

Limited Attention and Information Quality: Late Filings, Restatements, and the NCAA Basketball Tournament

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Abstract

I investigate the consequences of limited attention on information quality in a setting where resources allocated to financial reporting are constrained by personal interests. Specifically, I examine if firms with distracted workforces are more likely to produce annual reports that are filed beyond the SEC's mandated deadline and/or subsequently restated. Using manually collected data, I measure distraction as the proportion of the local workforce whose alma mater advances through the NCAA basketball tournament. I find that firms confronted with workforce distraction are more likely to file annual reports that are either late or subsequently restated, but not both. When taken together, these results are consistent with constrained workforces facing a tradeoff between the timeliness and reliability of annual reports. Additional analyses suggest accountants (either consciously or subconsciously) weigh the salient signal of delayed disclosure against the comparatively small risk of restatement when confronted with constrained resources. These findings should be of interest to stakeholders who rely on timely and accurate disclosures to efficiently allocate capital.

I Literature Review and Hypothesis Development

Human capital is a fundamental determinant of economic performance (Becker 1962). Extending this perspective to an information-output setting contends that annual reports, like that of any good, is a product of those responsible for its preparation and review. Consistent with Becker's frame of reference, regulators recognize that quality is a function of "the integrity, objectivity, intelligence, competence, experience, and motivation of personnel who perform, supervise and review the work" (PCAOB QC Section 20.12). Recent archival evidence supports this notion. For example, firms and audit offices headquartered in areas with higher levels of educational attainment produce financial statements with higher quality earnings, more accurate going concern opinions, and fewer subsequent restatements (Call, Campbell, Dhaliwal and Moon 2017; Beck, Francis, and Gunn 2017). Additionally, the likelihood of issuing subsequent restatements varies with local social norms such as religious adherence and gambling attitudes (McGuire, Omer, and Sharp 2011; Christensen, Jones, and Kenchington 2017). In summary, the existing archival evidence finds that financial reporting quality varies with characteristics of the local workforce that reflect both the quality of, and social norms that influence, those responsible for preparing and reviewing annual reports.

The effectiveness of human capital is not without limits. For example, the quality of information produced by accountants is constrained by the resources available to them. Becker (1965) contends that individuals allocate time and effort in a manner that maximizes expected utility. If personal interests provide accountants with a net positive expected utility, then these interests serve as a mechanism through which human capital resources are consciously diverted away from professional responsibilities. A separate, but related stream of literature in cognitive psychology explores the implications of cognitive limitations on decision making (Kahneman 1973; Tversky and Kahneman 1974). Disentangling the conscious allocation of time and effort from the subconscious allocation of cognitive resources is beyond the scope of this study. Rather, this study makes use of the following generalized prediction supplied by both theories: provided human capital is subject to limited resources, a distraction that amplifies personal interests will divert resources away from professional responsibilities. As a result, I expect distractions to decrease the quality of information produced.

Timeliness and reliability, two essential aspects of information quality, exemplify a classic tradeoff confronting resource-constrained accountants. One way to examine the timeliness-reliability tradeoff is to test how reliability varies when time is constrained. A number of studies find that the reliability of annual reports diminished for firms affected by the SEC's acceleration of annual reporting deadlines (Doyle and Magilke 2013; Bryant-Kutcher, Peng, and Weber 2013; Boland, Bronson, and Hogan 2015; Gillette, Jayaraman, and Zimmerman 2017). Applying this setting to late filings, Lambert, Jones, Brazel, and Showalter (2017) show that affected firms facing a time-constrained audit are more likely to file financial statements beyond the SEC's new accelerated deadline. In contrast to the aforementioned setting, this paper examines how accountants handle both aspects of the timeliness-reliability tradeoff when reporting deadlines are held constant and the level of human capital allocated to professional responsibilities is expected to vary as distractions increase the proportion of resources captivated by personal interests.

A collection of experimental research provides possible channels through which distractions may affect the timeliness and/or reliability of annual reports. For example, cognitively-constrained accountants may experience difficulty in recognizing patterns, applying existing knowledge to the current task, and/or weighting evidence appropriately (INSERT CITATIONS).¹ Additionally, constrained accountants may also refrain from digging deeper when evidence conforms to expectations (Earley 2002). Ineffective auditor/client interactions could lead to lengthy discussions and negotiations (Antle and Nalebuff 1991; Gibbins et al. 2001). If accountants are aware of issues and/or need more time to complete reliable reporting procedures, then distractions will lead to delayed filings. On the other hand, if distractions prevent accountants from detecting and effectively mitigating reporting issues, then distractions will increase the likelihood of accounting restatements. This rationale leads to the following set of hypotheses:

Firms headquartered in areas where a higher proportion of the workforce is subject to distraction are more likely to (**H1**) file annual reports beyond the SEC's mandated deadline and/or (**H2**) file annual reports that are subse-

¹See Nelson (2009) for a review and discussion of the pathways through which cognitive limitations have been theorized to impair accounting-related decisions.

quently restated.

Whether distractions manifest in late filings, restatements, or both will likely depend on the incentives and circumstances facing those responsible for financial reporting.² If the costs of shifting resources away from professional responsibilities exceed the benefit associated with the personal interests, then accountants will be less likely to allocate time and attention towards personal interests. For example, the expected cost of late or unreliable annual reports is higher for firms in litigious industries (Francis, Philbrick and Schipper 1994). Therefore, firms in litigious industries are less likely to compromise professional responsibilities. And so, I expect the influence of distraction on the timeliness/reliability of annual reports will be attenuated for firms operating in high litigation-risk industries.

As an external reviewer, the firm's auditor plays a critical role in ensuring the annual report is presented in accordance with generally accepted accounting principles and free of material errors. Auditors that are industry specialists typically have superior resources, expert knowledge, and reputation concerns that can be applied to clients operating in the auditor's industry of specialization (Reichelt and Wang 2010). I expect these qualities help specialized auditors balance the demands of constrained resources, making them more able to cope with a distracted workforce. Similar to litigation risk, expert auditors are expected to attenuate the influence of distraction on both dimensions of information quality.

H3: The affect of distraction on the likelihood of issuing late/subsequently restated annual reports should be attenuated for firms (a) operating in a litigious industry or (b) audited by a local industry expert.

Other factors may alter the relative cost of issuing late versus potentially unreliable annual reports. For example, the costs of delaying disclosure are largely imposed by market participants, not the SEC.³ According to the SEC, late filings should occur in only the "most compelling and unexpected circumstances." However, the SEC has not historically taken

²The consideration of incentives in this setting does not necessarily contend that accountants consciously allocate cognitive resources. For example, Wilks (2002) suggests subordinates subconsciously evaluate information and make accounting-related decisions that are biased in favor of their supervisor's preferences.

³In addition to investors, stock exchanges, such as the NYSE and Nasdaq, also have the option of temporarily halting trade or delisting the stock if filing requirements are not met. See NYSE Listed Company Manual, Section 802.01E and Nasdaq Equity Rules Section 5250.

action against issuers who file within a fifteen-day extension period following the deadline (SEC 1974).⁴ In contrast, stockholders immediately observe when issuers exceed the SEC reporting deadline and respond accordingly. A number of studies indicate annual reporting delays are met with negative market reactions, which is consistent with investors interpreting delayed filings as indicative of financial reporting issues or manager’s proclivity to delay bad news (Alford, Jones, and Zmijewski 1994; Impink, Lubberink, Praag, and Veenman 2011; Bartov and Konchitchki 2017). If distracted accountants weigh the costly and salient signal of delayed disclosure against the comparatively small risk of restatement, then the reporting outcome associated with distraction will depend on the presence of actively traded equity.

H4: The influence of distraction on the likelihood of filing late (subsequently restated) annual reports will be attenuated (concentrated) among those firms with actively traded equity.

The above arguments are predicated on distractions decreasing the timeliness and/or reliability of annual reports by constraining the resources applied to professional responsibilities. However, some labor economists suggest that extended working hours do not necessarily yield higher production, but instead lead to fatigue, stress, and errors (Pencavel 2015). This sentiment is echoed in survey evidence where at least some audit partners indicated that they try to mitigate the effect of long hours on their audit team by increasing “esprit de corps” and “trying to get as many [audit team members] out of the client’s office as possible for some personal time whenever possible” (Lambert, Jones, Brazel, and Showalter 2017, pg. 64). Hence, it is possible that resources allocated to personal interests could potentially *increase* annual reporting quality by improving the quality of human capital resources applied to professional responsibilities.

II Background and Setting

The annual report (Form 10-K) provides a comprehensive overview of operations including audited financial statements depicting the firm’s recent performance and current

⁴The exception being that the SEC does not permit issuers to register securities until the delayed reports are eventually filed.

financial condition.⁵ Firms typically complete journal entries and other bookkeeping duties in the weeks following fiscal year end. However, many financial reporting activities contributing to the timeliness and reliability of the annual report are completed immediately preceding public disclosure. These activities can include internal reviews and audit procedures in the days and weeks leading up to filing the annual report with the SEC. While it is impossible to identify the exact timing of financial reporting procedures, the original error does not have to originate during the tournament for tournament-driven distraction to impact the timeliness/reliability of the annual report. Given the tournament's timing, it is more likely that tournament-driven distraction will impact the quality of internal or external reviews intended to detect mistakes and prompt corrections in a timely manner.

This study examines the influence of distraction on firms classified as non-accelerated filers (NAFs), those with a public float less than \$75 million. In comparison to accelerated filers (AFs) and large-accelerated filers (LAFs), NAFs are typically characterized as smaller firms with fewer financial reporting resources. Additionally, NAFs are exempt from Section 404 of the Sarbanes Oxley Act, which mandated external audits of internal controls, making it more likely that the bulk of substantive audit procedures are conducted after fiscal year end. Finally, the SEC requires all NAFs to file annual reports within 90 days of fiscal year end. On average the NCAA tournament begins 75 days and concludes 95 days after December 31st within the sample period. Limiting analyses to the subset of NAFs with a December fiscal year end maximizes the overlap between the timing of reporting activities and the NCAA basketball tournament.

Each year millions of professionals spend some amount of work-time filling out brackets, researching teams, watching and/or discussing the NCAA tournament. Recent estimates on the number of people filling out NCAA tournament brackets range from 40 to 60 million people (Coaches 2015, 2017). In 2012, MSN sponsored a random survey of 1,003 men and women eighteen years and older regarding their typical NCAA tournament habits. The survey found that 86 percent of all workers spend at least part of their workday updating brackets, checking scores, and following games during the tournament. That same survey indicated that 56 percent of all workers spend at least one hour of their workday on NCAA

⁵<https://www.sec.gov/about/forms/form10-k.pdf>

tournament activities, while only 14 percent do not devote any work time towards the NCAA tournament (Fox 2012). The tournament is capable of captivating so many people because, in addition to its high stakes, tournament results are notoriously unpredictable.

Participants in the NCAA tournament are identified in one of two ways: (1) 32 conference champions automatically qualify and (2) the remaining 36 at-large spots are chosen by a selection committee on the Sunday immediately preceding the tournament (i.e. Selection Sunday).⁶ The tournament is divided into four regions, where each team is assigned a seed from 1-16. Lower seeds identify higher quality teams. Table 1 lists the schools that have advanced to the Final Four each year from 2006 through 2016. Since 2006, the mean (median) seed of a Final Four team is 3.3 (2), all four #1 seeds advanced to the Final Four one time (2008), and none of the four #1 seeds advanced to the Final Four twice (2006 and 2011).⁷ During the same period, the mean (median) seed of the four highest-ranked teams that did not advance past the round of 32 was 2.6 (3).⁸ While good teams tend to advance further in the tournament, reaching the Final Four is far from a guarantee even for the highest ranked teams.

To summarize, the SEC's reporting deadline creates a busy season for accountants when attention is traditionally consumed by professional responsibilities. For NAFs, the SEC's reporting deadline typically coincides with the culmination of the NCAA tournament, making the tournament an attractive setting to test what impact (if any) personal interests have on the timeliness and/or reliability of annual reports. I expect distraction arising from the NCAA tournament to increase the attention preoccupied by personal interests. If tournament-driven distraction captures attention that otherwise would have been allocated to professional responsibilities, I expect the timeliness and/or reliability of annual reports to decrease.

⁶The tournament traditionally included 32 at-large spots until the field was expanded to 65 teams in 2001 and again to 68 teams in 2011.

⁷It is possible that individuals are better at forecasting tournament success than team-seeds would indicate. Though anecdotal evidence suggests that the general public does not appear to be accurate forecasters of tournament success. The NCAA.com has been releasing statistics regarding the accuracy of brackets submitted to its annual March Madness challenge since 2011. Since then only 0.23% of the brackets submitted accurately guessed all of the eventual schools advancing to the Final Four. In 2017, 39.76% of brackets submitted failed to accurately identify any of the eventual Final Four schools (Wilco 2017).

⁸These schools are identified as "Early Exit" schools in Table 1.

III Empirical Research Design

III.I Measuring the Degree of Distraction

I assume working professionals are more likely to be distracted by March Madness when their alma mater’s basketball team successfully advances through the NCAA tournament. The allegiance of a firm’s workforce towards a school is measured as the concentration of alumni that live in the same location as the firm’s headquarters. This approach is consistent with recent archival studies that rely on characteristics of the local labor force as a proxy for firm-level human capital (McGuire, Omer, and Sharp 2011; Call, Campbell, Dhaliwal and Moon 2017; Beck, Francis, and Gunn 2017; Christensen, Jones, and Kenchington 2017). The headquarter location for each firm is identified using the zip code from the 10-K filing obtained from WRDS SEC Analytics Suite. Zip codes are then mapped to core-based statistical areas (CBSAs) using data from the U.S. Census Bureau. The Census Bureau describes a CBSA as a population center and adjacent communities that share a high degree of economic and social integration.

The location of alumni for each school is manually collected using LinkedIn’s campus insights tool. The campus insights tool is intended to help students identify career paths of alumni with similar backgrounds. For each school, LinkedIn provides a field titled, “Where they live,” listing the top 25 locations where alumni reside. After excluding alumni residing outside of the United States, the remaining locations combine to represent 74 (70) percent of each Final Four (Sweet Sixteen) school’s domestic alumni on average. This method assigns alumni from 23 (67) unique Final Four (Sweet Sixteen) schools to 121 CBSAs.

I combine local alumni populations with team success in the NCAA basketball tournament to yield an estimated measure of distracted alumni for each CBSA-year.

$$DISTRACT_{c,t} = \sum \frac{Success_{s,t} * Alumni_{c,s}}{Professionals_c} \times 100$$

Success is an indicator set equal to one if school *s* reached the Sweet Sixteen or Final Four in year *t*. *Alumni* is the total number of people that attended school *s* and reside in CBSA *c*. *Professionals* is the total number of LinkedIn professionals that reside in CBSA *c* regardless of school affiliation. For firms headquartered in CBSA *c*, higher levels of *DISTRACT* indicate higher levels of workforce distraction.

LinkedIn’s campus insights tool provides additional filters to better identify accountant-specific attention. One filter, “What they do,” indicates alumni job functions. After setting “What they do” equal to “Accounting,” I apply the above method to construct a similar measure of accountant-specific distraction. Where *Alumni* is replaced with accounting-alumni and *Professionals* is replaced with accounting-professionals based on user-generated LinkedIn profiles. All other variables are previously defined. Each distraction measure is designed to represent the percentage of professionals or accountants that are distracted in each location each year.

With more than 530 million users, LinkedIn is arguably the most comprehensive professional network.⁹ However, using LinkedIn data to measure the location and job function of alumni necessitates certain caveats. First, the accuracy of LinkedIn data depends on the faithful representation and timely updates of individual users. Second, LinkedIn data used in this study are calculated as of the search date – not the historical date financial statements were filed.¹⁰ This limitation leads to the following assumption: the geographic footprint of alumni at the time of data collection is a reasonable approximation for the historical geographic footprint of alumni. Therefore, the cross-sectional and time series variation in DISTRACT is entirely determined by school success in the NCAA basketball tournament.

Despite these limitations, using LinkedIn data to establish the residential location and job function of alumni has clear benefits. For example, in contrast to qualifications or achievements, LinkedIn users are less likely to be motivated to falsely represent their location or broad job function. Second, “Where they live” and “What they do” are less likely to change than “Where they work.” With specialized skills that can be applied to a number of professional settings, accountants enjoy a relatively high degree of workplace mobility. While accountants may frequently jump from public audit firms to corporate accounting roles or across companies, they are arguably less likely to change their regional location or job function given the significant costs associated with both changes. Finally, LinkedIn membership levels have risen from 32 million members as of December 2008 to 530 million members in December 2017. Greater numbers of LinkedIn members should increase

⁹<https://press.linkedin.com/about-linkedin>

¹⁰Data used in this paper were manually collected from LinkedIn in November of 2017.

the accuracy of estimated local alumni concentration.

III.II Regression Framework

To examine the impact of distraction on the quality of annual reports I estimate a series of regressions generally taking the form:

$$Quality_{i,t} = \alpha + \beta_1 DISTRACT_{c,t} + \Sigma \beta Firm_{i,t} + \Sigma \beta Auditor_{i,t} + \Sigma \beta Location_{c,t} + \epsilon \quad (1)$$

where *Quality* is one of two measures of annual reporting quality (LATE or RESTATE) for firm *i* in year *t*. The first dependent variable, LATE, is an indicator variable that takes a value of 1 if the annual report is filed after the SEC’s reporting deadline. RESTATE, is equal to one if the annual report is subsequently restated. Since the dependent variables are binary and relatively infrequent by nature, each equation is estimated using logistic regression with industry and year fixed effects. In summary, LATE captures timeliness whereas RESTATE reflects the reliability of annual reports.

In the main set of analyses, DISTRACT, takes the value one of four measures (16ALUM, 16ACCT, 4ALUM, 4ACCT). Each measure approximates the proportion of the firm’s local workforce distracted by the success of their alma mater in the NCAA basketball tournament. The four measures of distraction are designed to differ according to the severity of distraction and job function. Both the duration and degree of distraction experienced are expected to be greater for alumni of schools that advance to the Final Four as opposed to the Sweet Sixteen. Along the other dimension, LinkedIn users identifying their job function as “accounting” are more likely to be directly involved with annual reporting procedures. The coefficient of DISTRACT, β_1 of equation (1), will be positive and significant if distraction impairs the timeliness and/or reliability of annual reports beyond firm, auditor, and location-specific characteristics that have previously been shown or hypothesized to vary with annual reporting quality.

Given the importance of financial reporting quality, a bevy of empirical evidence has identified characteristics associated with both the timeliness and reliability of annual reports. Both dimensions of financial reporting quality have been shown to vary with a firm’s size, internal information environment, complexity of operations, and quality of external auditors (Givoly and Palmon 1982; Dechow, Ge, and Schrand 2010; DeFond and Zhang 2014). To

better identify distraction’s unique contribution to financial reporting quality, each regression includes several controls intended to identify characteristics of the firm ($\Sigma\beta Firm$), auditor ($\Sigma\beta Auditor$), and location ($\Sigma\beta Location$) that have been theorized or shown to vary with financial reporting quality.

Following prior research, I include several firm-level measures designed to capture performance, financial position, and complexity of operations that could affect the timeliness and/or reliability of financial reporting. Specifically, I control for firm size (SIZE), performance (ROA), leverage (LEV), growth opportunities (MTB), negative earnings (LOSS), sales growth (SGR), cash flow volatility (CFVOL), current ratio (CURRENT), financial distress (GCONCERN), financing activities (FNDSRSD), mergers and acquisitions/restructurings costs (M&A), foreign operations (FOREIGN), business and geographic segments (SEGMENT), and litigation risk (LIT). Additionally, timeliness and financial reporting quality are expected to vary with auditor characteristics such as size (BIG4), industry expertise (LEADER), and office growth (GROWPAIN). Finally, I control for local demographic characteristics such as population (POP), wages (WAGES), local economic activity (CBSAROA), religious adherence (REL) and education (EDUC).

Since both timeliness and reliability are both expected to be determined by resource constraints, performance, financial position, and risks, I include the same control variables in the regression regardless of which aspect of annual reporting quality is examined. Aside from firm size, I expect each of the control variables to exhibit the same directional relationship with both late filings and restatements. While large firms have more accounting resources, they are also subject to greater scrutiny. Therefore, prior literature has illustrated that firm size exhibits a negative relationship with the likelihood of filing late, but a positive relationship with the likelihood of subsequent restatement (Givoly and Palmon 1982; Dechow, Ge, Larson, and Sloan 2011). Refer to Appendix A for formal definitions and information sources of all variables.

IV Empirical Results

The main analyses focus on non-accelerated filers that issue 10-Ks during the NCAA basketball tournament. Panel A of Table 2 describes sample selection procedures and the

impact of each data requirement on the number of observations available for analysis. The sample begins with all 10-Ks issued from 2005 through 2015 that have valid links to Compustat and Audit Analytics. Manual data collection procedures began with the year 2005, because that year marks the first year I am able to calculate the weighted-average education level of the local workforce. The local level of educational attainment has been shown to be a significant determinant of restatements and is naturally related to alumni concentration (Call, Campbell, Dhaliwal and Moon 2017). The sample ends in 2015 to allow for subsequent discovery of errors and restatements. Distraction arising from the NCAA tournament is not expected to delay annual reports beyond the SEC’s 15-day grace period, therefore annual reports issued beyond the grace period are excluded from the analysis.

Nearly three-quarters of the remaining observations represent 10-Ks with December fiscal year ends. The large proportion of 10-Ks prepared and reviewed following December is consistent with the traditional busy-season strain experienced by accountants responsible for financial reporting. Approximately one-third of 10-Ks with December fiscal year ends are issued by NAFs. For a firm-year observation to be included in the sample, I require the date of the audit report to occur after the first weekend of the tournament (i.e. round of 32). The date of the audit report reflects the date that the auditor has obtained sufficient evidence to conclude that the financial statements are free of material error. More than 75 (63) percent of non-accelerated filers issue 10-Ks with audit sign-off dates after Selection Sunday (round of 32). Together, Panel B and Panel C of Table 2 illustrate the substantial overlap between the financial reporting responsibilities of busy season and the NCAA tournament.

Panel A of Table 3 presents descriptive statistics for NAF firm-years having audit letter dates after the round of 32. All variables are winsorized at the 1st and 99th percentiles. Subsequent tests use subsets of the full sample to examine the timeliness/reliability tradeoff. Therefore, Table 3 also compares the characteristics of late filers with those filers that abide by the SEC’s deadline (on-time filers). Late filers comprise approximately one-quarter of the entire sample.¹¹ In comparison to on-time filers, late filers tend to be smaller, financially

¹¹Late filers constitute a larger share of the sample in comparison to prior studies (Alford, Jones, and Zmijewski 1994; Impink, Lubberink, Praag, and Veenman 2011; Cao, Chen, and Higgs 2016; Bartov and Konchitchki 2017). Differences in the proportion of firms issuing late 10-Ks is largely driven by sample selection procedures, which limit the sample to non-accelerated filers that issue 10-Ks after the opening rounds of the NCAA tournament. For example, if the sample is extended to include all non-accelerated

constrained, poorly performing firms that are less likely to be audited by the big four or have actively traded equity, and more likely to restate their financial statements. This characterization of late filers is in line with evidence from prior studies (Alford, Jones, and Zmijewski 1994; Impink, Lubberink, Praag, and Veenman 2011; Cao, Chen, and Higgs 2016; Bartov and Konchitchki 2017). Interestingly, the descriptive evidence also suggests that late filers experience higher levels of workforce distraction arising from the NCAA tournament.

As previously stated, I expect tournament-driven distraction to affect the timeliness and reliability of annual reports through the review process, due to the timing of the NCAA tournament with respect to financial reporting activities. In other words, if tournament-driven distraction is associated with accounting restatements, then it is likely because the underlying reporting issue existed before the NCAA tournament began and tournament-driven distraction prevented the issue from being identified and effectively addressed during the review process. Accordingly, I do not make any prediction regarding the nature of the restatement itself. For context, Panel B of Table 3 presents frequently studied characteristics of restatements. Over half of the restatements are accompanied by an 8-K Item 4.02 disclosure, which is required if the firm concludes that previously issued financial statements should no longer be relied upon.¹² Additionally, more than ten percent of the restatements are associated with reports of fraud or SEC investigations. While some restatements appear to be relatively minor revisions that do not necessitate non-reliance disclosures or lead to investigations/claims of fraudulent reporting, it is possible that material/fraudulent errors go undetected by distracted accountants.

IV.I Timeliness: Likelihood of exceeding SEC reporting deadline

Before moving on, it is worth noting that the decision to report a 10-K after the SEC reporting deadline is a conscious choice. Stated differently, accountants are aware of SEC reporting requirements and choose whether or not to report by the mandated deadline. The decision to delay is largely based on the accountants' confidence that the financial statements are free of material misstatement. My first hypothesis (H1) predicts that firms headquartered in areas with a distracted work-force are more likely to file their 10-K after

filers, then the proportion of late filers drops from roughly 25% to 16%. Additionally, non-accelerated filers are also more likely to file late annual reports when compared to accelerated and large-accelerated filers.

¹²See SEC Rule 33-8400 (August 23, 2004).

the SEC mandated reporting deadline. The results presented in Table 4 indicate that firms headquartered in areas where higher proportions of alumni from Final Four schools reside are more likely to file late 10-Ks. However, if tournament success is defined by reaching the Sweet Sixteen (16ALUM and 16ACCT) there is no significant relationship between distraction and the likelihood of filing late, suggesting that the influence of tournament-driven distraction depends on the duration and/or severity of the distraction.

Consistent with theory/existing evidence, control variables included in the regression generally exhibit their predicted association with the likelihood of filing late. Firms that have access to superior financial reporting resources (SIZE, BIG4, and EDUC) exhibit a negative association with the likelihood of filing late. Those firms that report poor performance (ROA and LOSS) or strained financial condition (CURRENT and GCONCERN) are more likely to report late. Sales growth (SGR) is expected to increase the complexity of financial reporting and thus should therefore be positively associated with late filings. On the other hand, firms that are subject to higher levels of litigation risk (LIT) are less likely to file late 10-Ks. The only variable that is inconsistent with its expected association is audit office-level growing pains (GROWPAIN). Bills, Swanquist, and Whited (2016) show that the clients of audit firms that experience year-over-year growth in audit fees report larger absolute discretionary accruals and are more likely to issue subsequent restatements. As a proxy for constrained resources at the audit-office level, GROWPAIN was expected to increase the likelihood that audit clients file beyond the SEC reporting deadline. I interpret the negative association between GROWPAIN and LATE to be attributable higher quality audit firms gaining larger market shares.

IV.II Reliability: Likelihood of subsequent restatement

If distractions prevent accountants from detecting and mitigating existing financial reporting issues, then distractions will decrease the reliability of annual reports. Specifically, the second hypothesis (H2) predicts that distractions will increase the likelihood that annual reports are subsequently restated. The results from testing this hypothesis over the full sample of firm-years suggests that distractions have no significant impact on the reliability

of annual reports (see Table 5 - Panel A).¹³ However, examining the full sample by itself does not shed light on the timeliness-reliability tradeoff that is expected to confront constrained accountants. Accordingly, I reperform the analysis over two separate samples - those that file 10-Ks on or before the reporting deadline (On-Time Sample) and those that file after the deadline (Late Sample).

If distractions prevent accountants from detecting financial reporting issues and/or accountants are unwilling to file late annual reports, then distractions will increase the likelihood of accounting restatements for firms that file on time. Panels B and C of Table 5 present results for the on-time filer sample (Panel B) and the late filer sample (Panel C) separately. The results from Panels B and C suggest that firms headquartered in an area with a distracted workforce are more likely to file financial statements that are subsequently restated, but only for firms that file on time. Similar to the results from the timeliness analysis in Table 4, distraction measures based on the concentration of alumni from Final Four schools are significantly positive, while distraction measures based on schools that advanced to the Sweet Sixteen exhibit no significant relation with the likelihood of restatement. When the evidence from Tables 4 and 5 are taken together, tournament-driven distraction increases the likelihood of filing annual reports that are late or subsequently restated, but not both.

IV.III Mediating Factors

The timeliness and reliability of 10-Ks are expected to be shaped by the incentives and circumstances facing those responsible for financial reporting. Characteristics that increase the costs associated with filing late and subsequently restated 10-Ks are expected to attenuate the detrimental impact of distraction on information quality. Using industry classification to proxy for elevated litigation risk, I modify the original regression framework by including an interaction term between distraction and litigation risk (DISTRACTxLIT). The results presented in Panel A of Table 6 support hypothesis 3(a) and suggest that when expected litigation costs are high, the influence of distraction on both aspects of information quality are attenuated to the extent that the significant association between distraction and the likelihood of issuing late or subsequently restated annual reports is isolated to firm operating

¹³Similar to the timeliness analysis, control variables included in the regression generally exhibit their predicted association with the likelihood of subsequent restatement.

in industries with lower litigation risk.

Hypothesis 3(b) predicted that expert-auditors are in a position to contend with the resource constraints arising from a distracted workforce. Using the same approach from Panel A of Table 6, I modify the original regression framework by including an interaction term between distraction and an indicator variable set equal to one if the firm's auditor is the local industry leader (DISTRACTxLEADER). The results presented in Panel B of Table 6 support hypothesis 3(b) and suggest that auditors having specialized knowledge regarding the client's industry are able to mitigate distraction's detrimental impact on both the timeliness and reliability of annual reports.

Next, I examine if the reporting outcome associated with distraction differs, depending on whether or not the firm has actively-traded equity. I classify a firm as having actively-traded equity if there is sufficient CRSP data to calculate returns surrounding the earnings announcement and public release of the 10-K that year. Because investors interpret delays as bad news, the relative cost of issuing a late 10-K is higher for firms with actively traded equity. I amend the regression framework by adding an indicator variable for actively-traded equity (EQUITY) and interact distraction measures with that indicator (DISTRACTxEQUITY). The results in Panel C of Table 6 are consistent with hypothesis 4. It appears that the firms headquartered in areas with distracted workforces are more likely to delay annual reports if the firm does not have to risk the investor imposed penalty associated with filing late. On the other hand, actively-traded firms will not delay the annual report when confronted with distraction. Instead, actively-traded firms are more likely to subsequently restate annual reports issued on time during periods of higher workforce distraction.

V Robustness

V.I Regular Season Success vs. Tournament Success: The Case of Early Exits

The results presented thus far could be attributable to school success during the regular season rather than school success in the NCAA tournament. If good teams tend to do well in the tournament and alumni are distracted by team success, then it is reasonable to suspect the results may be attributable to the regular season. After all, the regular season spans more than three months while the NCAA tournament spans a little more than three weeks. To address this concern I repeat the main analysis using distraction measures that are

based on teams that succeeded during the regular season, but failed to meet expectations during the NCAA tournament. Using the “Early Exit” schools identified in Table 1, I calculate EXITALUM (EXITACCT) as the number of alumni (accounting-alumni) whose alma mater was one of the four top-seeded teams that did not advance beyond the Round of 32 in the NCAA tournament. Following the calculation method discussed in Section IV.I, the summation of alumni for each CBSA is scaled by the total number of professionals (accounting-professionals) residing in that CBSA. These new measures (EXITALUM and EXITACCT) reflect the proportion of the local workforce whose alma mater had a successful season, but did not advance beyond the first weekend of the NCAA tournament.

Table 7 presents the results when I use EXITALUM and EXITACCT as distraction measures within the existing regression framework. Regardless of the dependent variable (LATE or RESTATE), neither measure depicting workforce distraction based on regular season success exhibits a significant association with the likelihood of issuing late or subsequently restated 10-Ks. While the results do not rule out the notion that regular season success can affect financial reporting quality, the results suggest that only sustained success (through the NCAA basketball tournament) increases the likelihood that firms issue late or subsequently restated 10-Ks.

V.II Pre-Elite vs. Post Elite: Reliability

To gain more confidence in this interpretation of the results I divide the sample of firm-years into two groups based on the expected overlap between financial reporting procedures and the NCAA tournament. Those firms that file annual reports between the Round of 32 through the Elite Eight are grouped into the “Pre-Elite” period, while those firms that file annual reports after the Elite Eight but before the SEC deadline are grouped into the “Post-Elite” period. Importantly, the duration of distraction is shorter for firms that file annual reports during the Pre-Elite period. Additionally, both Sweet Sixteen schools and Final Four schools are distracted to roughly the same extent during the Pre-Elite period. Taken together, these period-specific characteristics suggest that there should be no difference in the degree of distraction among the Sweet Sixteen and Final Four schools in the Pre-Elite period and the power of distraction for Final Four schools is strongest in the Post-Elite period.

Consistent with this prediction, only Final Four distraction measures in the Post-Elite period predict subsequent accounting restatements despite firms having a comparable incidence of restatements (roughly 5%) in each subsample. While many financial reporting tasks including a number of audit procedures and early reviews of the annual report are completed prior to the issuance of the annual report, the length of time between the beginning of the tournament and filing of the financial statements is largest for the Post-Elite subsample. This analysis bestows more confidence that that financial reporting procedures are conducted within the tournament window. Unfortunately, this test can only be run to examine the relation between tournament-driven distraction and accounting restatements. By definition, all 10-Ks issued after the SEC reporting deadline are issued in the Post-Elite period.

V.III Falsification Test: Large Accelerated Filers

Given that the measure I use for distraction is based on local demographic characteristics, it is reasonable to be concerned that some other factor occurring within that geographic area could influence the likelihood of firms subsequently restate annual reports. If this omitted variable is somehow correlated with the degree of distraction, then the coefficient on distraction could be capturing the effect of this unobserved correlated omitted variable. To address this concern, I examine a subset of firms headquartered in the same locations but file annual reports prior to the beginning of the NCAA tournament. In 2006, the SEC accelerated the annual reporting deadline to 60 days for a set of firms classified as large accelerated filers. The 60-day cutoff occurs before the NCAA tournament begins and before teams are selected to participate in the tournament. Therefore, distraction caused by the NCAA basketball tournament should not be related to the likelihood large accelerated filers restate annual reports. Untabulated results indicate that none of the distraction measures are positively related to the likelihood of issuing late or subsequently restated annual reports for large accelerated filers. The outcome of this test provides some confidence that my main results from Tables 4 and 5 are not being driven by some correlated omitted variable that varies over time and by location.

V.IV Falsification Test: Non-Accelerated Filers with Alternative Fiscal Year Ends

One drawback of using large accelerated filers in a placebo test is that large accelerated filers are much larger in size and have substantially more accounting-related resources than non-accelerated filers. To address this concern, my second falsification test examines the relationship between March Madness distraction and the likelihood of restating annual reports for a sample of non-accelerated filers whose fiscal year end does not align with calendar year end. For this sample of firms, the NCAA basketball tournament does not overlap with the SEC's 90-day reporting deadline. March Madness distractions should not affect the financial reporting quality for these firms since they have greater flexibility to allocate resources outside of the NCAA tournament period. The untabulated results confirm that March Madness distractions do not increase the likelihood of issuing late or subsequently restated annual reports for this sample of firms that should not be subject to tournament-driven distraction.

Table 1 NCAA Tournament Teams

Table 2 lists the teams that reached the Final Four from 2006 through 2016. In addition, the rightmost column (Early Exit) lists the four top-seeded teams that did not advance beyond the round of 32. Each team is listed followed by their seed in parentheses.

Year	Final Four	Early Exit
2006	Florida (3) UCLA (2) George Mason (11) LSU (4)	Ohio State (2) Tennessee (2) Iowa (3) North Carolina (3)
2007	Florida (1) Ohio State (1) Georgetown (2) UCLA (2)	Wisconsin (2) Washington State (3) Maryland (4) Texas (4)
2008	Kansas (1) Memphis (1) North Carolina (1) UCLA (1)	Duke (2) Georgetown (2) Connecticut (4) Pittsburgh (4)
2009	Michigan State (2) North Carolina (1) Connecticut (1) Villanova (3)	Wake Forest (4) Washington (4) Florida State (5) Utah (5)
2010	Butler (5) Duke (1) Michigan State (5) West Virginia (2)	Kansas (1) Villanova (2) Georgetown (3) New Mexico (3)
2011	Butler (8) Connecticut (3) Kentucky (4) VCU (11)	Pittsburgh (1) Notre Dame (2) Purdue (3) Syracuse (3)
2012	Kansas (2) Kentucky (1) Louisville (4) Ohio State (2)	Duke (2) Missouri (2) Florida State (3) Georgetown (3)

Table 1 NCAA Tournament Teams (continued)

Year	Final Four	Early Exit
2013	Louisville (1) Michigan (4) Syracuse (4) Wichita State (9)	Gonzaga (1) Georgetown (2) New Mexico (3) Kansas State (3)
2014	Connecticut (7) Kentucky (8) Florida (1) Wisconsin (2)	Wichita State (1) Kansas (2) Villanova (2) Duke (3)
2015	Duke (1) Kentucky (1) Wisconsin (1) Michigan State (7)	Villanova (1) Kansas (2) Virginia (2) Iowa State (3)
2016	North Carolina (1) Villanova (2) Oklahoma (2) Syracuse (10)	Michigan State (2) Xavier (2) West Virginia (3) Utah (3)

Table 2 Sample Selection

Panel A describes data requirements and the impact of each requirement on the number of observations regardless of filing status.

Panel A: Impact of data requirements on sample size

Data Requirement	Firm-Year Obs.
First 10-K issued for each firm from SEC Index File for fiscal years 2005 through 2015 with valid links to Compustat and Audit Analytics	66,274
Not issued by ABS, REIT, Shell, Blank Check, Non-Operational, Fund, or Trust Companies	59,728
Valid location data for firm headquarters	53,310
Sufficient data to measure variables	29,772
10-K filed on time or within the SEC's 15-day grace period	28,670

Panel B: Frequency of observations by filing status and fiscal year end

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
LAF	185	52	266	62	139	415	94	115	456	150	62	7,355	9,351
AF	192	69	449	79	45	544	134	84	507	143	56	6,923	9,225
NAF	155	109	476	157	144	952	157	102	622	189	62	6,969	10,094
Total	532	230	1,191	298	328	1,911	385	301	1,585	482	180	21,247	28,670

Panel C: Intersection of non-accelerated filers and the NCAA tournament

Data Requirement	Firm-Year Obs.
Non-accelerated filers with December fiscal year ends (from Panel B)	6,969
Sign-off on or after Selection Sunday	5,256
Full Sample: Sign-off after the Round of 32	4,429
On Time Sample: Filing on or before the SEC deadline	3,266
Late Sample: Filing during SEC grace period (Days 91-105)	1,163

Panel D: Map of subsamples to statistical analyses

Table and Test	Sample
Table 3: Panel A - Descriptive Statistics	Full, On Time, Late
Table 4: Timeliness	Full
Table 5: Reliability - Panel A	Full
Table 5: Reliability - Panel B	On Time
Table 5: Reliability - Panel C	Late
Table 6: Dep. Var. = LATE	Full
Table 6: Dep. Var. = RESTATE	On Time
Table 7: Dep. Var. = LATE	Full
Table 7: Dep. Var. = RESTATE	On Time

Table 3 Descriptive Statistics

Panel A presents descriptive statistics for the full sample of firm-year observations with the mean and standard deviation for the on time sample and late subsamples separately. Differences in the means are calculated at right. Significance of differences are calculated using t-test.

Panel A: Descriptive statistics by sample

Sample Firm-year Obs.	Full 4,429							On Time 3,266		Late 1,163		Difference (A)–(B)
	Mean	StdDev	P10	P25	P50	P75	P90	Mean (A)	StdDev	Mean (B)	StdDev	
16ACCT	1.423	1.851	0.047	0.498	0.884	1.635	3.029	1.417	1.820	1.441	1.937	(0.024)
16ALUM	1.693	1.970	-	0.768	1.357	1.971	3.469	1.709	1.956	1.649	2.007	0.060
4ACCT	0.394	0.848	-	-	0.149	0.342	0.946	0.363	0.751	0.479	1.071	(0.116)***
4ALUM	0.459	0.851	-	-	0.247	0.508	1.165	0.437	0.785	0.521	1.011	(0.084)**
BIG4	0.174	0.379	-	-	-	-	1.000	0.212	0.408	0.070	0.255	0.142***
CBSAROA	(2.679)	15.495	(5.923)	(1.794)	(0.551)	(0.199)	(0.004)	(2.425)	14.322	(3.393)	18.382	0.968
CFVOL	19.644	9.129	8.238	10.840	20.300	28.268	28.763	19.691	9.165	19.511	9.029	0.180
CURRENT	2.549	3.896	0.116	0.569	1.382	2.851	5.730	2.971	4.111	1.365	2.905	1.606***
EDUC	7.621	0.338	7.134	7.374	7.680	7.853	8.057	7.653	0.330	7.529	0.344	0.124***
EQUITY	0.490	0.500	-	-	-	1.000	1.000	0.574	0.495	0.255	0.436	0.320***
EXITACCT	0.320	0.757	-	-	0.140	0.324	0.584	0.337	0.781	0.272	0.684	0.065**
EXITALUM	0.381	0.790	-	-	0.230	0.402	0.767	0.400	0.814	0.329	0.714	0.070**
FNDSRSD	0.389	0.488	-	-	-	1.000	1.000	0.367	0.482	0.451	0.498	(0.083)***
FOREIGN	0.157	0.364	-	-	-	-	1.000	0.174	0.379	0.108	0.311	0.066***
GCONCERN	0.351	0.477	-	-	-	1.000	1.000	0.256	0.437	0.617	0.486	(0.360)***
GROWPAIN	0.567	7.048	(0.226)	(0.059)	0.016	0.270	0.821	0.623	8.171	0.413	1.283	0.210
LATE	0.263	0.440	-	-	-	1.000	1.000	-	-	1.000	-	N/A
LEADER	0.228	0.420	-	-	-	-	1.000	0.242	0.428	0.190	0.392	0.052***
LEV	3.774	35.135	0.166	0.317	0.590	1.105	3.738	1.767	17.765	9.410	61.436	(7.642)***
LIT	0.380	0.486	-	-	-	1.000	1.000	0.391	0.488	0.352	0.478	0.039**
LOSS	0.727	0.445	-	-	1.000	1.000	1.000	0.681	0.466	0.858	0.349	(0.177)***
M&A	0.089	0.285	-	-	-	-	-	0.098	0.298	0.064	0.244	0.035***
MTB	2.062	26.143	(4.115)	(0.125)	1.134	2.989	8.110	2.660	23.877	0.382	31.603	2.278**
POP	15.267	1.115	13.684	14.546	15.469	16.071	16.743	15.259	1.099	15.288	1.161	(0.030)
REL	0.508	0.091	0.369	0.436	0.534	0.568	0.586	0.509	0.089	0.505	0.098	0.004
RESTATE	0.074	0.262	-	-	-	-	-	0.064	0.244	0.103	0.304	(0.039)***
ROA	(1.243)	4.377	(2.216)	(0.786)	(0.195)	0.011	0.101	(0.654)	2.319	(2.895)	7.361	2.241***
SEGMENT	0.900	0.802	-	-	1.099	1.609	1.946	0.966	0.807	0.713	0.758	0.253***
SGR	1.020	6.953	(0.539)	(0.168)	0.047	0.326	1.168	0.765	5.859	1.736	9.332	(0.971)***
SIZE	2.633	1.977	(0.052)	1.557	2.892	3.894	4.877	2.970	1.747	1.687	2.259	1.283***
WAGES	46.823	7.486	38.437	41.727	45.310	51.465	56.935	47.271	7.502	45.564	7.298	1.707***

Table 3 Descriptive Statistics (continued)

Panel B describes characteristics of 209 restatements that affect a total of 328 firm-year observations in the full sample.

<u>Panel B: Restatement Characteristics</u>		
<u>Materiality</u>	<u>Frequency</u>	<u>Percentage</u>
Accompanied by 8-K Item 4.02	113	54.85
<u>Announcement's Form of Disclosure</u>		
8-K/Press Release	99	48.06
Periodic Filing	88	42.72
Other	19	9.22
<u>Nature of Restatement</u>		
Misapplication of Accounting Standard	182	88.35
Fraud/Misconduct	24	11.65
Board Involvement	99	48.06
Auditor Discussion	155	75.24
Securities Class Action Litigation	27	13.11
<u>Impact on previously reported financial performance/condition</u>		
Adverse	170	82.52
Improves	36	17.48
Duration of Restatement Period	2.41	
Count of Issues Identified	1.96	
<u>Top 15 most frequently cited issues</u>		
Debt, quasi-debt, warrants & equity security	55	26.70
Revenue recognition	34	16.50
Tax expense/benefit/deferral/other	30	14.56
Expense recognition	21	10.19
Inventory, vendor and/or cost of sales	20	9.71
Liabilities, payables, reserves and accrual estimate failures	19	9.22
Deferred, stock-based and/or executive compensation	18	8.74
Property, Plant, and Equipment, intangible, or fixed asset	17	8.25
Accounts/loans receivable, investments & cash	16	7.77
Cash flow statement classification	14	6.80
Acquisitions, mergers, disposals, and reorganizations	12	5.83
Income statement classification	11	5.34
Consolidation (including variable interest and off-B/S)	10	4.85
Foreign, related party, affiliated, or subsidiary	9	4.37
Debt and/or equity classification	9	4.37

Table 4 Timeliness

Panel A presents...dep.var. is LATE...FE: Year, SIC2...Cluster: CBSA

Panel A: 4,429 firm-year observations

	16ALUM	16ACCT	4ALUM	4ACCT
DISTRACT	-0.006 (0.020)	-0.009 (0.023)	0.123*** (0.034)	0.124*** (0.035)
SIZE	-0.082** (0.042)	-0.082** (0.042)	-0.086** (0.042)	-0.086** (0.042)
MTB	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)	0.000 (0.002)
ROA	-0.043*** (0.010)	-0.043*** (0.010)	-0.043*** (0.010)	-0.043*** (0.010)
LOSS	0.496*** (0.177)	0.496*** (0.177)	0.488*** (0.176)	0.487*** (0.177)
SGR	0.013** (0.005)	0.013** (0.005)	0.013** (0.005)	0.013** (0.005)
CFVOL	-0.001 (0.057)	-0.001 (0.057)	-0.004 (0.058)	-0.005 (0.058)
LEV	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
CURRENT	-0.075** (0.032)	-0.075** (0.032)	-0.074** (0.031)	-0.074** (0.031)
GCONCERN	0.997*** (0.102)	0.998*** (0.103)	0.995*** (0.101)	0.994*** (0.101)
FNDSRSD	-0.114 (0.103)	-0.114 (0.103)	-0.112 (0.104)	-0.111 (0.104)
M&A	0.105 (0.159)	0.105 (0.159)	0.110 (0.159)	0.112 (0.159)
FOREIGN	-0.067 (0.144)	-0.067 (0.144)	-0.062 (0.145)	-0.063 (0.145)
SEGMENT	-0.067 (0.071)	-0.067 (0.071)	-0.067 (0.071)	-0.067 (0.071)
BIG4	-0.779*** (0.133)	-0.779*** (0.134)	-0.779*** (0.135)	-0.776*** (0.135)
GROWPAIN	-0.015** (0.007)	-0.015** (0.007)	-0.015** (0.007)	-0.015** (0.007)
LIT	-0.538*** (0.170)	-0.540*** (0.171)	-0.546*** (0.163)	-0.541*** (0.163)
LEADER	-0.057 (0.142)	-0.056 (0.142)	-0.062 (0.142)	-0.063 (0.142)
CBSAROA	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)	-0.003*** (0.001)
POP	0.036 (0.047)	0.036 (0.047)	0.022 (0.049)	0.022 (0.048)
REL	-0.612 (0.612)	-0.610 (0.613)	-0.540 (0.630)	-0.561 (0.625)
EDUC	-0.794*** (0.215)	-0.797*** (0.213)	-0.797*** (0.205)	-0.786*** (0.204)
WAGES	0.012 (0.010)	0.012 (0.010)	0.012 (0.010)	0.012 (0.010)

Table 5 Reliability

Panel B presents...dep.var. is RESTATE...FE: Year, SIC2...Cluster: CBSA.

Panel A: Full Sample 4,429 observations

	16ALUM	16ACCT	4ALUM	4ACCT
DISTRACT	0.030 (0.046)	0.032 (0.048)	0.092 (0.092)	0.069 (0.106)
SIZE	0.207*** (0.042)	0.207*** (0.043)	0.205*** (0.043)	0.206*** (0.043)
MTB	0.005** (0.002)	0.005** (0.002)	0.005** (0.002)	0.005** (0.002)
ROA	-0.044*** (0.014)	-0.044*** (0.014)	-0.044*** (0.014)	-0.044*** (0.014)
LOSS	0.362* (0.189)	0.361* (0.189)	0.355* (0.190)	0.358* (0.191)
SGR	0.012* (0.007)	0.012* (0.007)	0.012* (0.007)	0.012* (0.007)
CFVOL	0.217** (0.105)	0.218** (0.105)	0.214** (0.104)	0.215** (0.104)
LEV	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
CURRENT	-0.005 (0.020)	-0.005 (0.020)	-0.004 (0.020)	-0.004 (0.020)
GCONCERN	-0.110 (0.221)	-0.110 (0.221)	-0.110 (0.222)	-0.111 (0.222)
FNDSRSD	0.211** (0.108)	0.211* (0.108)	0.216** (0.107)	0.215** (0.107)
M&A	-0.058 (0.269)	-0.059 (0.269)	-0.062 (0.266)	-0.062 (0.266)
FOREIGN	-0.098 (0.220)	-0.099 (0.220)	-0.090 (0.221)	-0.092 (0.221)
SEGMENT	-0.160* (0.094)	-0.160* (0.094)	-0.158* (0.093)	-0.159* (0.093)
BIG4	-0.372 (0.271)	-0.370 (0.271)	-0.374 (0.268)	-0.369 (0.269)
GROWPAIN	0.003 (0.005)	0.003 (0.005)	0.002 (0.005)	0.002 (0.005)
LIT	-0.324** (0.153)	-0.322** (0.152)	-0.334** (0.150)	-0.328** (0.151)
LEADER	0.185 (0.168)	0.183 (0.168)	0.186 (0.168)	0.185 (0.168)
CBSAROA	-0.003** (0.001)	-0.003** (0.002)	-0.003** (0.001)	-0.003** (0.001)
POP	0.082 (0.058)	0.083 (0.057)	0.076 (0.058)	0.079 (0.058)
REL	0.946 (0.799)	0.925 (0.799)	0.985 (0.777)	0.943 (0.774)
EDUC	-0.686** (0.275)	-0.671** (0.273)	-0.669** (0.286)	-0.664** (0.286)
WAGES	0.007 (0.016)	0.007 (0.016)	0.006 (0.016)	0.007 (0.016)

Table 5 Reliability (continued)
 ...FE: Year, SIC2...Cluster: CBSA.

Panel B: On Time Sample 3,019 observations				
DISTRACT:	16ALUM	16ACCT	4ALUM	4ACCT
DISTRACT	0.049 (0.045)	0.046 (0.046)	0.218*** (0.051)	0.174** (0.087)
Controls?	YES	YES	YES	YES
Fixed Effects:	Year & Ind.	Year & Ind.	Year & Ind.	Year & Ind.
Panel C: Late Sample 1,163 observations				
DISTRACT:	16ALUM	16ACCT	4ALUM	4ACCT
DISTRACT	0.003 (0.074)	0.014 (0.079)	0.044 (0.095)	0.025 (0.109)
Controls?	YES	YES	YES	YES
Fixed Effects:	Year & Ind.	Year & Ind.	Year & Ind.	Year & Ind.

Table 6 Mediating Factors

...FE: Year, SIC2...Cluster: CBSA.

Panel A: Litigation Risk				
Dep. Var.:	LATE		RESTATE	
DISTRACT:	4ALUM	4ACCT	4ALUM	4ACCT
DISTRACT	0.158*** (0.040)	0.142*** (0.047)	0.288*** (0.069)	0.224** (0.090)
LIT	-0.493*** (0.176)	-0.514*** (0.177)	-0.126 (0.233)	-0.140 (0.236)
DISTRACTxLIT	-0.100 (0.067)	-0.056 (0.076)	-0.160 (0.102)	-0.141 (0.159)
Firm-Year Obs.	4,429	4,429	3,266	3,266
Controls?	YES	YES	YES	YES
Fixed Effects:	Year & Ind.	Year & Ind.	Year & Ind.	Year & Ind.
Panel B: Audited by Local Industry Leader				
Dep. Var.:	LATE		RESTATE	
DISTRACT:	4ALUM	4ACCT	4ALUM	4ACCT
DISTRACT	0.108*** (0.040)	0.104** (0.043)	0.294*** (0.061)	0.264*** (0.080)
LEADER	-0.084 (0.151)	-0.090 (0.152)	0.205 (0.208)	0.167 (0.196)
DISTRACTxLEADER	0.046 (0.082)	0.061 (0.083)	-0.251 (0.237)	-0.252 (0.244)
Firm-Year Obs.	4,429	4,429	3,266	3,266
Controls?	YES	YES	YES	YES
Fixed Effects:	Year & Ind.	Year & Ind.	Year & Ind.	Year & Ind.
Panel C: Actively traded equity				
Dep. Var.:	LATE		RESTATE	
DISTRACT:	4ALUM	4ACCT	4ALUM	4ACCT
DISTRACT	0.104** (0.050)	0.096** (0.048)	-0.120 (0.190)	-0.116 (0.175)
EQUITY	-0.633*** (0.138)	-0.640*** (0.136)	-0.190 (0.243)	-0.164 (0.234)
DISTRACTxEQUITY	0.042 (0.098)	0.064 (0.087)	0.350* (0.193)	0.362* (0.188)
Firm-Year Obs.	4,429	4,429	3,266	3,266
Controls?	YES	YES	YES	YES
Fixed Effects:	Year & Ind.	Year & Ind.	Year & Ind.	Year & Ind.

Table 7 Early Exits

Table 7 presents .

Dep. Var.:	LATE		RESTATE	
	EXITALUM	EXITACCT	EXITALUM	EXITACCT
DISTRRACT	-0.023 (0.052)	-0.059 (0.047)	0.050 (0.087)	0.023 (0.090)
SIZE	-0.082* (0.042)	-0.082* (0.042)	0.211*** (0.075)	0.211*** (0.075)
MTB	0.000 (0.002)	0.000 (0.002)	0.004 (0.004)	0.004 (0.004)
ROA	-0.043*** (0.010)	-0.043*** (0.010)	0.025 (0.067)	0.025 (0.067)
LOSS	0.495*** (0.177)	0.495*** (0.177)	0.359* (0.205)	0.358* (0.205)
SGR	0.013** (0.005)	0.013** (0.006)	0.040*** (0.015)	0.040*** (0.015)
CFVOL	-0.001 (0.058)	-0.002 (0.059)	0.161* (0.094)	0.160* (0.094)
LEV	0.001 (0.001)	0.001 (0.001)	0.062** (0.026)	0.062** (0.026)
CURRENT	-0.075** (0.031)	-0.075** (0.031)	-0.022 (0.030)	-0.022 (0.030)
GCONCERN	0.997*** (0.102)	0.999*** (0.102)	-0.444** (0.217)	-0.443** (0.217)
FNDSRSD	-0.114 (0.104)	-0.112 (0.104)	0.284** (0.142)	0.283** (0.142)
M&A	0.105 (0.159)	0.103 (0.160)	-0.099 (0.281)	-0.100 (0.281)
FOREIGN	-0.067 (0.144)	-0.067 (0.144)	-0.310 (0.256)	-0.310 (0.256)
SEGMENT	-0.067 (0.071)	-0.067 (0.071)	-0.065 (0.120)	-0.065 (0.120)
BIG4	-0.778*** (0.134)	-0.777*** (0.134)	-0.368 (0.248)	-0.367 (0.248)
GROWPAIN	-0.015** (0.007)	-0.015** (0.007)	0.002 (0.006)	0.002 (0.006)
LIT	-0.538*** (0.169)	-0.539*** (0.169)	-0.193 (0.224)	-0.193 (0.224)
LEADER	-0.057 (0.142)	-0.058 (0.142)	0.079 (0.168)	0.079 (0.168)
CBSAROA	-0.003*** (0.001)	-0.003*** (0.001)	-0.007** (0.003)	-0.007** (0.003)
POP	0.036 (0.047)	0.037 (0.047)	0.064 (0.064)	0.065 (0.064)
REL	-0.601 (0.618)	-0.585 (0.613)	-0.092 (0.959)	-0.102 (0.960)
EDUC	-0.787*** (0.214)	-0.777*** (0.215)	-1.186*** (0.306)	-1.172*** (0.301)
WAGES	0.012 (0.010)	0.012 (0.010)	0.023 (0.019)	0.023 (0.019)
Obs.	4,429	4,429	3,266	3,266

Appendix A: Variable Definitions

Variable	Definition
Distraction Variables	
4ALUM (16ALUM)	Number of alumni whose alma mater advanced to the Final Four (Sweet Sixteen) scaled by the total number of professionals residing in the same CBSA. The count and location of alumni and professionals are manually collected from LinkedIn.
4ACCT (16ACCT)	Number of accounting-alumni whose alma mater advanced to the Final Four (Sweet Sixteen) scaled by the total number of LinkedIn accounting-professionals residing in the same CBSA. Accounting-alumni and accounting-professionals are identified according to their self-identified industry classification and manually collected from LinkedIn.
EXITALUM (EXITACCT)	Number of alumni (accounting-alumni) whose alma mater was highly seeded, but did not advance beyond the second round of the tournament scaled by the total number of professionals(accounting-professionals) residing in the same CBSA. The count and location of alumni and professionals are manually collected from LinkedIn.
Dependent Variables	
LATE	Binary variable set equal to one if the 10-K is publicly filed after the SEC deadline, zero otherwise.
RESTATE	Binary variable set equal to one if the 10-K is subsequently restated, zero otherwise.
Independent Control Variables	
SIZE	Natural log of total assets (AT)
MTB	Market value of equity (MKVALT) scaled by book value of equity (SEQ)
ROA	Income before extraordinary items (IB) scaled by total assets (AT)
LOSS	Indicator variable set equal to one if the firm reports a loss ($IB < 0$) in the current year, zero otherwise.
SGR	Year-over-year change in sales divided by prior period sales ($\Delta \text{SALE}_t / \text{SALE}_{t-1}$)
CFVOL	Standard deviation of net cash flow from operating activities (OANCF) scaled by total assets (AT) measured over the past three years
LEV	Total liabilities (LT) divided by total assets (AT)
CURRENT	Current assets (ACT) divided by current liabilities (LCT)
FUNDSRSD	Indicator variable set equal to one if the sum of new long-term debt (DLTIS) and equity (SSTK) is greater than 20% of total assets (AT), zero otherwise.
M&A	Indicator variable set equal to one if the firm reports special items corresponding to a merger or acquisition ($\text{AQP} > 0$) or incurs restructuring costs during the year ($\text{RCP} > 0$)

Variable	Definition
FOREIGN	Indicator variable set equal to one if the firm reports realized or unrealized foreign exchange gains/losses ($ FCA > 0$)
SEGMENT	Natural log of one plus the total number of geographic and business segments
LIT	Indicator variable set equal to one if the firm operates in an industry associated with higher litigation risk, zero otherwise. High litigation industries are defined as the following SIC industry groupings: 2833-2836, 3570-3577, 3600-3674, 5200-5961, 7370-7374, and 8731-8734
EQUITY	Indicator variable set equal to one if the firm has actively traded equity. A firm has actively traded equity if there is sufficient trading activity to calculate stock returns in the three days surrounding the earnings announcement and 10-K filing date. Stock returns are calculated using CRSP data. CRSP data includes price and return information for NYSE, NYSE MKT, NASDAQ, and ARCA stocks. CRSP excludes price data on rights and warrants, preferred shares, units representing common stocks bundled with rights or warrants, and over the counter bulletin board issues.
BIG4	Indicator variable set equal to one if the firm is audited by a big four accounting firm according to Audit Analytics.
GCONCERN	Indicator variable set equal to one if the auditor's letter made reference to the client's ability to continue as a going concern according to Audit Analytics (GOING_CONCERN)
GROWPAIN	Year-over-year change in total audit fees for each audit office scaled by prior year audit fees.
LEADER	Indicator variable set equal to one if the firm is audited by the local industry leader. Local industry leaders are defined as auditor collecting the highest audit fees within the firm's CBSA for the firm's two-digit SIC industry.
CBSAROA	Local economic activity, measured as the average ROA of all firms within the CBSA
REL	Local religious adherence, measured as the total proportion of the CBSA population that regularly attend religious services. Data regarding religious adherence is collected from the 2010 Religious Congregations and Membership Study made available by the Association of Religion Data Archives (ARDA).
POP	Natural log of the CBSA population obtained from U.S. Census Bureau

Variable	Definition
EDUC	<p>The weighted-average education level of respondents to the American Community Survey (ACS) in the CBSA where the firm is headquartered. Following Call, Campbell, Dhaliwal, and Moon (2017), I obtain ACS data from the Integrated Public Use Microdata Series (IPUMS), hosted by the University of Minnesota (usa.ipums.org). Education levels are coded by the IPUMS as follows: 0–N/A or no schooling; 1–Nursery school to grade 4; 2–Grade 5, 6, 7, or 8; 3–Grade 9; 4–Grade 10; 5–Grade 11; 6–Grade 12; 7–one year of college, 8–two years of college; 9–three years of college; 10–4 years of college; 11–5+ years of college. Refer to Appendix A of Call, Campbell, Dhaliwal, and Moon (2017) for a thorough discussion of the ACS data and measurement of the average education level for each CBSA.</p>
WAGES	<p>The weighted-average wages for the employed workforce in the CBSA. Wages are obtained from the ACS and are weighted by sample weights reported by the IPUMS.</p>

Appendix B NCAA Tournament Teams

Appendix B extends Table 2 by including the teams that reached the Sweet Sixteen from 2006 through 2016. In addition to listing the teams reaching the Final Four and Sweet Sixteen, the rightmost column (Early Exit) lists the four top-seeded teams that did not advance beyond the round of 32. Each team is listed followed by their seed in parentheses.

Final Four	Sweet Sixteen			Early Exit
<i>2006</i>				
Florida (3)	Connecticut (1)	Boston College (4)	Gonzaga (3)	Ohio State (2)
George Mason (11)	Memphis (1)	Bradley (13)	Washington (5)	Tennessee (2)
Louisiana State (4)	Texas (2)	Duke (1)	West Virginia (6)	Iowa (3)
UCLA (2)	Villanova (1)	Georgetown (7)	Wichita State (7)	North Carolina (3)
<i>2007</i>				
Florida (1)	Kansas (1)	Butler (5)	Southern Illinois (4)	Wisconsin (2)
Georgetown (2)	Memphis (2)	Nevada-Las Vegas (7)	Tennessee (5)	Washington State (3)
Ohio State (1)	North Carolina (1)	Pittsburgh (3)	Texas A&M (3)	Maryland (4)
UCLA (2)	Oregon (3)	Southern California (5)	Vanderbilt (6)	Texas (4)
<i>2008</i>				
Kansas (1)	Davidson (10)	Michigan State (5)	Washington State (4)	Duke (2)
Memphis (1)	Louisville (3)	Stanford (3)	West Virginia (7)	Georgetown (2)
North Carolina (1)	Texas (2)	Tennessee (2)	Western Kentucky (12)	Connecticut (4)
UCLA (1)	Xavier (3)	Villanova (12)	Wisconsin (3)	Pittsburgh (4)
<i>2009</i>				
Connecticut (1)	Louisville (1)	Arizona (12)	Memphis (2)	Wake Forest (4)
Michigan State (2)	Missouri (3)	Duke (2)	Purdue (5)	Washington (4)
North Carolina (1)	Oklahoma (2)	Gonzaga (4)	Syracuse (3)	Florida State (5)
Villanova (3)	Pittsburgh (1)	Kansas (3)	Xavier (4)	Utah (5)
<i>2010</i>				
Butler (5)	Baylor (3)	Cornell (12)	St. Mary's (10)	Kansas (1)
Duke (1)	Kansas State (2)	Northern Iowa (9)	Syracuse (1)	Villanova (2)
Michigan State (5)	Kentucky (1)	Ohio State (2)	Washington (11)	Georgetown (3)
West Virginia (2)	Tennessee (6)	Purdue (4)	Xavier (6)	New Mexico (3)

Appendix B NCAA Tournament Teams (continued)

Final Four	Sweet Sixteen			Early Exit
<i>2011</i>				
Butler (8)	Arizona (5)	Brigham Young (3)	Ohio State (1)	Pittsburgh (1)
Connecticut (3)	Florida (2)	Duke (1)	Richmond (12)	Notre Dame (2)
Kentucky (4)	Kansas (1)	Florida State (10)	San Diego State (2)	Purdue (3)
Virginia Cmnwlth. (11)	North Carolina (2)	Marquette (11)	Wisconsin (4)	Syracuse (3)
<i>2012</i>				
Kansas (2)	Baylor (3)	Cincinnati (6)	N.C. State (11)	Duke (2)
Kentucky (1)	Florida (7)	Indiana (4)	Ohio (13)	Missouri (2)
Louisville (4)	North Carolina (1)	Marquette (3)	Wisconsin (4)	Florida State (3)
Ohio State (2)	Syracuse (1)	Michigan State (1)	Xavier (10)	Georgetown (3)
<i>2013</i>				
Louisville (1)	Duke (2)	Arizona (6)	La Salle (13)	Gonzaga (1)
Michigan (4)	Florida (3)	Florida G.Coast (15)	Miami, Florida (2)	Georgetown (2)
Syracuse (4)	Marquette (3)	Indiana (1)	Michigan State (3)	New Mexico (3)
Wichita State (9)	Ohio State (2)	Kansas (1)	Oregon (12)	Kansas State (4)
<i>2014</i>				
Connecticut (7)	Arizona (1)	Baylor (6)	Stanford (10)	Wichita State (1)
Florida (1)	Dayton (11)	Iowa State (3)	Tennessee (11)	Kansas (2)
Kentucky (8)	Michigan (2)	Louisville (4)	UCLA (4)	Villanova (2)
Wisconsin (2)	Michigan State (4)	San Diego State (4)	Virginia (1)	Duke (3)
<i>2015</i>				
Duke (1)	Arizona (2)	North Carolina (4)	Utah (5)	Villanova (1)
Kentucky (1)	Gonzaga (2)	N.C. State (8)	West Virginia (5)	Kansas (2)
Michigan State (7)	Louisville (4)	Oklahoma (3)	Wichita State (7)	Virginia (2)
Wisconsin (1)	Notre Dame (3)	UCLA (11)	Xavier (6)	Iowa State (3)
<i>2016</i>				
North Carolina (1)	Kansas (1)	Duke (4)	Maryland (5)	Michigan State (2)
Oklahoma (2)	Notre Dame (6)	Gonzaga (11)	Miami, Florida (3)	Xavier (2)
Syracuse (10)	Oregon (1)	Indiana (5)	Texas A&M (3)	West Virginia (3)
Villanova (2)	Virginia (1)	Iowa State (4)	Wisconsin (7)	Utah (3)