismissal attribute is an indicator variable capturing whether the client fails to name a successor auditor at the time of the dismissal announcement (DELAY_SUCCESSOR). Failing to name a successor indicates a sudden and unplanned dismissal that may have been prompted by a financial reporting or going concern problem. Thus we expect DELAY_SUCCESSOR to be positively related to future adverse events. The variable equals 1 if

the Audit Analytics' engagement date for the new auditor follows the dismissal effective date by more than seven days.[11]

The final two dismissal attributes pertain to cases when the client immediately appoints a successor. IMMEDIATE_UP (IMMEDIATE_DOWN) equals 1 if the immediate appointment involves a switch from a non-Big N to Big N auditor (Big N to non-Big N auditor). These two variables may be positively or negatively related to future adverse events. Firms upgrading to Big N auditors may have fewer or less severe underlying problems and would thus be less likely to experience future adverse events. On the other hand, Big N auditors may be more likely to detect problems that were undetected or waived by the previous non-Big N auditor.

Market pricing of dismissals

We test whether investors understand the signaling implications of dismissals by investigating stock price drifts following dismissal announcements. We measure drifts in buy-and-hold returns using the methods recommended in Lyon et al. (1999). The methods involve creating benchmark portfolios that are free of rebalancing and survivorship bias. Standard benchmark indices like the S&P 500 or CRSP size deciles periodically admit new firms and rebalance positions, which can induce bias because the sample of treatment firms is static. Rather than use a standard index, we form our own benchmark portfolios based on size and book-to-market, and compute returns over a given horizon without admitting new firms or rebalancing.

To form the benchmark portfolios, we partition all CRSP/Compustat NYSE firms into size-based deciles using market value of common equity (share codes 10 and 11) at the end of June in each year. We then apply the NYSE size decile cutoffs to Nasdaq and AMEX firms, and

[11] Manual inspection of dismissal disclosures reveals that, when these dates are within seven days of each other, the successor and dismissal announcements were generally simultaneous.

partition the lowest decile into quintiles, creating a total of 14 size portfolios. Each size portfolio is then divided into book-to-market quintiles, creating 70 benchmark portfolios. To compute the benchmark portfolio return that will be subtracted from the return of a given dismissal firm, we compute the portfolio's equally-weighted buy-and-hold return starting two days after the dismissal announcement and ending six months, one year, or two years later (depending on the horizon being tested). If the dismissal firm or a firm in the benchmark portfolio stops trading during this time, we incorporate the delisting return as in Beaver et al. (2007).

The abnormal return of a dismissal firm is the firm's buy-and-hold return minus the benchmark portfolio's buy-and-hold return. Lyon et al. (1999) find that these abnormal returns are skewed, and thus recommend two nonparametric approaches for evaluating statistical significance: bootstrapped skewness adjusted t-statistics and empirical p-values derived from "pseudoportfolios". Under the first approach, the t-statistic is adjusted for skewness as specified in Johnson (1978). Then the statistical significance of this t-statistic is evaluated using 5,000 bootstrapped resamples from the original sample of size n/2.

The second approach involves generating an empirical distribution of abnormal returns using 1,000 "pseudoportfolios". Each pseudoportfolio consists of control firms randomly matched (with replacement) to dismissal firms by size and book-to-market category. The statistical significance of the dismissal portfolio return is determined by where it lies in the empirical distribution of pseudoportfolio returns. Following Jegadeesh and Titman (2001) and others (e.g. Zhang 2006; Fang and Peress 2009; Edelen, Ince, and Kadlec 2016), we limit all stock return analyses to firms that have a stock price of greater than $5 one day before the dismissal announcement in order reduce the effects of illiquidity and bid-ask bounce on results.[12]

[12] Similarly, for the firms in the pseudoportfolios we require a stock price greater than $5 as of the month ended prior to the dismissal date of the treatment firm.

V. RESULTS

Descriptive Statistics

Table 2, Panel A presents descriptive statistics for the test variables, with the dismissal and matched control samples presented separately. The sample of dismissals has significantly higher rates of restatements, material weaknesses, and adverse delistings in the two years following the switch ($p < .01$). The dismissal sample also has statistically higher rates of losses (LOSS_AVE) and going concern opinions (GOING_CONCERN_AVE) in the years before the dismissal. Despite matching to control firms on assets and ROA in the fiscal year prior to the dismissal date, the dismissal sample's mean SIZE_AVE and ROA_AVE are statistically lower. However, magnitudes are economically similar across samples. Mean and median SIZE_AVE for the dismissal sample are 4.9 and 4.7, compared to 5.0 and 4.9 for the control sample. Mean and median ROA_AVE for the dismissal sample are -10.5 and 0.5 percent, compared to -7.7 and 0.8 percent for the control sample. Dismissal firms also have statistically lower mean stock price (ln(PRICE)) and statistically higher mean M&A activity (M&A_AVE), capital issuance (DE_ISSUANCE_AVE), accruals (ACCRUALS_AVE), restructuring activity (RESTRUCT_AVE), and survivorship following the switch date (NQTRS).

Table 2, Panel B presents Pearson (upper diagonal) and Spearman (lower diagonal) correlation coefficients for the dismissal sample, with coefficients bolded if they are statistically significant at the 10 percent confidence level. As predicted, the PERIOD of the dismissal is significantly correlated with restatements, material weaknesses, and adverse delistings (Pearson correlations of 0.07, 0.20, and 0.13). Surprisingly, PERIOD is not significantly correlated with disclosure of negative circumstances in the dismissal announcement (NEG_CIRC) (Pearson correlation = 0.03). In other words, firms are not significantly more likely to disclose negative

circumstances when dismissing auditors late in the year. NEG_CIRC also is not significantly correlated with future restatements (Pearson correlation = 0.00), but is significantly associated with future material weaknesses and delistings (Pearson correlations of 0.19 and 0.09).

Unconditional relations between dismissal timing and future adverse events

Future restatements

Table 3 presents the rate of future restatements by dismissal period. Rates are the percentage of firms that announce restatements in the two years following dismissal announcements. The restatement rate among dismissal firms rises from 12.3 percent in Period 1 to 20.8 percent in Period 5. The rise is monotonic except for a dip from 18.6 percent in Period 3 to 16.6 percent in Period 4. The rates in Periods 3, 4, and 5 are statistically higher than the Period 1 rate at the 10 percent level of confidence or greater.

The restatement rate associated with dismissals in periods 3 through 5 combined is 18.2 percent (untabulated). *Resignations*, which are an obvious red flag for accounting problems, are associated with a future restatement rate of 22.6 percent. Thus, dismissals that occur after the second quarter of the fiscal year entail a level of restatement risk that is closer to resignations than to early-year dismissals. This result suggests that the end of the second quarter is a powerful separator of more and less innocuous dismissals.

The control sample and sample of resignations do not exhibit upsloping restatement rates across periods. For each period except Period 2, the rate in the dismissal sample is statistically higher than that of the control sample. Differences in restatement rates across the two samples become starker in periods 3 through 5, ranging between 7.3 and 12.5 percentage points ($p < .05$).[13]

[13] Increasingly, firms have been correcting errors via informal revisions (i.e. "little r" restatements) as opposed to formal restatements that are announced in an 8-K and clearly described in a 10-K or 10-Q filing (Tan and Young

Recall that the restatements in Panel A are those that affect a period before the auditor dismissal. In contrast, the first column of Panel B presents the rates of restatements that only affect periods after the dismissal (i.e. "new" errors). If new errors tend to be caused by the time crunch that occurs when successor auditors take over later in the reporting year (Cassell et al. 2016), we would expect to observe "new error" restatements occurring more frequently after late dismissals. However, we do not observe such a pattern. The new-error restatement rate is highest following Period 3 dismissals (5.3 percent), and declines to 3.4 percent in Period 4 and 0 percent in Period 5. Thus, it does not appear that late successions tend to be the *original cause* of accounting errors.

However, as shown in columns 2 and 3 of Panel B, late successions may prevent the successor auditor from immediately discovering errors that began under the previous auditor (i.e. "old" errors). Column 2 repeats from Panel A the restatement rates by period for these old errors. Column 3 shows the percentage of these errors that the successor discovers by the end of its first audit (i.e. the percentage of these restatements announced before the first 10-K audited by the successor is filed). Consistent with late succession preventing immediate discovery of old errors, period 4 and 5 successors are the least likely to immediately discover old errors. Untabulated analysis shows that the probability of immediate discovery for period 4 and 5 successions combined (50.0 percent) is statistically lower than for periods 1 through 3 combined (69.6 percent) ($p < .05$). Thus, although there is no evidence that late successors overlook new accounting errors, late successors are more likely to overlook old accounting errors.

2015). The SEC allows informal revisions if the accounting error is not material to any past period (but would be material to correct as a catch-up adjustment in the current period). Patterns in the restatement rates by period are similar when excluding informal revisions (which constitute 18% of our sample "restatements"). We identify informal revisions as those missing 8-K 4.02 dates in the Audit Analytics database and not having the stem "restat" in the error disclosure text.

Nevertheless, late successions could not have originally caused these errors, and therefore the evidence indicates that late-year auditor dismissals are primarily reflections of pre-existing accounting problems rather than causes of future accounting problems.

Future Material Weaknesses

Panel C of Table 3 presents by dismissal period the rate of future material weaknesses for firms subject to SOX 404 internal control audits. Sample size declines considerably (n=435) because SOX 404 internal control audits did not begin until 2004 and are required only for accelerated filers. We drop both the dismissal and matched control firm if either firm lacks an internal control audit.

The material weakness rate among dismissal firms monotonically increases over the dismissal periods, from 8.4 percent in period 1 to 37.5 percent in period 5. The rates in Periods 3, 4, and 5 are statistically higher than the Period 1 rate ($p < .01$). There is no upsloping rate pattern across periods in the control sample or the sample of resignations. The material weakness rates for dismissal firms begin to statistically diverge from those of control firms in Period 3. The Period 5 divergence is not statistically significant due to small sample size (n=8). The divergence in periods 3 through 5 is considerable, with dismissal firms having rates of 22.6, 30.0, and 37.5 percent in these periods compared to control firm rates of 3.2, 5.0, and 12.5 percent.

Results (untabulated) are similar when expanding the sample to include firms that are subject to the SOX 404 management assessment but not the auditor attestation (n=650).[14] When further expanding the sample to include firm-years subject to the SOX Section 302 management certification of internal controls (n=1,315), the rate of SOX 302 material weaknesses in the dismissal sample rises monotonically over periods 1 through 4 but declines in period 5 to a level

[14] The additional firms are non-accelerated filers that became subject to the SOX 404 management disclosure in 2007.

similar to period 2 (untabluated).[15] The material weakness rates in periods 2 through 5 are statistically higher than the rate in period 1. The control and resignation samples exhibit no upsloping pattern in rates across periods, and in all periods the rates in the dismissal sample are statistically higher than the rates in the control sample.

Future Adverse Delistings

Panel D of Table 3 presents the rate of future adverse delistings by dismissal period. The delisting rate among dismissal firms rises from 4.6 percent in Period 1 to 22.9 percent in Period 5. The rise is monotonic except for a dip to 3.4 percent in Period 2. The rates in Periods 3, 4, and 5 are statistically higher than the Period 1 rate at the 10 percent level of confidence or greater. However, the rate patterns are also roughly upsloping in the control sample and sample of resignations, and delisting rates do not statistically differ between dismissal and control firms in Periods 2 and 4. Thus, firm characteristics rather than dismissal period may explain the upsloping trend in the delisting rate among dismissal firms, a possibility we test later with logistic regression.

Regression analysis

We use logistic regression to examine whether the signal about the risk of future adverse events provided by dismissal timing is subsumed by other signals about the firm and the dismissal that are available to capital markets participants at the time of the dismissal.

Regressions incorporating control firms

Table 4, Panel A presents results from estimating regression (1) for each of the three dependent variables (indicators for future restatement, material weakness, and adverse delisting). The coefficients on the PERIOD*DISMISS interaction terms indicate whether dismissal firms,

[15] The additional firms became subject to the SOX 302 management disclosure in 2002.

as compared to control firms, have a more pronounced positive relation between dismissal period and the odds of a future negative event.

In the future restatement regression, the estimated coefficient on the interaction is statistically positive ($p < .05$). The odds ratio of 1.21 suggests that, on average, the odds of a future restatement increase by 21 percent per dismissal period, ceteris paribus. The estimated coefficient on the PERIOD variable is not statistically different from zero (as expected), providing no evidence that the pseudo-period assigned to control firms is related to future restatements. Control variables that have significant coefficients in the predicted (unpredicted) direction are losses, leverage, M&A activity, accruals, Big N auditor, and number of quarters of survivorship (ROA and firm size). The percentage of concordant observations is 63.4 percent, i.e. across all possible pairings of restatement and non-restatement observations, the regression assigns higher odds to the restatement observation in 63.4 percent of the pairs.

In the future material weakness regression, the PERIOD*DISMISS interaction coefficient is positive and significant ($p < .01$). The odds ratio of 1.88 suggests that, on average, the odds of a future material weakness increase by 88 percent per dismissal period. The PERIOD coefficient is not statistically different from zero (as expected), providing no evidence that the pseudo-period assigned to control firms is related to future material weaknesses. Prior material weaknesses are also significant predictors of future material weaknesses (odds ratio of 5.2), as are firm size and M&A activity. The percentage of concordant observations is 75.3 percent.

In the future delisting regression, the PERIOD*DISMISS interaction coefficient is not statistically different from zero. Thus, consistent with the univariate comparisons in Table 3, there is no evidence that dismissal firms have a *uniquely* upsloping trend in the future delisting rate across dismissal periods as compared to control firms. Future delistings are instead

predicted by going concern opinions and firm characteristics such as low stock price level, low prior stock returns, financial leverage, and not having a Big N auditor. These other factors are highly predictive, resulting in a percent concordant of 87.5 percent. In summary, results from the regressions employing matched control firms indicate that dismissal firms have a unique upward trend in rates of future restatements and material weaknesses across dismissal periods. A unique trend for future delistings is not observed.[16]

Table 4, Panel B presents sensitivity analysis that identifies which particular dismissal periods are associated with future adverse events after controlling for other predictors. The PERIOD timing variable (1 through 5) is replaced with a set of indicator variables denoted PERIODX, which are equal to 1 if the dismissal or pseudo-dismissal period is period X and 0 otherwise. We combined dismissal periods 4 and 5 due to the low number period 5 dismissals. The coefficients on the PERIODX*DISMISS variables indicate whether firms that dismiss auditors in period X have a higher probability of future adverse events compared to control firms assigned to the same period, after controlling for other factors that may also predict future adverse events. For brevity the coefficients on the control variables are not presented.

Similar to the univariate analysis in Table 3, dismissals after the second quarter of the fiscal year are related to future restatements and material weaknesses, ceteris paribus (i.e. the coefficients on the PERIOD3*DISMISS and PERIOD4&5*DISMISS interactions are statistically positive). In the future delistings regression, consistent with the insignificant

[16] Ai and Norton (2003) point out that, because logistic regression models are nonlinear, interpreting the sign and significance of interaction coefficients is not straightforward. However, Kolasinski and Siegel (2010) claim that in most cases logistic interaction coefficients can be analyzed in the conventional manner. To ensure our inferences are valid, we use an alternative specification that does not involve interaction terms. We separate dismissal firms from control firms and re-estimate the regressions on each subsample, dropping the interaction term and focusing on PERIOD as the variable of interest. In the regressions for all three future events, we find that the comparisons of the PERIOD coefficients across the two samples are similar to what is inferred from the PERIOD*DIMISS interactions in Table 4, Panel A.

PERIOD*DISMISS interaction coefficient in Panel A, there is no temporal pattern in the PERIODX*DISMISS coefficients. Significantly positive coefficients are observed for periods 1 and 3 but not for periods 2 and 4/5 combined.

Regressions incorporating other dismissal information

We now estimate regression (2) within the dismissal sample to test whether dismissal timing predicts future adverse events incremental to 8-K and other information about the dismissal. In the future restatement regression, we find a statistically significant and positive coefficient on PERIOD ($p < .01$), indicating that the dismissal period predicts future restatements after controlling for other information about the dismissal. The odds ratio of 1.26 indicates that, on average, the odds of a future restatement increase by 26 percent with each dismissal period, ceteris paribus. In other words, the expected odds of a future restatement are 2.5 times higher for a period 5 dismissal compared to a period 1 dismissal, ceteris paribus.[17]

Future restatements are not statistically associated with negative circumstances disclosed in the dismissal announcement (NEG_CIRC), suggesting that the disclosures tend to be unhelpful to market participants in discerning whether accounting problems are a factor in the dismissal. An immediately announced upgrade to a Big N auditor from a non-Big N auditor (IMMEDIATE_UP) significantly increases the likelihood of a future restatement compared to an immediately announced lateral change (odds ratio of 3.2, $p < .01$). Likewise, an immediate downgrade to a non-Big N auditor from a Big N auditor (IMMEDIATE_DOWN) significantly decreases the likelihood of restatement compared to an immediate lateral change (odds ratio of 0.4, $p < .01$). One interpretation of these audit upgrade and downgrade findings is that Big N audit firms are more likely to discover the errors of smaller audit firms, consistent with prior

[17] $2.5 = (1.26 \text{ odds ratio})^4$. The odds ratio of 1.26 is raised to the fourth power because there are four periods separating periods 1 and 5.

literature suggesting higher quality audit by Big N firms (DeAngelo 1981; Nagy 2005; Carver, Hollingsworth, and Stanley 2011). Another interpretation is that Big N firms are more conservative in waiving errors due to facing higher litigation risk (Lazer, Livnat, and Tan 2004). In either case, the results show that auditor upgrades are *not* good news about the client's prospects of avoiding a future restatement.

Results from the material weakness regression show a positive and highly statistically significant coefficient on PERIOD ($p < .01$), suggesting the dismissal period predicts future material weaknesses after controlling for other information about the dismissal. The odds ratio of 1.8 means that the expected odds of a future material weakness are 10.5 times higher for a period 5 dismissal compared to a period 1 dismissal, ceteris paribus. As in the restatement regression, negative circumstances disclosed about the dismissal (NEG_CIRC) have no incremental predictive power for material weaknesses. An immediate auditor upgrade (IMMEDIATE_UP) is the only attribute of the dismissal that predicts future material weaknesses (odds ratio of 4.3, $p < .05$).

In the adverse delistings regression, the PERIOD variable does not have incremental predictive power, nor do the other dismissal attributes. In this regression, the NEG_CIRC variable partially overlaps with the GOING_CONCERN_ALT variable because both variables capture cases when going concern issues are mentioned in the dismissal disclosure. The coefficient on NEG_CIRC thus reflects the predictive power of other (i.e. non-going concern) issues mentioned in the dismissal disclosures, and is not statistically significant. In contrast, the GOING_CONCERN_ALT variable is highly predictive of future delistings (odds ratio of 5.8, $p < .01$).[18]

[18] A going concern indicator variable that is based solely on going concern information disclosed in the dismissal 8-K is also a significant predictor of delistings (untabulated).

Table 5, Panel B presents sensitivity analysis that replaces the PERIOD timing variable (1 through 5) with the set of PERIODX variables denoting each period. The results thus identify the particular dismissal periods that are associated with future adverse events after controlling for other predictors. For brevity the control variable coefficients are not presented. Similar to the previous results, dismissals after the second fiscal quarter predict future restatements and material weaknesses. In contrast, none of the dismissal period indicators are significantly related to future delistings.

In summary, the results from regressions (1) and (2) provide strong evidence in favor of H1 and H2 but not H3. In other words, we find that dismissal timing has incremental predictive power for restatements and internal control weaknesses but not for adverse delistings.[19] The predictive power of dismissal timing is in stark contrast to the lack of predictive power found for 8-K dismissal disclosures.

Market pricing of dismissal signals

To understand how equity investors react to dismissals and whether they understand the implications of dismissals and dismissal timing, we examine stock returns in the three trading days (-1, 0, +1) around dismissal announcements and in the subsequent six months, one year, and two years. To reduce the effects of illiquidity and bid-ask bounce, firms are required to have stock prices of $5 or greater prior to the dismissal announcement (Jegadeesh and Titman 2001).

Table 6 presents mean cumulative size-adjusted stock returns over days (-1, 0, +1) around the dismissal announcement. Mean returns are statistically negative around period 3

[19] In untabulated robustness tests, we find that inferences from the restatement regressions in Panels A and B of Tables 4 and 5 are similar when including an indicator variable denoting whether the firm disclosed SOX 302 or 404 material weaknesses in the year prior to the dismissal announcement. This control variable is not included in the main restatement analyses because it causes sample attrition.

announcements (-0.74 percent, $p < .05$) and positive around period 5 announcements (2.17 percent, $p < .01$). Mean returns for the other periods are of small magnitude (-0.11 to 0.00 percent). The positive mean reaction to period 5 dismissals is surprising. One possibility is that the announcement resolves uncertainty about suspected accounting problems. Another possibility is that it represents mispricing, which we test below.[20] The mean reaction to dismissals as a whole is a statistically insignificant -0.11 percent, compared to a statistically negative mean reaction of -1.72 percent for resignations ($p < .01$). Untabulated analysis indicates that the generally tepid reaction to dismissal announcements is not due to prior anticipation; there is no evidence of negative drifts in stock prices during the six months prior to the dismissal announcements for any dismissal period.

We test for stock price drift over six-month, one-year, and two-year horizons beginning two days after the dismissal announcement. We assess whether dismissal firms' mean abnormal buy-and-hold return statistically differs from zero using the bootstrapped skewness-adjusted t-statistic. We also employ a nonparametric procedure testing whether the mean and median dismissal firm abnormal returns are in a tail of the pseudoportfolio return distribution. A rejection region consisting of the top and bottom fifth percentiles corresponds to a two-tailed test at the 10 percent confidence level.

Table 7 presents the mean and median abnormal returns (i.e. drifts) following dismissal announcements. Assuming adequate controls for risk, negative (positive) drifts indicate underreaction (overreaction) to the negative implications of dismissal announcements. There is

[20] The result is not due to outliers. The median announcement return for period 5 dismissals is +1.6 percent, which is statistically different from zero according to a sign test. For the ten Period 5 dismissals with the most positive announcement returns, we find no concurrent events for the firms on LexisNexis or SEC EDGAR, except for one merger announcement. The mean and median announcement returns continue to be significantly positive after eliminating the six Period 5 dismissals that involve upgrades to a Big 4 auditor.

evidence of negative drifts in the six months and one year following dismissal announcements. The mean drift over six months is -2.5 percent, which has a t-statistic that is significant at the 5 percent confidence level. The nonparametric percentile is 8.7, which is just outside the conventional significance range. The median six-month drift of -4.3 percent is nonparametrically significant (2.4 percentile). Similar to the six-month drifts, the mean one-year drift (-2.9 percent) has a significant t-statistic ($p < .10$) but is nonparametrically insignificant (25.5 percentile), and the median one-year drift (-7.9 percent) is nonparametrically significant (3.4 percentile).

The strong median results indicate that investors underreact to most auditor dismissals. The weaker mean results indicate that a trading strategy to exploit the common underreaction may not be feasible, because a minority of dismissal firms earns relatively large positive abnormal returns that partially offset the negative abnormal returns earned by the majority of dismissal firms. An alternative explanation for the negative drifts is compensation for risk (rather than underreaction). This explanation seems unlikely, however, because negative drifts would be caused by decreases in perceived risk. It is unlikely that dismissals rationally decrease perceived firm risk, given the adverse real events that tend to follow.

Partitioning the sample by dismissal period, there is strong evidence of negative drifts over the six-months following Period 2 dismissals and the two-years following Period 4 dismissals. The mean (median) six-month drift following Period 2 dismissals is -3.9 (-6.2) percent. The mean is significant both according to the t-test ($p < .10$) and nonparametrically (percentile = 4.4), and the median is nonparametrically significant (percentile = 3.5). The mean (median) two-year drift following Period 4 dismissals is -16.2 (-21.3) percent. The mean has a

significant t-statistic ($p < .05$) and has a nonparametric percentile of 4.2, and the median is just outside conventional significance levels (percentile = 6.0).

Other dismissal periods have weaker evidence of drifts. Period 1 dismissals have a significant six-month t-statistic ($p < .10$), but the mean and median are nonparametrically insignificant. Period 2 dismissals have a significantly negative median one-year drift of -9.1 percent (percentile = 4.8), but the mean is not statistically significant. The only evidence of superior stock performance following dismissals is a median two-year -2.8 percent drift for Period 3 dismissals. Even though this drift is negative, it is near the top of the pseudoportfolio distribution (96.2 percentile).

Due to small sample sizes related to the $5 minimum stock price requirement, we combine periods 2 and 3 and periods 4 and 5 to determine whether inferences change. The six-month drift for combined Period 2/3 and the two-year drift for combined Period 4/5 reflect the Period 2 and Period 4 drifts discussed above. A previously undetected one-year median drift of -12.7 percent is also observed for combined Period 4/5.

To summarize, consistent evidence of negative stock price drifts is observed following dismissals pooled together as a group (at six months and one year) and dismissals in Period 2 (six months) and Period 4 (two years). Mixed evidence of negative drifts is observed following dismissals in Period 1 (six months), Period 2 (one year), and Period 4/5 combined (one year). The only evidence of superior stock price performance following dismissals is the median two-year drift for Period 3. Although drifts are not observed across all periods and horizons, the multiple cases of statistically negative drifts and the relative absence of positive drifts indicates a tendency of investors to underreact to dismissal announcements. Given that the mean drifts tend to be less negative and statistically weaker than the median drifts, it may not be feasible for

sophisticated investors to capitalize on the drifts and arbitrage away the mispricing. Nevertheless, the evidence indicates that stock prices tend not to fully impound the negative implications of dismissal announcements.

VI. CONCLUSION

This study explores the information conveyed by the timing of auditor dismissals within the reporting year. When dividing the reporting year into five dismissal periods, we find largely monotonic increases in the probability of future adverse events across the five periods. The dividing line between more and less innocuous dismissals is the end of the second fiscal quarter. Dismissals occurring after this point are associated with starkly higher rates of future restatements and material weaknesses, even after controlling for other factors, and entail a level of restatement risk approaching that associated with auditor *resignations*.

In contrast, we find that negative circumstances disclosed in dismissal 8-K forms generally have no significant predictive ability for future adverse events incremental to dismissal timing and other predictors. The only exception is the ability to predict delistings using the going concern issues disclosed in the dismissal 8-K. Finally, we find evidence that equity markets do not understand the implications of dismissals. Stock prices of dismissal firms tend to drift negatively following dismissal announcements.

Capital market participants likely have a general awareness that firms are reluctant to disclose negative circumstances related to dismissals, but our findings indicate an extreme degree of uselessness for dismissal disclosures. Throughout the 1970s and 80s regulators attempted to increase transparency about the reasons behind auditor changes, culminating in a requirement to separate dismissals from resignations. However, considerable opacity continues to surround auditor changes classified as dismissals, which is by far the most common

classification. In the absence of more transparent disclosures, the evidence presented about the implications of dismissal timing may be useful to investors and to those charged with monitoring capital markets, including the SEC, PCAOB, exchange authorities, board members, analysts, and auditors themselves.

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Appendix

Variable Definitions

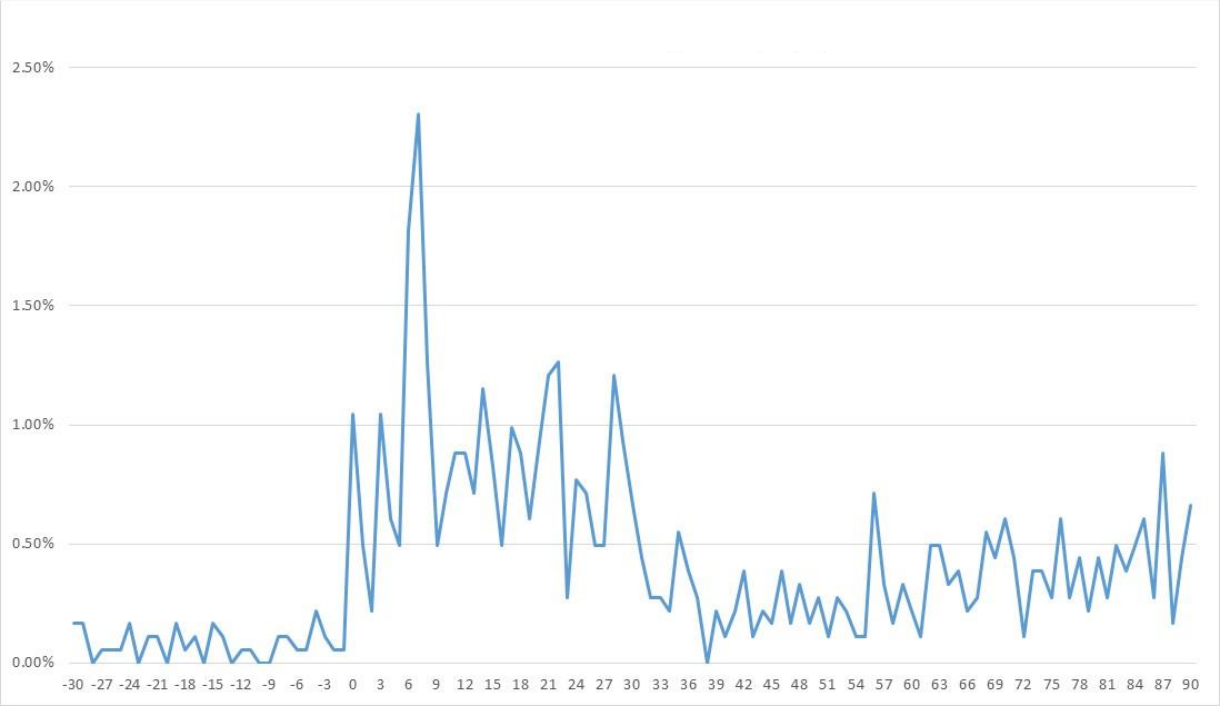
All continuous variables are winsorized at the 1st and 99th percentiles.

Dependent variables	
Restatement	Equals 1 if the firm announces a restatement in the two years following an auditor dismissal announcement and the restatement affects a period ended before the effective date of the dismissal. Restatement announcement dates, periods restated, and auditor change dates are obtained from Audit Analytics. Prior to searching for restatements in the two-year window, we also eliminate restatements in the Audit Analytics database that are announced 180 days after a previous restatement because these often relate to the same underlying issue.
Material weakness	Equals 1 if the firm announces a material weakness in the two years following an auditor dismissal announcement, 0 otherwise (derived from Audit Analytics).
Delisting	Equals 1 if the firm delists due to adverse reasons in the two years after the auditor dismissal announcement. Adverse reasons are identified using the "dropped" category of delisting codes on CRSP (500 range). Due to ambiguity about circumstances, we do not classify as adverse those delistings in the "dropped" category related to an insufficient number of shareholders, going private, a move to another major exchange, and "no reason given."
Variables of Interest	
DISMISSAL	Equals 1 if the firm has dismissed its auditor, 0 if the firm is a control firm.
PERIODX, where X=1 to 5	Equals 1 if the auditor dismissal announcement date or pseudo-dismissal announcement date is period X, 0 otherwise.
PERIOD	The period of the auditor dismissal, ranging from 1 to 5.
Control Variables	**Note: In the tables, the suffix _AVE on the variable names below denotes a three-year average of the variable. All variables are measured as of the fiscal year ended before the dismissal unless stated otherwise.**
LOSS	Equals 1 if annual net income (Compustat NI) is negative, 0 otherwise.
ROA	Annual net income (Compustat NI) / Ending total assets (Compustat AT)
LEVERAGE	Debt (Compustat DLTT + DD1) / Total assets (Compustat AT)
M&A	Equals 1 if firm reports non-zero pretax special items related to acquisitions or mergers (Compustat AQP), 0 otherwise.
DE_ISSUANCE	Annual net cash flows from financing activities (Compustat FINCF) / Beginning total assets (Compustat AT)
SIZE	Natural log of total assets (Compustat AT)
MTOB	Equity market capitalization (Compustat MKVALT) / Book value of equity (Compustat SEQ)
ACCRUALS	Absolute value of annual operating accruals (Compustat NI – OANCF) / Beginning total assets (Compustat AT)
BIGN	Equals 1 if the auditor is a Big 5 auditor (Compustat AU), 0 otherwise.
GOING_CONCERN	Equals 1 if the auditor issued a going concern opinion, 0 otherwise. Opinion is obtained from Audit Analytics.
GOING_CONCERN_ALT	Equals 1 if the auditor issued a going concern opinion for the fiscal year ended prior to the switch announcement date or if a potential going concern issue is mentioned in the client's auditor change announcement or auditor's verification letter, 0 otherwise (derived from Audit Analytics).
RESTRUCT_AVE	Absolute value of restructuring charges (Compustat RCP) over the prior two fiscal years, scaled by total assets.
FOREIGN_TRANS_AVE	Equals 1 if foreign currency translation (Compustat FCA) is non-zero, 0 otherwise.

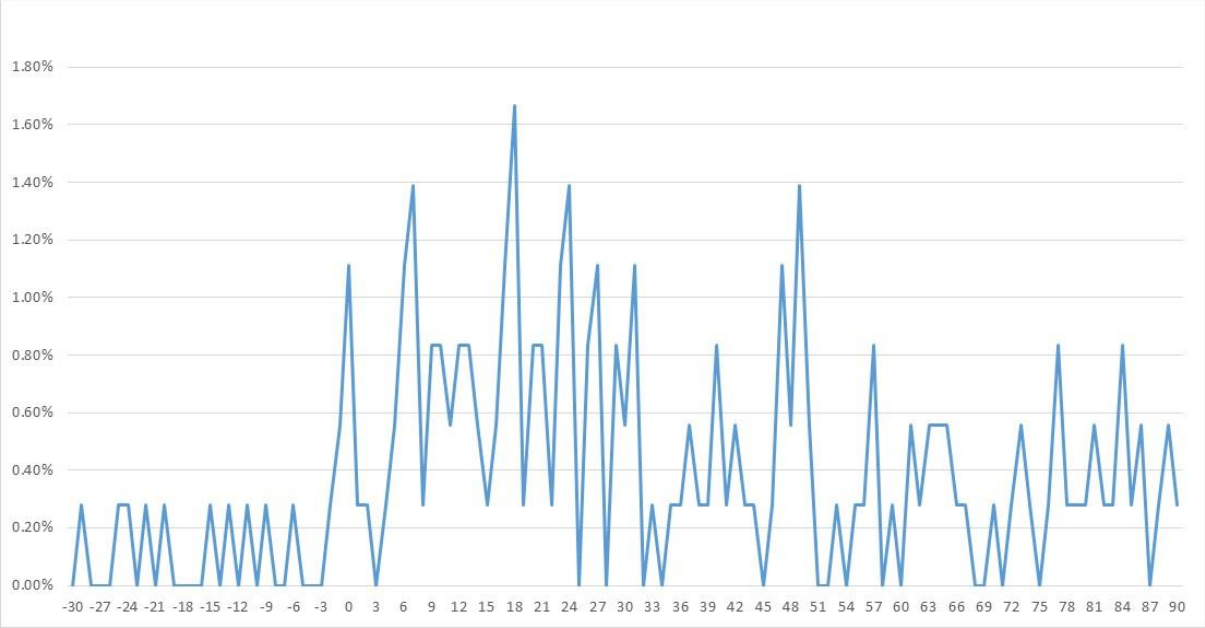
NQTRS	Number of quarters of Compustat data available in the two years following the auditor dismissal announcement.
PRE_RET	Buy-and-hold size-adjusted stock return over trading days (-261, -2) relative to the auditor change announcement. Daily firm stock returns are size adjusted by subtracting the value-weighted CRSP size decile return and are then compounded over the trading days.
PRICE	Ln(stock price + 1) one day before the auditor change announcement, obtained from CRSP.
NEG_CIRC	Equals 1 if negative circumstances are disclosed in the client's auditor change announcement or the auditor's verification letter, as identified by Audit Analytics, 0 otherwise. The negative circumstances that Audit Analytics identifies are: auditor-client disagreements prior to the auditor change; disagreements between the client's auditor change disclosure and the auditor's verification letter; reportable conditions involving internal controls, scope restrictions, management representations, or modified or going concern audit opinions; bankruptcy; restatements; illegal acts; SEC inquiries and investigations; lack of auditor independence; auditors that are unregistered, banned from, or exiting public clients; and the need for reaudits of prior financial statements.
DELAY_SUCCESSOR	Equals 1 if the Audit Analytics' engagement date for the new auditor follows the dismissal effective date by more than seven days.
IMMEDIATE_UP	Equals 1 if DELAY_SUCCESSOR=0 and the firm switches from a non-BigN to a BigN auditor, 0 otherwise (derived from Audit Analytics)
IMMEDIATE_DOWN	Equals 1 if DELAY_SUCCESSOR=0 and the firm switches from a BigN to a non-BigN auditor, 0 otherwise (derived from Audit Analytics)

Figure 1
Auditor Changes Around 10-K Filing Dates

Panel A: Dismissals

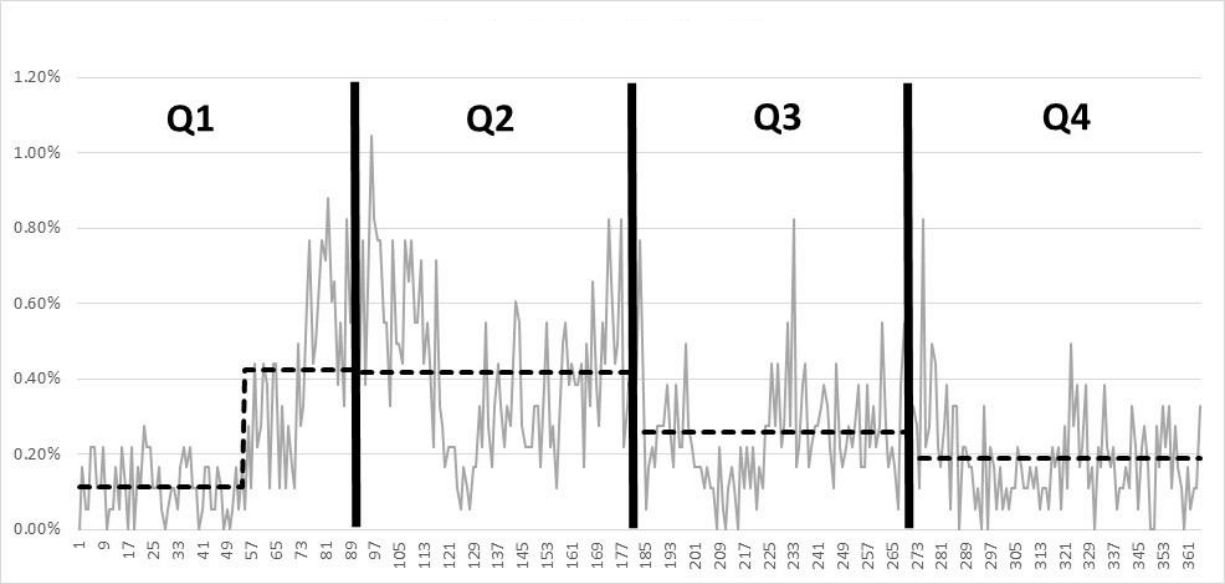


Panel B: Resignations



These figures plot auditor dismissals and resignations by day, as a percentage of total sample dismissals or resignations, over days (-30, +90) relative to the 10-K filing date. 10-K filing dates are obtained from EDGAR or Compustat. Auditor change announcement dates are obtained from Audit Analytics and are manually checked for accuracy if the difference between the announcement date and the effective date is less than zero or greater than seven.

Figure 2
Dismissals Over the Fiscal Year



This figure plots auditor dismissals by day, as a percentage of total sample dismissals, over the 90 days of each fiscal quarter. The dotted line portrays the mean over the region. Fiscal quarter-end dates are obtained from EDGAR or Compustat. Auditor change announcement dates are obtained from Audit Analytics and are manually checked for accuracy if the difference between the announcement date and effective date is less than zero or greater than seven.

Table 1
Sample Selection

	Dismissals
Preliminary identification of auditor dismissals	
Audit Analytics auditor dismissals filed between 1/1/2000 through 12/31/2013	16,096
Require match to Compustat, CRSP, and SEC Edgar 10-K and 10-Q filing dates for fiscal years 2001-2012	3,976
Retain first dismissal filed within the fiscal year	3,776
Remove shell companies and subsidiaries	3,233
Remove if dismissed auditor key and engaged auditor key are the same	3,224
Identify dismissals that have ambiguous implications	
Remove dismissals that have verifiably exogenous reasons	2,304
Remove dismissals that occur when 10-K is more than 15 days past due	2,270
Remove if a restatement is announced within the year prior to the dismissal announcement	2,121
Remove dismissals in firm years that have unusual timing	
Remove changes in fiscal year end	2,108
Remove fiscal years with unusual quarterly spacing	1,834
Remove short fiscal years	1,821
Remove if hand collection indicated that no auditor change occurred	1,820
Final base sample	1,820

Table 2
Descriptive Statistics

Panel A: Descriptive statistics

	Auditor Dismissal Sample							Control Sample				
	Mean	Std Dev	Min	Q1	Median	Q3	Max	Mean	Median	Dif Mean		n
Restatement	0.150	0.357	0.000	0.000	0.000	0.000	1.000	0.105	0.000	0.045	***	1587
Material Weakness	0.124	0.330	0.000	0.000	0.000	0.000	1.000	0.067	0.000	0.057	***	435
Delisting	0.061	0.239	0.000	0.000	0.000	0.000	1.000	0.040	0.000	0.021	***	1558
PERIOD	2.219	1.208	1.000	1.000	2.000	3.000	5.000	2.219	2.000	0.000		1587
LOSS_AVE	0.424	0.405	0.000	0.000	0.333	0.667	1.000	0.397	0.333	0.027	*	1587
ROA_AVE	-0.105	0.321	-1.724	-0.106	0.005	0.049	0.242	-0.077	0.008	-0.028	***	1587
LEVERAGE_AVE	0.155	0.176	0.000	0.005	0.094	0.250	0.751	0.147	0.086	0.008		1587
M&A_AVE	0.050	0.159	0.000	0.000	0.000	0.000	1.000	0.041	0.000	0.009	*	1587
DE_ISSUANCE_AVE	0.260	0.696	0.000	0.005	0.037	0.152	4.344	0.185	0.030	0.075	***	1587
SIZE_AVE	4.886	1.831	1.333	3.496	4.667	6.130	9.366	5.011	4.922	-0.125	**	1587
MTOB_AVE	3.025	3.704	0.033	1.125	1.802	3.215	24.258	2.857	1.889	0.168		1587
ACCRUALS_AVE	0.154	0.238	0.002	0.046	0.085	0.159	1.546	0.115	0.081	0.039	***	1587
BIGN_AVE	0.682	0.451	0.000	0.000	1.000	1.000	1.000	0.674	1.000	0.009		1587
GOING_CONCERN_AVE	0.043	0.152	0.000	0.000	0.000	0.000	1.000	0.024	0.000	0.019	***	1587
RESTRUCT_AVE	0.009	0.030	0.000	0.000	0.000	0.002	0.201	0.007	0.000	0.002	***	1587
FOREIGN_TRANS_AVE	0.160	0.341	0.000	0.000	0.000	0.000	1.000	0.156	0.000	0.004		1587
NQTRS	7.708	1.006	0.000	8.000	8.000	8.000	8.000	7.291	8.000	0.417	***	1587
PRE_RET	0.044	0.616	-0.883	-0.347	-0.074	0.266	2.599	0.058	-0.058	-0.014		1558
ln(PRICE)	2.116	1.008	0.215	1.308	2.117	2.879	4.323	2.244	2.284	-0.128	***	1558
NEG_CIRC	0.241	0.428	0.000	0.000	0.000	0.000	1.000					1587
DELAY_SUCCESSOR	0.064	0.245	0.000	0.000	0.000	0.000	1.000					1587
IMMEDIATE_UP	0.106	0.309	0.000	0.000	0.000	0.000	1.000					1587
IMMEDIATE_DOWN	0.335	0.472	0.000	0.000	0.000	1.000	1.000					1587
GOING_CONCERN_ALT	0.070	0.255	0.000	0.000	0.000	0.000	1.000					1587

This panel presents descriptive statistics for the test variables. ***, **, * denote significantly different from zero at the 1, 5, and 10 percent level (two-tailed). For continuous (indicator) variables, differences in means are testing using a two-sample t-test (chi-square test). See Appendix for variable definitions.

Panel B: Correlation matrix (Pearson correlations above the diagonal, Spearman below)

	Restatement	Material Weakness	Delisting	PERIOD	LOSS_AVE	ROA_AVE	LEVERAGE_AVE	M&A_AVE	DE_ISSUANCE_AVE	SIZE_AVE	MTOB_AVE	ACCRUALS_AVE	BIGN_AVE	GOING_CONCERN_AVE	RESTRUCT_AVE	FOREIGN_TRANS_AVE	NQTRS	PRE_RET	ln(PRICE)	NEG_CIRC	DELAY_SUCCESSOR	IMMEDIATE_UP	IMMEDIATE_DOWN	GOING_CONCERN_ALT
Restatement		**0.34**	**0.04**	**0.07**	0.00	0.01	0.04	0.04	0.00	0.02	0.01	**0.04**	**-0.07**	-0.01	-0.02	0.01	0.00	-0.04	0.00	0.00	0.00	**0.14**	**-0.11**	-0.03
Material Weakness	**0.34**		0.00	**0.20**	**0.12**	**-0.10**	-0.01	0.04	0.04	**-0.13**	0.06	**0.11**	**-0.09**	**0.11**	0.00	0.00	0.04	-0.07	**-0.16**	**0.19**	-0.03	**0.13**	0.02	0.07
Delisting	**0.04**	0.00		**0.13**	**0.18**	**-0.17**	0.03	-0.04	**0.11**	**-0.15**	0.02	**0.13**	**-0.08**	**0.27**	**0.05**	-0.02	**-0.36**	**-0.16**	**-0.27**	**0.09**	0.01	-0.02	-0.01	**0.28**
PERIOD	**0.07**	**0.17**	**0.11**		**0.12**	**-0.15**	-0.01	**-0.09**	**0.06**	**-0.31**	0.01	**0.14**	**-0.15**	**0.15**	-0.01	**-0.08**	**-0.12**	0.01	**-0.27**	0.03	0.02	**-0.05**	**0.06**	**0.17**
LOSS_AVE	0.00	**0.11**	**0.18**	**0.12**		**-0.63**	-0.01	-0.04	**0.32**	**-0.36**	**0.19**	**0.34**	0.00	**0.29**	**0.26**	-0.01	**-0.06**	**-0.05**	**-0.53**	**0.14**	0.02	-0.01	**0.08**	**0.29**
ROA_AVE	0.01	**-0.09**	**-0.18**	**-0.10**	**-0.86**		0.01	**0.05**	**-0.48**	**0.38**	**-0.28**	**-0.58**	**0.04**	**-0.42**	**-0.31**	**0.07**	0.03	**0.08**	**0.43**	**-0.17**	**-0.06**	0.00	**-0.05**	**-0.44**
LEVERAGE_AVE	0.04	-0.01	0.03	-0.01	**-0.06**	0.01		0.02	0.00	**0.24**	0.03	0.02	**0.07**	**0.08**	**-0.05**	0.00	-0.01	0.03	**0.06**	**0.05**	0.00	-0.02	**-0.06**	**0.06**
M&A_AVE	0.03	0.02	-0.03	**-0.11**	-0.04	0.03	0.04		-0.03	**0.18**	**-0.05**	-0.03	-0.03	-0.03	0.02	**0.07**	-0.03	**-0.05**	**0.07**	0.02	-0.01	**0.09**	**-0.07**	**-0.05**
DE_ISSUANCE_AVE	**0.06**	**0.17**	**0.14**	**0.07**	**0.25**	**-0.30**	**0.07**	0.01		**-0.26**	**0.39**	**0.67**	**-0.12**	**0.16**	0.04	**-0.08**	-0.02	**-0.08**	**-0.13**	**0.10**	**0.05**	**0.14**	**-0.12**	**0.16**
SIZE_AVE	0.02	**-0.13**	**-0.16**	**-0.29**	**-0.36**	**0.31**	**0.28**	**0.17**	**-0.19**		**-0.20**	**-0.33**	**0.26**	**-0.21**	**-0.07**	**0.10**	0.03	-0.03	**0.59**	0.01	-0.03	-0.01	**-0.19**	**-0.18**
MTOB_AVE	0.04	0.01	-0.01	-0.02	0.02	0.03	**-0.09**	**-0.05**	**0.34**	**-0.13**		**0.35**	**-0.06**	**0.14**	-0.02	-0.04	0.03	-0.02	0.01	**0.07**	-0.03	**0.08**	**-0.10**	**0.08**
ACCRUALS_AVE	**0.07**	**0.09**	**0.15**	**0.13**	**0.44**	**-0.36**	-0.04	**-0.07**	**0.31**	**-0.42**	**0.27**		**-0.16**	**0.27**	**0.11**	**-0.06**	**-0.06**	**-0.05**	**-0.25**	**0.09**	**0.05**	**0.14**	**-0.09**	**0.23**
BIGN_AVE	**-0.06**	**-0.10**	**-0.10**	**-0.15**	-0.02	0.02	**0.05**	-0.04	**-0.21**	**0.28**	**-0.04**	**-0.06**		**-0.09**	**0.10**	**0.11**	**0.06**	**0.06**	**0.22**	**0.02**	0.01	**-0.49**	**0.44**	**-0.05**
GOING_CONCERN_AVE	0.01	**0.14**	**0.26**	**0.13**	**0.29**	**-0.31**	**0.05**	-0.01	**0.18**	**-0.22**	**0.07**	**0.24**	**-0.12**		**0.17**	-0.03	**-0.08**	**-0.07**	**-0.29**	**0.35**	0.03	-0.02	0.03	**0.80**
RESTRUCT_AVE	0.02	0.00	0.00	**-0.09**	**0.20**	**-0.19**	-0.02	**0.14**	**-0.13**	**0.11**	-0.02	**0.12**	**0.17**	**0.04**		**0.06**	**-0.06**	0.00	**-0.17**	**0.09**	0.02	**-0.07**	**0.10**	**0.18**
FOREIGN_TRANS_AVE	0.01	-0.01	-0.02	**-0.05**	0.00	**0.05**	0.00	**0.05**	**-0.09**	0.12	0.01	-0.02	**0.12**	-0.02	**0.21**		-0.01	0.02	**0.11**	**0.06**	0.00	-0.01	-0.01	-0.03
NQTRS	0.00	0.03	**-0.34**	**-0.08**	**-0.07**	**0.04**	-0.03	**-0.04**	-0.04	0.01	**0.06**	**-0.05**	**0.06**	**-0.09**	**-0.05**	-0.02		**0.07**	**0.13**	-0.03	0.00	**-0.04**	0.01	**-0.09**
PRE_RET	**-0.05**	-0.06	**-0.21**	-0.02	**-0.14**	**0.15**	0.02	-0.03	**-0.16**	0.04	-0.03	**-0.06**	**0.10**	**-0.11**	0.01	0.02	**0.09**		**0.28**	**-0.07**	-0.01	0.02	-0.01	**-0.08**
ln(PRICE)	0.00	**-0.16**	**-0.26**	**-0.25**	**-0.54**	**0.53**	**0.09**	**0.07**	**-0.17**	**0.60**	**0.15**	**-0.35**	**0.24**	**-0.30**	**-0.05**	**0.09**	**0.13**	**0.39**		**-0.09**	-0.02	0.02	**-0.12**	**-0.29**
NEG_CIRC	0.00	**0.19**	**0.09**	0.03	**0.14**	**-0.15**	**0.05**	0.03	**0.14**	0.01	**0.08**	**0.09**	0.01	**0.36**	**0.09**	**0.05**	-0.03	**-0.08**	**-0.09**		0.01	-0.04	0.00	**0.43**
DELAY_SUCCESSOR	0.00	-0.03	0.01	0.02	0.02	-0.03	0.01	-0.02	0.03	-0.04	-0.01	**0.04**	0.01	0.03	0.03	0.01	-0.01	-0.03	-0.02	0.01		**-0.09**	**-0.19**	0.02
IMMEDIATE_UP	**0.14**	**0.13**	-0.02	**-0.06**	-0.02	0.03	-0.03	**0.09**	**0.15**	-0.01	**0.06**	0.04	**-0.48**	-0.01	**-0.05**	0.00	**-0.06**	0.02	0.03	-0.04	**-0.09**		**-0.25**	**-0.05**
IMMEDIATE_DOWN	**-0.11**	0.02	-0.01	**0.08**	**0.08**	**-0.10**	**-0.07**	**-0.07**	**-0.16**	**-0.18**	**-0.14**	-0.04	**0.42**	0.01	**0.06**	-0.01	0.02	0.00	**-0.12**	0.00	**-0.19**	**-0.25**		0.04
GOING_CONCERN_ALT	-0.03	0.07	**0.28**	**0.15**	**0.29**	**-0.32**	**0.05**	-0.04	**0.16**	**-0.19**	0.03	**0.21**	**-0.06**	**0.83**	**0.05**	-0.02	**-0.08**	**-0.13**	**-0.28**	**0.43**	0.02	-0.05	0.04	

Bold denotes statistically different from zero at the 10 percent confidence level (two-tailed). See Appendix for variable definitions. The sample is the auditor dismissal sample only (no control firms).

Table 3
Auditor Switches and Future Adverse Events

Panel A: Restatement rates in the two years following auditor switches

	Dismissals		Matched Control	dif		n	Resignations	n
Period 1	12.3%		9.8%	2.5%	*	601	28.6%	98
Period 2	14.2%		14.0%	0.3%		386	23.9%	67
Period 3	18.6%	^^^	9.0%	9.6%	***	323	17.8%	90
Period 4	16.6%	^	9.3%	7.3%	**	205	17.4%	46
Period 5	20.8%	^^	8.3%	12.5%	**	72	23.1%	13
Pooled	15.0%		10.5%	4.5%	***	1,587	22.6%	314

^^^, ^^, ^ denote statistically different from the Period 1 rate at the 1, 5, and 10 percent confidence level (one-tailed), using a chi-squared test.
***, **, * denote statistically different from zero at the 1, 5, and 10 percent confidence level (one-tailed), using a chi-squared test.
Restatements must be announced in the two years following the auditor switch announcement and must involve at least one period ended prior to the switch effective date.

Panel B: Timing of accounting errors and discovery

	Restatements for errors originating with successor auditor	Restatements for errors originating with old auditor	Percentage discovered by end of successor's first audit
Period 1	2.7%	12.3%	58.1%
Period 2	4.1%	14.2%	76.4%
Period 3	5.3%	18.6%	71.7%
Period 4	3.4%	16.6%	52.9%
Period 5	0.0%	20.8%	46.7%
Pooled	3.5%	15.0%	64.3%

This panel presents two-year restatement rates for the dismissal sample only. The first column presents the rates of restatements that only affect periods ended after the effective date of the dismissal. The second column presents the rates of restatements that affect at least one period ended prior to the dismissal effective date. The third column presents the percentage of column 2 restatements discovered by the end of the successor's first audit (i.e. the percentage of these restatements announced before the first 10-K audited by the successor is filed).

Panel C: Material weakness rates in the two years following auditor switches

	Dismissals		Matched Control	dif		n	Resignations	n
Period 1	8.4%		7.4%	1.0%		202	52.9%	17
Period 2	9.8%		7.0%	2.8%		143	42.9%	14
Period 3	22.6%	^^^	3.2%	19.4%	***	62	45.5%	11
Period 4	30.0%	^^^	5.0%	25.0%	**	20	50.0%	2
Period 5	37.5%	^^^	12.5%	25.0%		8	0.0%	1
Pooled	12.4%		6.7%	5.7%	***	435	46.7%	45

^^^, ^^, ^ denote statistically different from the Period 1 rate at the 1, 5, and 10 percent confidence level (one-tailed), using a chi-squared test.
***, **, * denote statistically different from zero at the 1, 5, and 10 percent confidence level (one-tailed), using a chi-squared test.
Material weaknesses must be announced in the two years following the auditor switch announcement.

Panel D: Adverse delisting rates in the two years following auditor switches

	Dismissals		Matched Control	dif		n	Resignations	n
Period 1	4.6%		3.1%	1.5%	*	590	11.5%	96
Period 2	3.4%		3.4%	0.0%		383	16.4%	67
Period 3	6.9%	^	2.8%	4.1%	***	317	14.8%	88
Period 4	8.6%	^^	8.1%	0.5%		198	30.2%	43
Period 5	22.9%	^^^	10.0%	12.9%	**	70	33.3%	12
Pooled	6.1%		4.0%	2.1%	***	1,558	17.0%	306

^^^, ^^, ^ denote statistically different from the Period 1 rate at the 1, 5, and 10 percent confidence level (one-tailed), using a chi-squared test.
***, **, * denote statistically different from zero at the 1, 5, and 10 percent confidence level (one-tailed), using a chi-squared test.
Delistings must occur in the two years following the auditor switch announcement.

Table 4
Dismissal Timing Regressions Incorporating Control Firms

Panel A: Trends in Future Adverse Events across Dismissal Periods

		Future Restatement		Future Material Weakness		Future Adverse Delisting	
	Predicted	Coef	Odds Ratio	Coef	Odds Ratio	Coef	Odds Ratio
Intercept	?	-3.897 ***		-2.260		-4.036 ***	
		(0.529)		(1.458)		(0.862)	
PERIOD*DISMISS	+	0.191 **	1.21	0.632 ***	1.88	-0.028	0.97
		(0.091)		(0.266)		(0.143)	
PERIOD	?	-0.017	0.98	-0.165	0.85	0.173	1.19
		(0.071)		(0.224)		(0.111)	
DISMISS	?	-0.087	0.92	-0.838	0.43	0.359	1.43
		(0.232)		(0.562)		(0.424)	
LOSS_AVE	+	0.319 **	1.38	0.447	1.56	0.243	1.28
		(0.178)		(0.467)		(0.332)	
ROA_AVE	-	0.526 *	1.69	0.651	1.92	-0.087	0.92
		(0.290)		(0.981)		(0.385)	
LEVERAGE_AVE	+	0.630 **	1.88	0.034	1.03	1.520 ***	4.57
		(0.315)		(0.773)		(0.517)	
M&A_AVE	+	0.582 *	1.79	0.938 *	2.56	-0.269	0.76
		(0.346)		(0.587)		(0.830)	
DE_ISSUANCE_AVE	+	-0.142	0.87	-0.190	0.83	0.257 *	1.29
		(0.127)		(0.448)		(0.161)	
SIZE_AVE	-	0.083 **	1.09	-0.196 **	0.82	0.170 **	1.18
		(0.040)		(0.112)		(0.086)	
MTOB_AVE	+	0.022	1.02	-0.024	0.98	-0.065 **	0.94
		(0.016)		(0.047)		(0.029)	
ACCRUALS_AVE	+	0.883 ***	2.42	0.756	2.13	-0.177	0.84
		(0.356)		(0.892)		(0.517)	
BIGN_AVE	-	-0.316 ***	0.73	-0.186	0.83	-0.540 ***	0.58
		(0.134)		(0.317)		(0.222)	
GOING_CONCERN_AVE	+	0.168	1.18	1.269	3.56	1.781 ***	5.93
		(0.417)		(1.384)		(0.426)	
RESTRUCT_AVE	+	1.119	3.06	3.985	53.77	-0.204	0.82
		(2.050)		(5.150)		(3.018)	
FOREIGN_TRANS_AVE	+	0.154	1.17	-0.071	0.93	0.452 *	1.57
		(0.160)		(0.327)		(0.299)	
NQTRS	+	0.116 ***	1.12	0.090	1.09		
		(0.045)		(0.135)			
Prior Material Weakness	+			1.644 ***	5.18		
				(0.322)			
PRE_RET	-					-0.681 ***	0.51
						(0.221)	
ln(PRICE)	-					-1.359 ***	0.26
						(0.185)	
Year fixed effects		Yes		Yes		Yes	
n		3,174		870		3,116	
Percent Concordant		63.4%		75.3%		87.5%	
Percent Discordant		35.5%		23.7%		11.8%	

This table presents the results of estimating regression (1). ***, **, * denote p-values of 1, 5, and 10 percent, one-tailed if sign is in the predicted direction, two-tailed otherwise. Standard errors are presented in parentheses below coefficient estimates. See Appendix for variable descriptions.

Panel B: Incidence of Future Adverse Events across Dismissal Periods

		Future Restatement		Future Material Weakness		Future Adverse Delisting	
	Predicted	Coef	Odds Ratio	Coef	Odds Ratio	Coef	Odds Ratio
PERIOD1*DISMISS	+	0.209	1.23	-0.089	0.91	0.449 *	1.57
PERIOD2*DISMISS	+	-0.056	0.95	0.079	1.08	-0.132	0.88
PERIOD3*DISMISS	+	0.803 ***	2.23	1.888 ***	6.60	0.843 **	2.32
PERIOD4&5*DISMISS	+	0.685 ***	1.98	1.454 **	4.28	0.058	1.06
PERIOD2	?	0.425 **	1.53	-0.147	0.86	0.181	1.20
PERIOD3	?	-0.055	0.95	-0.977	0.38	-0.429	0.65
PERIOD4&5	?	0.018	0.10	-0.180	0.84	0.662 *	1.94
Other controls in Table 4, Panel A		Yes		Yes		Yes	
Year fixed effects		Yes		Yes		Yes	
n		3,174		870		3,116	
Percent Concordant		63.9%		76.0%		88.1%	
Percent Discordant		35.1%		23.2%		11.3%	

This table presents the results of estimating regression (1) after replacing PERIOD with a set of PERIODX indicator variables equal to 1 if the dismissal or pseudo-dismissal period is in period X and 0 otherwise. Coefficients on other control variables are not presented. ***, **, * denote p-values of 1, 5, and 10 percent, one-tailed if sign is in the predicted direction, two-tailed otherwise. See Appendix for variable descriptions.

Table 5
Dismissal Timing Regressions Incorporating other Dismissal Information

Panel A: Trends in Future Adverse Events across Dismissal Periods

		Future Restatement		Future Material Weakness		Future Adverse Delisting	
	Predicted	Coef	Odds Ratio	Coef	Odds Ratio	Coef	Odds Ratio
Intercept	**?**	-3.361 ***		-5.551 **		-2.870 ***	
		(0.797)		(2.493)		(0.993)	
PERIOD	**+**	0.234 ***	1.26	0.575 ***	1.78	0.126	1.13
		(0.064)		(0.166)		(0.100)	
NEG_CIRC	**+**	0.043	1.04	0.343	1.41	-0.301	0.74
		(0.185)		(0.478)		(0.360)	
DELAY_SUCCESSOR	**+**	-0.186	0.83	0.524	1.69	-0.403	0.67
		(0.307)		(0.828)		(0.506)	
IMMEDIATE_UP	**?**	1.153 ***	3.17	1.456 **	4.29	-0.260	0.77
		(0.253)		(0.686)		(0.479)	
IMMEDIATE_DOWN	**?**	-0.958 ***	0.38	0.018	1.02	-0.345	0.71
		(0.217)		(0.427)		(0.357)	
LOSS_AVE	**+**	0.127	1.14	0.632	1.88	0.680 *	1.97
		(0.238)		(0.590)		(0.432)	
ROA_AVE	**-**	0.222	1.25	0.725	2.07	0.842 *	2.32
		(0.359)		(1.175)		(0.494)	
LEVERAGE_AVE	**+**	0.636 *	1.89	-0.078	0.93	0.711	2.04
		(0.417)		(0.974)		(0.684)	
M&A_AVE	**+**	0.457	1.58	0.707 ***	2.03	-0.122	0.89
		(0.447)		(0.762)		(1.046)	
DE_ISSUANCE_AVE	**+**	-0.195	0.82	-0.186	0.83	0.349 **	1.42
		(0.160)		(0.540)		(0.190)	
SIZE_AVE	**-**	-0.008	0.99	-0.138	0.87	0.049	1.05
		(0.057)		(0.147)		(0.117)	
MTOB_AVE	**+**	-0.001	1.00	-0.029	0.97	-0.043	0.96
		(0.022)		(0.059)		(0.034)	
ACCRUALS_AVE	**+**	0.651 *	1.92	1.025 **	2.79	0.090	1.09
		(0.443)		(1.100)		(0.590)	
BIGN_AVE	**-**	0.427 *	1.53	0.662	1.94	-0.325	0.72
		(0.248)		(0.692)		(0.391)	
GOING_CONCERN_AVE	**+**	-0.547	0.58	2.879 *	17.81		
		(0.624)		(1.834)			
GOING_CONCERN_ALT	**+**					1.757 ***	5.80
						(0.438)	
RESTRUCT_AVE	**+**	-0.614	0.54	-6.786	0.00	1.278	3.59
		(2.911)		(9.008)		(3.467)	
FOREIGN_TRANS_AVE	**+**	0.028	1.03	0.016	1.02	0.352	1.42
		(0.219)		(0.427)		(0.403)	
NQTRS	**+**	0.062	1.06	0.280	1.32		
		(0.075)		(0.247)			
Prior Material Weakness	**+**			1.311 ***	3.71		
				(0.526)			
PRE_RET	**-**					-0.614 **	0.54
						(0.286)	
ln(PRICE)	**-**					-1.208 ***	0.30
						(0.243)	
Year fixed effects		Yes		Yes		Yes	
n		1,587		435		1,558	
Percent Concordant		67.2%		76.8%		86.5%	
Percent Discordant		32.1%		22.6%		12.9%	

This panel presents the results of estimating regression (2). ***, **, * denote p-values of 1, 5, and 10 percent, one-tailed if sign is in the predicted direction, two-tailed otherwise. Standard errors are presented in parentheses below coefficient estimates. See Appendix for variable descriptions.

Panel B: Incidence of Future Adverse Events across Dismissal Periods

		Future Restatement		Future Material Weakness		Future Adverse Delisting	
	Predicted	Coef	Odds Ratio	Coef	Odds Ratio	Coef	Odds Ratio
PERIOD2	+	0.224	1.25	0.050	1.05	-0.505	0.60
PERIOD3	+	0.709 ***	2.03	1.241 ***	3.46	0.013	1.01
PERIOD4&5	+	0.652 ***	1.92	1.660 ***	5.26	0.170	1.19
Other controls in Table 5, Panel A		Yes		Yes		Yes	
Year fixed effects		Yes		Yes		Yes	
n		1,587		435		1,558	
Percent Concordant		67.2%		76.8%		86.8%	
Percent Discordant		32.1%		22.6%		12.6%	

This panel presents the results of estimating regression (2) after replacing PERIOD with a set of PERIODX indicator variables equal to 1 if the dismissal is in period X and 0 otherwise. Coefficients on other control variables are not presented. . ***, **, * denote p-values of 1, 5, and 10 percent, one-tailed if sign is in the predicted direction, two-tailed otherwise. See Appendix for variable descriptions.

Table 6
Announcement Period Stock Returns

	Dismissals		n	Resignations		n
Period 1	-0.07%		469	-0.90%		57
Period 2	-0.11%		293	-3.16%	**	34
Period 3	-0.74%	**	205	-2.31%	*	45
Period 4	0.00%		107	-0.85%		24
Period 5	2.17%	***	42	-0.25%		5
Pooled	-0.11%		1,116	-1.72%	***	165

This table presents cumulative size-adjusted stock returns in the three days (-1, 0, 1) around auditor change announcements. ***, **, * indicate statistically different from 0 at the .01, .05, .10 confidence level, two-tailed (using a t-statistic). Returns are size-adjusted by subtracting the value-weighted CRSP size decile. Sample firms are required to have a stock price greater than $5 one day before the auditor change announcement.

Table 7
Price Drifts Following Auditor Dismissal Announcements

	6 months				1 year				2 years				
	Mean Abnormal Return t	Non-parametric Percentile	**Median Abnormal Return**	Non-parametric Percentile	**Mean Abnormal Return** t	Non-parametric Percentile	**Median Abnormal Return**	Non-parametric Percentile	**Mean Abnormal Return** t	Non-parametric Percentile	**Median Abnormal Return**	Non-parametric Percentile	**n**
Individual periods (dismissals only)													
Period 1	-2.7% *	26.3	-3.4%	18.6	-3.5%	41.4	-7.2%	16.7	-2.1%	65.4	-9.3%	55.9	439
Period 2	-3.9% *	**4.4**	-6.2%	**3.5**	-0.7%	60.3	-9.1%	**4.8**	-0.3%	63.8	-10.3%	47.6	265
Period 3	-2.1%	25.5	-5.1%	12.5	-1.3%	44.1	-5.5%	44.8	4.6%	88.3	-2.8%	**96.2**	189
Period 4	1.2%	78.5	-1.6%	79.6	-6.7%	14.0	-11.4%	11.1	-16.2% **	**4.2**	-21.3%	6.0	101
Period 5	-3.0%	25.2	-3.3%	35.0	-9.3%	11.0	-13.9%	8.5	-1.1%	46.9	-17.9%	23.6	40
													1,034
Combined periods (dismissals only)													
Period 1	-2.7% *	26.3	-3.4%	18.6	-3.5%	41.4	-7.2%	16.7	-2.1%	65.4	-9.3%	55.9	439
Periods 2 and 3	-3.1% **	**4.5**	-5.3%	**3.7**	-0.9%	55.9	-7.2%	14.9	1.7%	84.9	-7.6%	81.4	454
Periods 4 and 5	0.0%	58.1	-1.9%	69.0	-7.4%	7.0	-12.7%	**2.3**	-11.9% *	7.3	-19.6%	6.2	141
													1,034
Pooled dismissals	-2.5% **	8.7	-4.3%	**2.4**	-2.9% *	25.5	-7.9%	**3.4**	-1.8%	64.6	-10.3%	45.3	1,034

This table presents mean and median abnormal returns in the six months, one year, and two years following auditor dismissal announcements. ***, **, * indicate statistically different from 0 at the .01, .05, and .10 confidence level (two-tailed) using a skewness-adjusted bootstrapped t-statistic (Lyon et al. 1999). **Bold** indicates percentiles below 5 or above 95 of the pseudoportfolio distribution. Abnormal returns pseudoportfolio deciles are based on the method of Lyon et al. (1999).