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Julie Persellin

Trinity University, jpersell@trinity.edu

J. Schmidt

S. D. Vandervelde

Michael S. Wilkins

Trinity University

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Auditor Perceptions of Audit Workloads, Audit Quality, and Job Satisfaction

Julie S. Persellin
Associate Professor
Trinity University

Jaime J. Schmidt
Associate Professor
University of Texas at Austin

Scott Vandervelde
Dixon Hughes Goodman Faculty Fellow
University of South Carolina

Michael S. Wilkins*
Professor
University of Kansas

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* corresponding author

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Auditor Perceptions of Audit Workloads, Audit Quality, and Job Satisfaction

SUMMARY

In this study, we use a survey instrument to obtain perspectives from over 700 auditors about present-day audit workloads and the relationship between audit workloads, audit quality, and job satisfaction. Our findings indicate that auditors are working, on average, five hours per week above the threshold at which they believe audit quality begins to deteriorate and often 20 hours above this threshold at the peak of busy season. Survey respondents perceive deadlines and staffing shortages as two of the primary reasons for high workloads and further believe that high workloads result in decreased audit quality via compromised audit procedures (including taking shortcuts), impaired audit judgment (including reduced professional skepticism), and difficulty retaining staff with appropriate knowledge and skills. We also find that auditors' job satisfaction and their excitement about auditing as a career are negatively impacted by high audit workload, particularly when the workload exceeds a threshold that is perceived to impair audit quality. Overall, our findings provide support for the PCAOB's recent concern that heavy workloads are continuing to threaten audit quality and suggest that the primary drivers of workload (i.e., deadlines and staffing problems) might be the actual "root cause" of workload-related audit deficiencies.

Key words: auditing, audit quality, audit workloads, PCAOB

JEL classification: M42, M12

Auditor Perceptions of Audit Workloads, Audit Quality, and Job Satisfaction

INTRODUCTION

“One exceptionally troubling issue that I sense is getting worse is the sheer number of hours that audit teams are expected to work ... If I were an audit committee member, I would be highly concerned if the work plan called for significantly more than 55 hours per week or if the actual sustained hours were much higher than that. How do you function if you are working 16 hours per day on a continual basis? How do you perform basic tasks, much less conduct the more difficult evaluations that require heightened skepticism and objectivity? How do you guard against the temptation to overlook difficult issues that will stretch out your workday even longer? If audit teams are working excessive hours, there is a problem.” - Jay Hanson, Former PCAOB Board Member (Cohn 2013a, 1)

Excessive workload has long been a concern in the accounting profession. As early as the 1980s, accounting research documented that overly-tight time constraints could result in dysfunctional auditor behavior (Kelley and Seller 1982). Subsequent studies found that high workload contributes to employee burnout, increased turnover, and decreased performance (Sweeney and Summers 2002; Fogerty, Singh, Rhoads, and Moore 2000). As accounting firms have become more aware of these problems, they have increased efforts to monitor and manage workloads. For example, PwC notes that it now has processes in place that are “designed to help our people properly manage their workloads” (PwC 2014, 12). Similarly, Deloitte completes “a detailed review of partner and senior manager workloads annually” (Deloitte 2017, 19) and Ernst & Young “closely evaluate(s) the workloads of our audit executives...to determine that they have the time necessary to perform quality work” (EY 2015, 13).

Despite these efforts, concerns remain that high workloads may threaten audit quality. In 2013, the Public Company Accounting Oversight Board (PCAOB) identified “workload pressures” as a potential root cause for inspection findings (Hanson 2013). In response, the PCAOB’s Standing Advisory Group (SAG) recommended that “measurements of staff workload

could be monitored to highlight potential risks to audit quality, such as situations in which partner or staff workloads might impair those individuals' abilities to accomplish their assignments effectively" (PCAOB 2014, 26). Regulators and policymakers then included workload as part of several formal audit quality initiatives. For example, the PCAOB issued a concept release that included partner, manager, and staff workload as an important audit quality indicator (AQI).¹ Similarly, the International Auditing and Assurance Standards Board (IAASB) noted that an important audit quality input is that auditors have "sufficient time allocated to them to perform the [audit] work" (IAASB 2014, 4). In addition, the Center for Audit Quality (CAQ) recommended that key engagement team members' workloads be disclosed to audit committee members who are charged with hiring and monitoring the external auditor and can therefore hold the auditor accountable when workloads become too excessive (CAQ 2014).

In this study, we survey current and former auditors to gather information on present-day workloads and their perceived impact on audit quality. Our analysis is based on responses from 776 current and former auditors, consisting of 266 staff, 354 seniors, 105 managers, 39 senior managers, and 12 partners.² Survey respondents report that the average public accounting workweek during busy season is approximately 65 hours, with an average maximum of 80 hours. These numbers reveal that in an average busy season workweek, auditors work 10 hours above the 55-hour threshold identified by former PCAOB Board member Jay Hanson as the point at which audit quality likely decreases. Hours further increase to 25 hours above the threshold during the busiest periods.

¹ https://pcaobus.org/Rulemaking/Docket%20041/Release_2015_005.pdf

² The former auditors are classified according to their level when they left public accounting.

Respondents also report that during busy season, they exceed the number of billable hours mandated by their firms between 74 percent and 90 percent of the time.

A particularly troubling part of our findings is that, on average, respondents also indicate that they believe audit quality deteriorates when they work beyond 60 hours per week. Our focus on perceptions is important because if auditors perceive that audit quality is being impaired but are not working to improve it, the conclusion is that either auditors do not particularly care about audit quality – which is not borne out by either our study or previous research – or that the pressures to which auditors are subjected effectively prevent them from delivering the product that they would like to be able to deliver. In sum, our findings indicate that audit workload continues to be a problem for the profession and support the PCAOB’s concern that workload could be one of the root causes of audit deficiencies.³

We also investigate the factors that drive audit workloads and the perceived effects of workload pressures on audit quality. In particular, we ask participants to describe specific examples of how workload pressures in public accounting either increase or decrease audit quality. While a few respondents indicate that workload pressures increase audit quality, the overwhelming majority (87 percent) of those that responded describe a negative impact. In addition, the majority of respondents indicate that deadlines and staff shortages are the biggest drivers of workload. Respondents further state that workload pressures result in decreased audit quality via (1) compromised audit procedures (including taking shortcuts); (2) impaired audit judgment

³ Although it may seem obvious that audit workloads and audit quality should be negatively related, Agoglia et al. (2010) find that when misstatement risk is high, auditors tend to choose a higher quality review format (i.e., face-to-face interviews rather than electronic reviews) even when they are experiencing workload pressure. This finding suggests that higher workloads may not necessarily decrease audit quality.

(including reduced professional skepticism); and (3) difficulty retaining staff with appropriate knowledge and skills. These findings provide evidence that increasing workloads impact characteristics that are viewed by auditors and investors as important contributors to audit quality (Christensen, Glover, Omer, and Shelley 2016).

Finally, we investigate whether elevated workloads play a significant role in respondents' job satisfaction. Understanding job satisfaction is important given its likely effect on staff turnover and the recent concern that the large accounting firms are facing staffing shortages (Drew 2015). In a multivariate setting, we find that although audit workloads negatively impact job satisfaction, the negative relationship seems to exist primarily when workloads exceed a threshold that is perceived to impair audit quality. In other words, auditors appear to care more about having their work compromised by excessive workloads than about the absolute number of hours they are working. We also find that job satisfaction is higher when respondents believe they are rewarded for effectiveness rather than efficiency and for taking a strong stance on audit issues. Overall, our results suggest that auditors would view their careers more favorably if their workloads did not threaten audit quality.

Our study contributes to the literature in several ways. First, we address concerns voiced by regulators and professional organizations about the potential negative impact of workloads on audit quality by (1) providing comprehensive data on actual audit workloads during busy season; (2) examining the impact of workloads on perceived audit quality; and (3) exploring the perceived internal and external drivers of workloads and audit quality through the collection of rich qualitative data from auditors at all experience levels. Our large-sample evidence specifically related to auditor workloads and audit

quality extends previous research more generally related to workloads, burnout, and turnover intention (e.g., Sweeney and Summers 2002; Herda and Lavelle 2012; Buchheit, Dalton, Harp, and Hollingsworth 2016).

Second, we heed the call by academics to investigate not just what audit quality “is not” but what it “is” by soliciting information about both the impediments and contributors to audit quality as well as the specific positive and negative effects of workload on audit quality (e.g., Knechel et al. 2013). Third, we extend existing frameworks by exploring the relationship between job satisfaction and a variety of inputs and processes that are believed to impact audit quality (Financial Reporting Council (FRC) 2008, Knechel et al. 2013). We believe that our study provides insights that should be useful to audit firms, regulators, and other stakeholders as they evaluate the many challenges auditors and accounting firms face in the pursuit of high quality audits.

The remainder of the paper is organized as follows. In Section 2 we discuss the importance of workloads in current audit quality standards and proposals and also summarize relevant research related to public accounting workloads. In Section 3 we describe our survey method and respondent characteristics. In Sections 4 and 5 we present our sample-wide survey responses and multivariate tests. Section 6 presents our summary and concluding remarks.

BACKGROUND AND RESEARCH QUESTIONS

Audit Workloads and Audit Quality: Standards and Proposals

Professional standards have long considered personnel management an important part of quality control within audit firms. Originally developed by the AICPA and adopted by the PCAOB in 2002, the Elements of Quality Control – *QC 20, System of Quality Control for a CPA*

Firm's Accounting and Auditing Practice – specifically states that the “quality of a firm’s work ultimately depends on the integrity, objectivity, intelligence, competence, experience, and motivation of personnel who perform, supervise, and review the work” (PCAOB 2003, paragraph 12). However, standard-setters and practitioners recently have renewed their interest in personnel-related factors (PCAOB 2013).

As part of its Audit Quality Indicators Project, in 2013 the PCAOB developed an Audit Quality Framework. The framework states that developing and maintaining talented people is an important component of audit quality and describes operational inputs that should be monitored to maintain this “people factor” (PCAOB 2013). The framework specifically cites, among other things, the potential impact on audit quality of excessive workloads and turnover of personnel. Out of a total of 70 possible indicators the project team reviewed, the PCAOB’s 2015 Concept Release included partner, manager, and staff workload as well as turnover of audit personnel in its final list of 28 indicators of audit quality (PCAOB 2015).

The CAQ commended the efforts of the PCAOB and noted that communicating trends in engagement hours to audit committees could lead to more in-depth conversations between auditors and audit committees about ways to manage risks to audit quality (CAQ 2014). The CAQ noted that while an engagement team experiencing higher than expected overtime could be spending additional time to address an audit issue to maintain audit quality, the extra hours could also indicate that the team is overburdened, which could detrimentally affect audit quality. Furthermore, the CAQ specifically suggested that workload levels in excess of a 40-hour work week should be disclosed to the audit committee to assist the audit committee in understanding “whether engagement teams have appropriate time to perform the audit, review and supervise the audit work, and address difficult issues, if and when they arise” (CAQ 2014, 11).

Audit Workloads: Previous Research

Concerns about possible detrimental effects of excessive workloads have been validated by prior research. As early as 1982, Maslach asserted that organizations should be cognizant of burnout symptoms among employees because there is often a negative relationship between burnout and performance (Maslach 1982). A number of studies have found that excessive workload can cause employees to experience burnout – emotional exhaustion, depersonalization, and reduced personal accomplishment (Rose 1983; Sanders 1998; Fogarty et al. 2000; Almer and Kaplan 2002; Sweeney and Summers 2002; Jones, Norma, and Wier 2010; Herda and Lavelle 2012; Buchheit et al. 2016). McKee (2014) explains that negative emotions experienced at work, often associated with burnout, lead people to not “process information as well, think creatively, or make good decisions. Frustration, anger, and stress cause an important part of us to shut down – the thinking, engaged part.”

In a public accounting setting, Sweeney and Summers (2002) measured hours worked, role stressors, and job burnout among 142 auditors, tax accountants, and consultants from a national firm prior to the start of busy season and again at the end of busy season. Interestingly, prior to the start of busy season when the average workload was 49 hours per week, job burnout was not affected by workload. However, at the end of busy season, when participants reported working on average 63 hours per week, a direct relationship was observed between workload and job burnout. The authors note that after controlling for pre-busy season hours, the increase in hours during busy season caused job burnout to “escalate to alarmingly high levels.” Their study demonstrates that excessive hours worked during busy season leads to burnout.

Fogarty et al., (2000) performed a cross-sectional study of 188 AICPA members to examine the relationship between job and role characteristics, burnout, and job outcomes. The

study provides evidence that role overload leads to burnout tendencies and that high levels of burnout tendencies are associated with low levels of job satisfaction, high levels of turnover intentions, and low levels of performance. However, the authors expressed the need for additional research on workload and other job stressors, noting that the impact of these stressors is not one-dimensional. Specifically, job stressors can have a positive or “eustress” component rather than always resulting in a negative or “distress” component.

Almer and Kaplan (2002) extend Fogarty et al. (2000) by examining the extent to which flexible work arrangements reduce role stressors and burnout. Their results indicate that CPAs with flexible work arrangements report higher job satisfaction and lower turnover intentions, as well as lower levels of emotional exhaustion and depersonalization. However, while role conflict was found to be significantly lower among CPAs under a flexible work arrangement, neither role ambiguity nor role overload was significantly influenced by flexible work arrangements. In addition, Buchheit et al. (2016), in a study examining accounting professionals’ work-life balance, find that while audit, tax, and industry accountants report similar levels of support for alternative work arrangements (AWAs), Big 4 professionals report significantly lower perceived viability of these arrangements.

Overall, previous research suggests that excessive workload is associated with burnout, employee turnover, and decreased job satisfaction. In response, accounting firms have introduced remedial measures such as AWAs (with varying degrees of success) and have taken steps to monitor workload levels. As mentioned previously, the Big 4 firms consistently discuss their attention to workload in their audit quality reports for the basic reason that “delivering audit quality requires the leaders of our audit teams to have enough time to complete their assignments” (Deloitte 2017,19). Nevertheless, audit regulators remain concerned about

workload (Cohn 2013a), and workload levels have been identified as an important AQI that audit committees should monitor (CAQ 2014). The main purpose of our study is to contribute to this discussion by investigating present-day auditor workloads and documenting how auditors believe workloads and engagement dynamics affect audit outcomes. This issue is important because, beyond employee turnover, the reduced effort or focus associated with excessive workload may result in lower quality audits and/or audit failures due to deficiencies in audit documentation and evidence gathering, performing complex judgments, and exercising appropriate use of professional skepticism. In sum, we agree with the PCAOB that workloads may be a root cause of recent audit deficiencies and our study provides important new insights in this area.

Research Questions

“I believe that after a couple of months of working 60+ hours, employees begin to get burned out, which results in reduced work quality. From my experience, when you are overworked, in a high stress environment, and you are not getting enough sleep or exercise, and this continues for months on end, there is no possible way for you to be as productive, efficient, or sharp as you would be under normal circumstances. In this environment, decrease in quality of work is inevitable.”
[Survey respondent, senior level]

“By the end of busy season, everyone was burnt out and exhausted. I remember falling asleep mid-sentence while giving instructions to a staff member after going several nights without more than one or two hours of sleep. There were many of us that still felt an obligation to the public and to our clients to perform our work with the utmost care, so I don't feel that the quality of work decreased proportionally to the level of physical and mental exhaustion. However, I do remember often seeing managers and partners that would sign off on just about anything as a particular job was winding up, especially towards the end of busy season.” [Survey respondent, senior level]

Our research questions investigate auditors' perceptions of how workloads and other factors impact audit quality and job satisfaction. We pay particular attention to audit workloads, given the significant concerns expressed by academics, regulators, and professional agencies on the potential association between workload and “reduced audit quality acts” (Knechel et al.

2013). However, our questions for respondents provide for the possibility that workloads may influence audits both positively and negatively, as well as identifying which particular factors are most important in driving positive and negative outcomes. A number of our questions are related to factors specifically mentioned as audit quality drivers (FRC 2008 and Knechel et al. 2013) – e.g., rewarding high quality work, ensuring sufficient time and resources, fostering appropriate appraisal and reward systems, having sufficiently experienced staff, providing sufficient training, and rewarding effectiveness versus efficiency. We also collect data regarding job satisfaction and the extent to which auditors are excited about their careers because, as noted by McKee (2014) “disengaged, unhappy people aren’t any fun to work with, don’t add much value, and impact our organizations (and our economy) in profoundly negative ways.”

Our study is built on a survey instrument that employs 17 questions related to audit workload, audit quality, and job satisfaction. We also include several free response questions that allow respondents to provide additional insights into the relationship between workload and audit quality. The specific research questions (RQs) that we investigate are as follows:

RQ 1: What are the perceived positive and negative effects of workload on audit quality?

RQ 2: What are the internal and external factors that drive workload?

RQ 3: What are the most significant contributors and impediments to a high quality audit?

RQ 4: What is the level of job satisfaction among auditors?

RQ 5: Is job satisfaction influenced by workload and perceived audit quality?

SURVEY METHOD AND RESPONDENT CHARACTERISTICS

Our survey was developed using Qualtrics and was distributed via email to 6,123 Master’s in Accounting graduates of three universities – two large public universities and one small private university – near the end of the fall semester of 2013. All three schools feature an

internship program with public accounting firms as a part of the fourth year of a qualifying undergraduate student's degree plan. A vast majority of these students then complete their Master's degree during their fifth year. In total, 1,544 respondents opened the survey and 1,363 surveys were completed (22 percent response rate). The focus of our study is perceived audit quality. As such, respondents who have never worked in the audit and assurance division of a public accounting firm were removed from the survey after the first question. This step removed 587 respondents (primarily people who are employed in tax divisions), resulting in a total of 776 usable surveys – 299 from current auditors and 477 from former auditors. Because the responses of current and former auditors were qualitatively the same across the survey questions, our analysis combines the responses of current and former auditors.⁴

In Table 1 we present demographic data for our survey respondents. The majority of our respondents (87 percent) represent Big 4 audit firms and are at the staff (34%) and senior auditor (46%) ranks. However, because our sample size is large we were able to obtain a reasonable number of mid-tier⁵ and small audit firm responses (41 and 60, respectively) and partner and senior manager / manager responses (12 and 144, respectively). Our respondents are located primarily in the major Texas markets (i.e., Houston, Dallas/Fort Worth, San Antonio, and Austin), but 32 of the respondents work in New York City and 96 work in other locales. Our sample is split approximately evenly on gender, and includes respondents with a mean (median) age of 30 (29), mean (median) number of years as a CPA of 6.75 (5) and approximately three years of industry expertise. Overall, the breadth of our sample with respect to experience and

⁴ Given that the responses of current and former auditors are qualitatively the same, the likelihood of possible effects of recall bias is reduced, as those who are further removed from auditing are not remembering earlier stages of their career any differently than those who are still engaged in the audit profession. In our tests of job satisfaction, however, we allow differential effects for current versus former auditors.

⁵ Respondents from mid-tier firms represent Grant Thornton LLP, McGladry & Pullen LLP, and BDO USA.

rank provides us with a comprehensive dataset of practitioner perceptions that we believe should be generalizable to the population of auditors as a whole.

SURVEY RESPONSES

Summary Data on Audit Workloads and Audit Quality

Table 2 presents quantitative data related to audit workloads and their perceived impact on audit quality. Panel A provides general summary measures related to hours worked and billable hours. Respondents reported working an average of 65.12 hours (median = 65 hours) during their last busy season, with an average maximum of 79.54 hours (median = 80 hours).⁶ The average minimum required number of billable hours is 53.96 (median = 55 hours). On average, actual billable hours during busy season exceed the minimum approximately 74 percent of the time and are below the minimum only 8 percent of the time. Furthermore, over half of the respondents indicated that billable hours exceed the mandated minimum 90 percent of the time.

Panel B of Table 2 provides initial evidence of a potential relationship between audit workload and audit quality. With these questions, we asked respondents whether they believe they are “better auditors” if they work the same, more, or less hours than the minimum number mandated by their firm, or whether they believe that audit quality is not impacted by the number of hours worked. Twenty-eight percent of respondents indicate that they are better auditors when they work the minimum mandated hours, while 37 percent (6 percent) indicate that they are better auditors when they work less (more) than the minimum mandated hours. Over half of the respondents indicate that audit quality begins to deteriorate when auditors work in excess of 60 hours per week, and only 29 percent of respondents believe that the quality of audit work is not

⁶ Our hours-per-week measure is similar to the measure used in Sweeney and Summers (2002) and Hermanson, Houston, Stefaniak, and Wilkins (2016).

impacted by the number of hours worked. Throughout the remainder of the paper, we refer to the workload level at which auditors perceive audit quality begins to deteriorate as the audit quality workload threshold.

Taken together, the data from Panels A and B in Table 2 suggest the following. First, at least 65 percent of respondents would not classify themselves as “better auditors” if they have to work beyond 55 hours per week (the minimum mandated hours). Second, the average busy season workweek (65 hours) requires auditors to work ten hours more than the mandate, which essentially translates into an extra full day of work each week. Third, respondents indicate that they believe audit quality begins to deteriorate when workloads are around 60 hours per week. This finding corroborates Sweeney and Summers’ (2002) assessment that busy season workloads of 63 hours per week cause accountants’ job burnout to “escalate to alarmingly high levels.” Overall, the data presented in Panel B suggest that the *average busy season audit* is conducted in a perceived state of deteriorating audit quality and in a workload environment in which respondents typically would not classify themselves as “better auditors.”⁷

Quantitative Data on Audit Workloads and Audit Quality (RQ1)

Panels C and D of Table 2 address RQ1 by summarizing responses related to the positive and negative aspects of higher audit workloads. For these questions, respondents were asked to rank their answers from most important to least important, with a lower average score revealing a higher rank across respondents. When asked about the benefits that are obtained as the hours worked exceed the normal range, 41 percent of respondents identify developing stronger relationships with colleagues as being the top benefit and 28 percent identify increasing knowledge and expertise as being the top benefit. The mean ranks for these two responses are

⁷ In untabulated responses, respondents also indicated that they believe audit quality decreases slightly from the beginning of busy season to the end of busy season.

2.19 and 2.49, respectively. The highest ranks related to what suffers the most with increasing audit workloads are personal relationships (2.62) and personal health (2.67), with 68 percent of respondents naming one of these two factors as their top choice. The fact that relationships and health have the highest mean ranks may explain why employee attrition at public accounting firms is so high. Although respondents claim that the biggest negative consequences associated with higher workloads are personal, they also identify negative effects on audit processes. Specifically, documentation (49 percent), professional skepticism (34 percent), and sufficiency of audit evidence (22 percent) commonly are included in respondents' top three choices. Overall, Panels C and D of Table 2 provide a number of initial insights related to RQ1.

Qualitative Data on Audit Workloads and Audit Quality (RQ1)

“I had a job last year where one of the most critical sections of the audit was basically not done by staff prior to report issuance (which had a hard deadline), despite repeated attempts to get them to do it. This was because they were so overloaded with other client demands by the end of busy season, and were very worn down. This is highly atypical (obviously), and we were comfortable that the financials weren't misstated so we issued the report anyway. Afterwards, I confronted the staff person about this, and gave them an extremely negative review. As this staff person's workload has decreased to manageable levels, he has done a great job for me subsequently – so I think the problem was primarily workload.” [Survey respondent, senior manager level]

“When it was tough to gather appropriate documentation for the sample selected, we decided to randomly select a new sample hoping that documentation could be gathered faster and thus finish the engagement on time.” [Survey respondent, staff level]

“Towards the end of the audit, there became more of a ‘how can I document that this works’ instead of a ‘does this work’ approach. When professional skepticism is lowered, I believe audit quality is greatly impacted.” [Survey respondent, senior level]

In Table 3 we continue our investigation of RQ1. Table 3 presents a breakdown of respondents' qualitative (i.e., “free”) responses to a question that asked them to describe one to three examples of how workload pressures in public accounting have either increased or

decreased audit quality. To obtain the most relevant insights, we focus only on responses made by currently practicing auditors. Of the 299 current auditors in our sample, 167 provided at least one qualitative response. All responses were coded independently by two graduate students to identify respondents' views of the drivers of workload and the effect of workload pressures on both short-term and long-term audit quality.⁸ Panel A of Table 3 reveals that 86 percent of current auditors who provided qualitative responses believe that higher audit workloads result in lower audit quality. The remaining 14 percent stated that workloads increase audit quality, both increase and decrease audit quality, or have no impact on audit quality. Thus, a vast majority of auditors believe that a negative relationship exists between audit workloads and audit quality (RQ1).

In Panels B and C of Table 3, we categorize the qualitative responses provided by the 167 currently practicing auditors. A representative list of sample responses and their assigned categories is provided in Appendix B. Because each respondent could have provided between one and three responses, the total number of responses across panels exceeds 167. Panels B and C categorize the qualitative responses related to the impact of audit workloads on audit quality (RQ1). Panel B shows that the vast majority of respondents believe that higher workloads negatively impact audit quality. For example, respondents report that higher workloads result in less diligence in the performance of audit procedures (51 percent of category respondents), audit shortcuts (19 percent of category respondents) and insufficient documentation (19 percent of category respondents). In addition, 57 percent of respondents comment that higher workloads result in impaired judgment and 43 percent cite decreased professional skepticism. Finally, 24

⁸ We conducted an interrater reliability analysis using the Kappa statistic for each category of responses to determine consistency among raters. Kappa scores were 0.81 or higher for every category of responses, indicating a high level of inter-rater agreement.

respondents indicate that heavy workloads reduce audit quality for reasons related to skills and staffing (primarily turnover). Panel C shows that 17 respondents indicate that higher workloads may positively impact audit quality, with seven respondents reporting that PCAOB enforcement improves audit quality and six respondents reporting an increase in the ability to manage tasks efficiently. While the qualitative data reflect the existence of both positive and negative outcomes, the bulk of the evidence strongly suggests that auditors believe that higher audit workloads have a negative impact on audit quality.

Drivers of Audit Workloads (RQ2)

Panel D of Table 3 summarizes the perceived internal and external drivers of audit workloads (RQ2).⁹ Of the 170 respondents, 153 responses relate to internal pressure and 54 responses relate to external pressures. The most prevalent internal pressures include deadline / time constraints (58 percent of category respondents) and staffing shortages (32 percent of category respondents). The most prevalent external pressure relates to PCAOB regulatory pressure. Specifically, 35 of the 54 respondents (65 percent) who cite external pressures mention the PCAOB while the comments are fairly evenly split between other regulatory pressures, unprepared clients, and client-imposed deadline or fee pressure. Overall, the evidence presented in Panel D indicates that the primary perceived driver of audit workloads relates to two internal factors – time constraints and staffing – and one external factor, the PCAOB.¹⁰

⁹ The percentage Overall Respondents and percentage Category Respondents will not sum to 100 percent because survey participants could provide up to three responses each.

¹⁰ It is possible that the highest workloads could be driven by problematic engagements (e.g., restatements, bankruptcies, etc). However, only two responses in the top 10% of maximum hours identified cases of this nature. One respondent cited a client bankruptcy and another cited difficulties associated with an economic downturn. The biggest drivers of extremely high workloads seem to be PCAOB / regulation (10% of observations), tight filing deadlines (9% of observations), and staffing shortages (6% of observations).

Contributors and Impediments to High Quality Audits (RQ3)

Table 4 presents responses related to the perceived determinants of audit quality (RQ3). With these questions, respondents were asked to identify the biggest contributors and biggest impediments to the delivery of a high quality audit.¹¹ Panel A shows that two of the top three contributors to audit quality relate to staffing. Specifically, 53 percent of respondents report either appropriate staffing (i.e., proper expertise and experience) or adequate staffing (i.e., the right amount of staff) as the top contributor to a high quality audit. Twenty-five percent of respondents said that the most important contributor to a high quality audit is timely client assistance. Average ranks for appropriate staffing, timely client assistance, and adequate staffing are 2.38, 2.80, and 2.89, respectively. By comparison, the average ranks for having an engaged audit committee or timely partner / manager assistance are 5.68 and 4.18, respectively, with fewer than six percent of respondents reporting either factor as the top contributor to a high quality audit.¹² The differing importance assigned to appropriate staffing and timely partner / manager assistance is interesting, given that both factors are cited as important indicators by regulators (FRC 2013). Overall, the participant responses suggest that having better “troops on the ground” has a stronger impact on audit quality than supervision and monitoring by superiors.

Panel B of Table 4 presents respondents’ views on the impediments to the delivery of a high quality audit. Understaffing and staff turnover are important impediments with mean ranks of 3.34 and 4.06, and approximately 58 percent and 45 percent of respondents, respectively, including these two factors in their top three choices. Deadline constraints and workload fatigue

¹¹ Some of our responses relate to the “engagement team qualification” questions of Christensen et al. (2014) and a portion of the questions asked by Carcello, Hermanson, and McGrath (1992).

¹² The rank assigned to the audit committee’s contribution to audit quality was relatively constant across the sample. Specifically, an engaged audit committee was given a rank of 5.61 by partners and senior managers, 5.67 by managers, 5.77 by seniors, and 5.59 by staff.

are important as well. Deadline constraints (workload fatigue) have a mean rank of 3.83 (4.19), and 47 percent (42 percent) of respondents report these issues in their top three choices. What we find to be most telling about Panel B is that the two staffing concern ranks are higher than the ranks associated with unavailability of client resources (4.48), budget constraints (4.80), unavailability of partner / manager assistance (5.66), and lack of technical expertise (5.80). In summary, the collective message from Panels A and B of Table 4 seems to be that auditors do not believe that audit quality is influenced primarily by resource or technical constraints. Rather, the most significant contributors and impediments to the delivery of a high quality audit involve the composition and continuity of audit teams.

Auditor Job Satisfaction (RQ4)

In his address to the Auditing Section at the 2014 American Accounting Association Annual Meeting, Stephen Howe – Ernst & Young’s Americas Managing Partner and Managing Partner of the U.S. Firm – stated that it is critical for the auditing profession to attract and retain “talent.” He also indicated that auditors need to understand and embrace the importance of their role in the capital markets and to “be excited” about what they are doing. Our final analyses explore issues related to job satisfaction, workload, and audit quality. We define job satisfaction, alternatively, as (1) a specific job satisfaction score and (2) a score measuring excitement about auditing as a career. In Table 5, we provide a univariate analysis that summarizes both responses. (RQ4). In Table 6, we explore whether job satisfaction is influenced by workloads and other characteristics related to audit quality (RQ5).

The first question in Table 5 simply asks respondents to rate their level of public accounting job satisfaction (*SATIS*) on a scale from 1 (lowest) to 10 (highest). The mean score across all respondents is 5.46, indicating that an indifferent to slightly moderate level of job

satisfaction exists. With the remaining three questions, we ask respondents to indicate their level of excitement about a career in public accounting at three different points in time – when they first started their internships [*EXCITE(int)*], when they first started full time employment [*EXCITE(start)*], and at the survey completion date [*EXCITE(now)*].¹³ These questions use a seven-point scale with responses ranging from 1 (very unexcited) to 7 (very excited) and are based on Cordes and Dougherty’s (1993) recommendation to measure “unmet expectations” by having respondents report separately on their previous versus current expectations.¹⁴ Although we expected the ranks for these responses to decrease over time, as they naturally would for many people in different careers, we were surprised at the extent of the decrease. The mean score associated with how respondents remember feeling on the first day of the internship is 6.40. This score decreased to a mean of 5.44 as of the first day of full-time employment in public accounting with a further decrease to 2.94 on the survey completion date. In untabulated analysis, we also find that 93 percent of people note a decrease in this ranking during their careers, with four percent reporting no change in rank and three percent reporting a higher rank later in their careers. Given Mr. Howe’s statements regarding the importance of “excited” auditors and cross-disciplinary evidence that employees who are happy and engaged work harder and more productively (McKee 2014), we view these trends as troubling.

¹³ Measuring an individual’s perceptions of his or her career over time might be subject to recall bias. However, our primary purpose in this part of the analysis is to capture trends in how auditors perceive changes in satisfaction over time rather than determining absolute measures at any given point in time. We also note that there are no significant differences between measures susceptible to recall bias (e.g., *EXCITE(int)* and *EXCITE(start)*) for current versus former auditors.

¹⁴ Scale specifics are as follows: 1=very unexcited, 2=unexcited, 3=somewhat unexcited, 4=indifferent, 5=somewhat excited, 6=excited, 7=very excited.

Table 5 also partitions responses by auditor rank, audit firm size, and auditor status (current versus former).¹⁵ As one might expect, higher-ranking auditors have higher levels of job satisfaction and are more excited about public accounting than lower ranking auditors.¹⁶ However, even partners and senior managers only report a score of “indifferent,” on average, regarding their excitement about a career in public accounting. The decrease in excitement from the internship date to the survey date is statistically significant across all auditor ranks, all audit firm sizes, and both auditor status categories. Furthermore, Big 4 respondents have the lowest level of job satisfaction and the lowest opinion of having a career in public accounting, a circumstance that could have important implications for capital markets given that over 95 percent of the global market capitalization of U.S. issuers is audited by the Big 4 and their affiliates. Finally, former auditors have a more negative current view of the profession than do current auditors. Overall, the answer to RQ4 seems to be that the level of job satisfaction among auditors is relatively low.

Audit Workloads, Audit Quality, and Job Satisfaction (RQ5)

In Table 6, we investigate the relationship between job satisfaction, workload, and characteristics of audit quality (RQ5). More specifically, the models we estimate seek to determine whether workload and characteristics of perceived audit quality are associated with job satisfaction. We use logistic models where the dependent variable is, alternatively, job satisfaction (*SATIS*; 1 = lowest to 10 = highest), current level of excitement about public

¹⁵ We also conducted separate analyses by gender. Female auditors tend to have a higher level of job satisfaction than male auditors on average and across all ranks; however, the differences typically are not statistically significant.

¹⁶ Across the full sample, job satisfaction declines monotonically across deciles and quartiles of workload. However, the monotonic relationship is driven by seniors and staff auditors, with the largest decrease occurring at 100 hours or greater. Although partners, senior managers, and managers are most satisfied when they are working fewer than 60 hours per week, their job satisfaction scores beyond 60 hours are largely the same.

accounting as a career (*EXCITE*; 1 = very unexcited to 7 = very excited), and increase in excitement about public accounting from the internship date to the survey date.¹⁷ For the latter measure, we use a binary variable (*INCR_EXCITE*) that identifies respondents who have a change in excitement from their internship date to the survey date that is greater than the median change across all respondents. Given that 93 percent of respondents document a decrease in excitement between these two dates, the *INCR_EXCITE* measure essentially identifies respondents whose opinion of public accounting has decreased less than the median decrease. We choose this specification so that the directional predictions for our independent variables are the same across all three models.¹⁸

Our first two independent variables include average hours worked during busy season (*AVGHOURS*) and the ratio of average hours worked during busy season to the respondent's opinion of the number of hours at which audit quality begins to decrease (*AVG_SUFFERS*). Although the pairwise correlation between these variables is high ($\rho = 0.502$), the measures proxy for distinct effects related to workloads in general and to how much audit quality may potentially suffer at average busy season workloads. Because people typically prefer working less to working more, we expect job satisfaction and excitement about the profession to be negatively related to average hours worked. However, if audit quality is important to auditors, then working significantly beyond the level at which audit quality is perceived to decrease (i.e., the audit quality workload threshold) should negatively impact auditors' views about a career in public accounting as well. Stated differently, a negative coefficient for *AVG_SUFFERS* would

¹⁷ We estimate an ordered logistic model for *SATIS* and *EXCITE* and a binary logistic model for *INCR_EXCITE*. Our findings are comparable when *INCR_EXCITE* is defined in terms of the public accounting start date rather than the internship date.

¹⁸ Defining *INCR_EXCITE* as a high-versus-low binary variable, rather than as the magnitude of the difference, should also reduce concerns related to recall bias.

suggest that auditors are less happy with their jobs the more they believe that workloads inhibit their ability to deliver a high quality audit.

Our next two independent variables have ranks ranging from 1 to 7. Specifically, we include ranks for whether the respondent perceives that (1) the audit firm rewards auditors for efficiency or effectiveness (*EFF*; 1 = efficiency to 7 = effectiveness), and (2) the audit firm rewards auditors for taking a strong stance on audit issues (*STANCE*; 1 = strongly disagree to 7 = strongly agree). Positive coefficients for these two measures would indicate that job satisfaction is higher when auditors believe that they are rewarded for conducting high quality audits. Finally, we control for auditor rank (*AUDRANK*; 1 = partner/senior manager, 2 = manager, 3 = senior, 4 = staff), audit firm (*FIRM*; 1 = Big 4, 2 = mid-tier, 3 = smaller audit firm), and current versus former auditor status (*FORMER*; 0 = current auditor, 1 = former auditor).

Table 6 presents the results associated with our multivariate logistic models. The coefficient for average audit workload (*AVGHOURS*) is negative and significant when *AVG_SUFFERS* is not included in the model, indicating that as average workloads increase, job satisfaction and excitement about public accounting generally decrease. When *AVG_SUFFERS* is included in the model, however, *AVGHOURS* loses its statistical significance. The significant negative coefficient for *AVG_SUFFERS* suggests that job satisfaction and excitement about public accounting decrease as the spread between average workloads and the audit quality workload threshold increases.¹⁹ Our conclusion is that auditors are discouraged when they believe that the demands placed on them during busy season make it difficult to deliver a high

¹⁹ Our sample includes 13 interns with zero years of experience and four respondents with more than 40 years of experience. When we remove these observations, our results are qualitatively changed. Given that some firms require partners to retire at age 62, we remove any respondent reporting an age of 62 or above. Our results are robust to this exclusion.

quality audit. The significant coefficients for *EFF* and *STANCE* corroborate this conclusion. Specifically, the positive coefficients for both of these measures suggest that the more respondents believe that they are rewarded primarily for effectiveness (rather than efficiency) and that their firm values taking a strong stance on audit issues (even if it means potentially losing the client), the higher their job satisfaction and the greater their excitement about public accounting as a career. We are encouraged by these findings, as they seem to suggest that “tone at the top” may facilitate the delivery of higher quality audits.

Our final three independent variables are related to auditor rank, audit firm, and current versus former auditor status.²⁰ The coefficients for *AUDRANK* and *FORMER* are negative and significant in all models, suggesting that lower ranking auditors and former auditors have lower levels of public accounting job satisfaction and are less excited about auditing as a career. The coefficient for *FIRM* is generally positive and significant, indicating that job satisfaction is higher for auditors at mid-tier and smaller audit firms.²¹ Overall, Table 6 identifies a number of significant and intuitively appealing multivariate determinants of job satisfaction that are related to audit workloads and characteristics of audit quality.

Given the significant coefficient for *AUDRANK*, we performed an additional test to better understand job satisfaction differences among ranks. We separated our sample into two groups – managers, senior managers, and partners (MSP) and senior and staff auditors (SS) – and re-estimated our Table 6 models. As shown in Table 5, MSP have job satisfaction ratings that are similar to each other but that are very different from those of SS. Because the former group has

²⁰ When we include a control variable for gender, its coefficient is statistically insignificant in all models.

²¹ When we remove observations in the top 5% of audit workloads, the coefficient for *FIRM* is significant only in the first model. Thus, with extreme workloads removed, job satisfaction is not higher for auditors at smaller audit firms than for auditors at larger audit firms. Our findings with respect to the other independent variables are qualitatively unchanged.

chosen to stay in public accounting for longer than the latter group, it also seems reasonable to believe that the relationship between job satisfaction and workload may differ between the two groups. Empirically, we do not find a significant negative coefficient for *AVGHOURS* in the MSP models – even when *AVG_SUFFERS* is excluded from the models. However, *AVG_SUFFERS* continues to be negative and significant in both the *SATIS* model and the *INCR_EXCITE* model for MSP. Thus, although higher ranking auditors seem to have resigned themselves to higher absolute workloads, they are still less satisfied when the workloads exceed their own perceived audit quality threshold. In contrast, in our SS models, both workload measures tend to be important. In fact, in the *SATIS* model (but not in the other two models), *AVGHOURS* loads even in the presence of *AVG_SUFFERS*. Overall, our findings suggest that working beyond a perceived audit quality threshold reduces job satisfaction for both lower and higher ranking auditors, but that lower ranking auditors also are more likely to be unhappy with the absolute number of hours they are required to work.

SUMMARY

The purpose of our study is to obtain perceptions from a large sample of current and former auditors at all levels about audit workloads, the relationship between audit workloads and perceptions of audit quality, and job satisfaction. Our study is motivated by recent heightened regulatory concern related to audit workloads and audit quality. Our findings support efforts by the PCAOB and the CAQ to encourage the disclosure of audit workload as an Audit Quality Indicator. Our results should also prove useful to accounting firms as they attempt to improve working conditions for auditors in an effort to retain talent and deliver high quality audits.

Our study uses a survey instrument to solicit responses from 776 current and former auditors. The survey includes a variety of questions related to audit workloads, perceived

determinants of audit quality, and job satisfaction. Our questions frame many of the issues from both positive and negative perspectives. For example, we ask respondents to identify the biggest contributors and biggest impediments to audit quality. We also ask respondents what benefits are obtained from increasing audit workloads in addition to asking which factors suffer the most when audit workloads increase.

Our results indicate that the demands placed on auditors are very high, with workloads significantly exceeding what respondents perceive to be the point at which audit quality begins to deteriorate. We also find that auditors at all levels and at all types of audit firms feel much more negative about working in the auditing profession than they remember feeling at the beginning of their careers, largely due to the presence of excessive workloads. On the positive side, auditors are significantly less negative when they believe that their firm supports taking a strong stance on audit issues and values audit effectiveness rather than audit efficiency. Overall, our findings provide support for the PCAOB's concern that heavy workload could be a root cause of audit deficiencies. We hope our study will encourage dialogue among practitioners, audit committees, and regulators about exploring mechanisms that can enhance audit quality and make the auditing profession more sustainable and attractive to current and prospective employees.

APPENDIX A
Variable Definitions

<i>Variable Name</i>	<i>Definition</i>
<i>SATIS</i>	Job satisfaction (1 = lowest, 10 = highest)
<i>EXCITE</i>	Excitement about public accounting as a career at survey date (1 = very unexcited, 4 = indifferent, 7 = very excited)
<i>INCR_EXCITE</i>	Increase in excitement from internship to survey date (1 = above median change, 0 = at or below median change)
<i>AVGHOURS</i>	Average hours worked during busy season
<i>AVG_SUFFERS</i>	Average hours worked during busy season / Hours at which respondent perceives audit quality begins to suffer
<i>EFF</i>	Primarily rewarded for audit efficiency or audit effectiveness (1 = efficiency, 4 = both equally, 7 = effectiveness)
<i>STANCE</i>	Firm rewards taking a strong stance on audit issues, even if taking such a stance means that client retention is jeopardized (1 = strongly disagree, 4 = neutral, 7 = strongly agree)
<i>AUDRANK</i>	Auditor rank (1 = senior manager/partner, 2 = manager, 3 = senior, 4 = staff)
<i>FIRM</i>	Audit firm (1 = Big 4, 2 = mid-tier, 3 = smaller audit firm)
<i>FORMER</i>	Former versus current auditor (1 = former auditor, 0 = current auditor)

APPENDIX B

Examples of Internal Workload Drivers

DEADLINE/TIME CONSTRAINTS

“There is so much pressure to meet deadlines that quality is often the easiest thing to sacrifice and still meet the deadline.”

“Unrealistic deadlines result in decreased quality.”

“Time constraints can cause one to rush through support and testing.”

“One instance as a senior staff where we had a client file for bankruptcy and had 8 401k plans that each needed audits for the preceding 5 years (40 audits total) and deadline from IRS less than 1 month. Our team was 2 seniors, 2 staff, manager & partner working 18 hour days (85 hour weeks) for a month. Probably one of my best experiences as the manager & partner did a great job at keeping it "fun" and the team motivated during the audits. Subsequent to the experience 'resentment' set in amongst the staff & seniors due to little to no recognition (either in the form of vacation, bonus, sporting event tickets, etc.) of our efforts. We made overtime @ straight time but that was it. / / When I previously worked for the Big 4, as a staff, working anything beyond 45 hrs a week was incredibly demotivating as we did not make overtime or receive any other incentives; as a result morale suffered big time.”

STAFFING SHORTAGE

“There is a significant level of understaffing in Big 4 right now at experienced senior and manager levels, resulting from the layoffs in the economic downturn in 2008/2009 combined with new pressure for additional audit procedures from PCAOB. Resources that could be plugged into an audit practice focusing on SEC clients are hard to come by in the market these days, so people are being asked to do more work and more projects, and given time and resource constraints, this could lead to decreased audit quality.”

BUDGET CONSTRAINTS

“...unrealistic budgets decrease audit quality.”

Examples of External Workload Drivers

PCAOB

“The increased pressure from the PCAOB regarding SOX testing has required a significant more amount of work which has distracted auditors from performing normal substantive audit procedures.”

NON-SPECIFIC REGULATORY BODY

“Pressures have increased from new regulatory requirements with no increase in staff or compensation.”

CLIENT UNPREPARED

“Late data from the client requires a faster testing approach that may not be as well thought out.”

“Delays from client personnel delay testing, which runs into deadlines on the audit side. As such, quality can decrease as deadlines must get met.”

CLIENT DEADLINE PRESSURE

“The client needs to meet a bank deadline and is putting pressure on us to issue so we issue prior to completing all audit documentation.”

CLIENT FEE PRESSURE

“The client pressures on fees and deadlines have a negative effect on audit quality and employee morale.”

Examples of Negative Effects of Workload on Audit Quality

LESS DILIGENT AUDIT PROCEDURES

“If a hard deadline approaches, sometimes things get missed.”

“If you are juggling multiple tasks at one time, you can't give full attention to any one task, so you tend to just do the minimum to get everything done.”

SHORTCUTS

“I had a job last year where one of the most critical sections of the audit was basically not done by staff prior to report issuance (which had a hard deadline), despite repeated attempts to get them to do it. This was because they were so overloaded with other client demands by the end of busy season, and were very worn down. This is highly atypical (obviously), and we were comfortable that the financials weren't misstated so we issued the report anyway. Afterwards, I confronted the staff person about this, and gave them an extremely negative review. As this staff person's workload has decreased to manageable levels, he has done a great job for me subsequently – so I think the problem was primarily workload.”

“When it was tough to gather appropriate documentation for the sample selected, we decided to randomly select a new sample hoping that documentation could be gathered faster and thus finish the engagement on time.”

“I have seen staff (and have been guilty of it myself) skip a step they deem too time-consuming even though they know they need to do it. The hope is the reviewer won't catch it and they can move on to finish their work more timely.”

“Working on a public sector audit, with a deadline approaching and behind schedule on our procedures, the manager and partner stressed not overtesting balances, resulted in the staff on the engagement to cut corners with documentation and one associate later admitted to documenting inquiries which they did not perform. This situation was addressed by the manager after the fact, and was discussed with management and members of the governing body, but this did ultimately decrease the quality of the audit.”

INSUFFICIENT DOCUMENTATION

“Deadline pressures can cause late hours which result in sloppy documentation.”

INADEQUATE REVIEW

“I am currently assigned on 2 full time audits, without any co-senior, and staffing on each job. I am required to review all interim and SOX testing prior to year-end. However, there is not enough time to support each of the staff as they test, answer client questions, coordinate with the audit executives, and review all the audit work performed on 2 jobs while technically assigned to one. Therefore, my review suffers or my staffs' work suffers because they do not have sufficient guidance.”

“My current senior is splitting her time between three clients and assumes both manager and senior's role at the same time since the manager is on maternity leave. She lives in Plano Texas and commutes to Fort Worth from Monday to Friday, working from 7am to 11 pm for all week without weekends. She also never takes lunch break and is on peanut butter and carrots all day. She is still behind on reviewing w/p and on providing timely support for staff.”

IMPAIRED JUDGMENT

“During a recent busy season our team was working 80+ hours per week for several weeks to meet the deadline. Fatigue set in and the focus shifted to ‘just get it done,’ as opposed to doing a thorough and accurate job.”

“Rather than understanding and actually auditing, people are just copying what was done last year and not really thinking about the big picture objective of what they are doing.”

“I have seen many occasions when, as a deadline approaches, materiality is used to justify omitted procedures.”

“When working extensive hours under deadline pressure, it causes "tunnel vision," resulting in intense focused concentration on one task at the expense of the bigger picture as well as at the expense of other priority tasks that are set aside and typically ignored until another pressing deadline.”

LACK OF PROFESSIONAL SKEPTICISM

“As you work longer hours and are just waiting on a few items, you begin to accept what the client tells you to be true more often than questioning/being as professionally skeptical as one should be.”

“Towards the end of the audit, there became more of a ‘how can I document that this works’ instead of a ‘does this work’ approach. When professional skepticism is lowered, I believe audit quality is greatly impacted.”

“When there is a time constraint approaching and a pile of work to complete, you work longer hours, you try to become more efficient, but you also feel some pressure to trust your own gut on certain issues. For example if a journal entry doesn't appear in line with expectations and it's late at night, you may try to just explain it yourself, rather than spending the time to discuss with the client to get a full understanding.”

INADEQUATE STAFFING/TURNOVER

“High turnover robs teams of experience and knowledge, leading to frustrated client.”

“Workload pressures decrease audit quality by creating turnover (and thus auditors who are not familiar with clients)”

“The individuals on my team are extremely intelligent. One of the individuals on my team received the highest score on the CPA exam in Texas for that time period. The two seniors on my engagement have chosen to leave after this busy season due to workload pressures and understaffing. I consider this a decrease in audit quality as the two seniors have 4 years of experience and will be leaving.”

KNOWLEDGE CONSTRAINTS

“I do believe [that] this most directly impacts is on-the-job coaching. When those who should be coaching as they work with lower level team members are short on time, they often pass off the work with much less instruction.”

“If managers are too busy with too many jobs at a time, they tend to not be available to help as needed.”

INSUFFICIENT SKILLS FOR TASK

“Work is often delegated to staff who aren't experienced/qualified enough to complete it with quality but have no other choice since managers/partners don't have time to do it.”

“In order to get all testing completed, tasks have been assigned to staff with inadequate knowledge, thus resulting in sub-par work being performed.”

NON-SPECIFIC

“I don't feel comfortable writing anything specific, however it is the general theme of us having less hours to complete tasks, and much more work that needs to be done. Any time this happens, work is going to suffer.”

“Decreased audit quality when you just don't have enough time to complete a task to the best of your ability. When your work is not your best, you don't feel proud of it.”

OTHER

“...pressure to off-shore "nonjudgmental" audit work may have decreased audit quality by pushing work to members of the firm who are working overseas and not receiving face-to-face instruction.”

Examples of Positive Effects of Workload on Audit Quality

“Workload pressures force me to be super organized and therefore, more prepared. This creates increased audit quality.”

“The amount of additional audit procedures and documentation requirements that have resulted from PCAOB inspection findings has increased quality as well as workload pressures.”

“I think having some degree of pressure on staff helps to increase the audit quality because they learn how to be more efficient and focused in their work. If they have all day to finish a task that should only take a few hours, I find that those staff tend to only be half focused on their work and it shows in their work product.”

“The workload pressures enforced based on PCAOB findings have lead to increased quality of audit work but also an overload of hours spent performing auditing procedures.”

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TABLE 1
Survey Respondent Demographics

Panel A: Percentages

	<u>N[±]</u>	<u>%</u>
Firm Size		
Big 4	675	86.98
Mid-tier	41	5.28
Other	<u>60</u>	<u>7.73</u>
	776	100
Current versus Former Auditor		
Current Auditor	299	38.5
Former Auditor	<u>477</u>	<u>61.5</u>
	776	100
Rank		
Partner	12	1.55
Senior Manager	39	5.03
Manager	105	13.53
Senior/In-charge	354	45.62
Staff/Associate/Intern	<u>266</u>	<u>34.28</u>
	776	100
Gender		
Female	405	52.19
Male	<u>377</u>	<u>47.81</u>
	776	100
City		
Houston	267	34.41
Austin	69	8.89
San Antonio	32	4.12
Dallas/Ft. Worth	209	26.93
New York City	32	4.12
Multiple	40	5.15
Other	<u>96</u>	<u>12.37</u>
	776	100

Panel B: Experience

	<u>N[±]</u>	<u>Mean</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>
Age	747	30.36	29	21	74
Years as CPA	575	6.75	5	0	48
Years in Industry	631	3.27	2.5	0	40

[±]All responses were requested on a volunteer-basis only.

TABLE 2
Audit Workloads and Impact on Audit Quality
Quantitative Responses

<i>Panel A: Audit Workloads</i>					
	<u>N</u> [±]	<u>Mean</u>	<u>Median</u>	<u>Min.</u>	<u>Max.</u>
Average hours worked during busy season	771	65.12	65	42	100
Maximum hours worked during busy season	769	79.54	80	45	120
Minimum billable hours required during busy season	502	53.96	55	40	65
% billable hours > minimum billable hours	551	73.86	90	0	100
% billable hours < minimum billable hours	542	7.95	0	0	100

<i>Panel B: Audit Workloads and Audit Quality</i>		
	<u>N</u>	<u>%</u>
Better auditor when work mandated hours	153	27.57
Better auditor when work < mandated hours	208	37.48
Better auditor when work > mandated hours	32	5.77
Quality of audit work not impacted by hours worked	<u>162</u>	<u>29.19</u>
	555 [±]	100%
Audit quality deteriorates beyond __ hours per week (mean / median)	699 [±]	60.29 / 60

<i>Panel C: What Benefits Obtained from Higher Workloads?</i>			
<u>Item</u>	<u>Mean Rank</u> *	<u>% Reporting as Top Choice</u> [¥]	<u>% Reporting in Top 3 Choices</u> [¥]
I develop stronger relationships with colleagues	2.19	40.99	81.18
My knowledge and expertise increase	2.49	28.36	78.23
I develop stronger relationships with clients	3.19	6.45	59.14
I become more efficient	3.56	11.56	43.55
Documentation is more thorough	3.84	8.60	32.12

<i>Panel D: What Suffers with Higher Workloads?</i>			
<u>Item</u>	<u>Mean Rank</u> *	<u>% Reporting as Top Choice</u> [¥]	<u>% Reporting in Top 3 Choices</u> [¥]
Personal relationships	2.62	33.78	75.66
Personal health	2.67	34.31	74.20
Documentation of work performed	3.76	14.76	48.54
Professional skepticism exercised	4.54	6.65	33.64
Sufficiency of audit evidence gathered	5.12	4.12	22.07
Appropriateness of audit procedures applied	5.51	2.39	15.69
Relationships with colleagues	5.81	1.60	18.35
Relationships with client	6.17	0.66	9.44

± All responses were requested on a volunteer-basis only.

* Lower number = higher rank

¥ Percentages based on the number of respondents who answered the question. Total responses for Panel A are 744 and total responses for Panel B are 752.

TABLE 3
Audit Workloads and Impact on Audit Quality:
Qualitative Responses (Current Auditors)

<i>Panel A: Workload Effect on Audit Quality (AQ)</i>			
	<u>N</u>	% Overall <u>Respondents</u>	
Decrease	143	85.63	
Increase	8	4.79	
Both decrease and increase	9	5.39	
No impact	<u>7</u>	<u>4.19</u>	
Total N	167	100%	
<i>Panel B: Negative Effects of Workload on Audit Quality</i>			
	<u>N±</u>	% Overall <u>Respondents</u>	% Category <u>Respondents</u>
<u>Procedures</u>			
Less diligent in performance of audit procedures	40	23.95	50.63
Forced to take short-cuts	15	8.98	18.99
Insufficient documentation	15	8.98	18.99
Inadequate review	9	5.39	11.39
<u>Judgment and Skepticism</u>			
Impaired judgment	20	11.98	57.14
Lack of professional skepticism	15	8.98	42.86
<u>Skills and Staffing</u>			
Inadequate staffing / staff turnover	24	14.37	61.54
Knowledge constraints	8	4.79	20.51
Insufficient skills for task	7	4.19	17.95
<u>Non-specific / other</u>	38	22.75	100.00
<i>Panel C: Positive Effects of Workload on Audit Quality</i>			
	<u>N±</u>	% Overall <u>Respondents</u>	% Category <u>Respondents</u>
PCAOB enforcement improves quality	7	4.19	41.18
Able to manage tasks more efficiently	6	3.60	35.29
Other	4	2.40	23.53
<i>Panel D: Workload Drivers</i>			
	<u>N±</u>	% Overall <u>Respondents</u>	% Category <u>Respondents</u>
<u>Internal Drivers:</u>			
Deadline/time constraints	89	53.29	58.17
Staffing shortage	49	29.34	32.03
Budget constraints	15	8.98	9.80
<u>External Drivers:</u>			
PCAOB pressure	35	20.96	64.81
Other regulatory pressure	6	3.59	11.11
Client unprepared	5	2.99	9.26
Client deadline pressure	5	2.99	9.26
Client fee pressure	3	1.80	5.56

± The N identified in this column consists of the number of times the particular pressure/effect was mentioned by the 167 overall current auditor respondents. Because participants could list up to three examples, the total N recorded across panels exceeds the number of respondents.

TABLE 4
Determinants of High Quality Audits

Panel A: What are the Biggest Contributors?

<u>Item</u>	<u>Mean Rank*</u>	% Reporting as Top Choice [¥]	% Reporting in Top 3 Choices [¥]
Appropriate staffing (i.e., experience and expertise)	2.38	33.65	77.88
Timely client information / assistance	2.80	24.80	64.08
Adequate staffing (i.e., the right amount)	2.89	19.30	64.88
Adequate time	3.14	16.09	59.12
Timely partner / manager assistance	4.18	4.02	27.48
Engaged audit committee	5.68	1.21	5.50
Other	7.84	0.94	1.21

Panel B: What are the Biggest Impediments?

<u>Item</u>	<u>Mean Rank*</u>	% Reporting as Top Choice [¥]	% Reporting in Top 3 Choices [¥]
Understaffing	3.34	20.62	58.23
Deadline constraints	3.83	17.40	47.12
Staff turnover	4.06	11.51	44.71
Workload fatigue / excessive hours	4.19	10.84	42.44
Resources not available from client	4.48	12.58	37.22
Budget constraints	4.80	14.99	33.87
Unavailable partner / manager assistance	5.66	2.54	17.14
Lack of technical expertise	5.80	8.17	17.40
Other	9.79	1.34	1.87

* Lower number = higher rank

¥ Percentages based on the number of respondents who answered the question. Total responses for Panels A and B are 746 and 747, respectively.

TABLE 5
Job Satisfaction
Descriptive Statistics

<u>Partition</u>	<i>SATIS</i> <u>1-10</u>	<i>EXCITE(int)</i> <u>1-7</u>	<i>EXCITE(start)</i> <u>1-7</u>	<i>EXCITE(now)</i> <u>1-7</u>
All Respondents (n=770-776)	5.46	6.40	5.44	2.94
<i>Auditor Rank</i>				
Partner / Senior Mgr (n=51)	6.90	6.75	6.08	4.10
Manager (n=105)	6.73	6.71	5.95	3.64
Senior (n=354)	5.56	6.36	5.53	2.73
Staff (n=262)	4.55	6.26	4.99	2.71
<i>Audit Firm Size</i>				
Big 4 (n=670)	5.35	6.39	5.44	2.84
Mid-Tier (n=40)	5.65	6.34	5.27	3.17
Small (n=60)	6.60	6.48	5.57	3.83
<i>Auditor Status</i>				
Current Auditor (n=296)	5.85	6.32	5.35	3.72
Former Auditor (n=474)	5.22	6.45	5.49	2.44

SATIS = Level of job satisfaction from 1 (lowest) to 10 (highest)

EXCITE(int) = Level of excitement about career in public accounting on first day of public accounting internship (1 = very unexcited; 4 = indifferent; 7 = very excited)

EXCITE(start) = Level of excitement about career in public accounting on first day of full-time employment in public accounting (1 = very unexcited; 4 = indifferent; 7 = very excited)

EXCITE(now) = Level of excitement about career in public accounting today (1 = very unexcited; 4 = indifferent; 7 = very excited)

The number of observations in each category reflects the maximum number of responses for that particular question. The 28 current interns are excluded from all analyses in this table because they have not yet started full-time in public accounting.

TABLE 6
Job Satisfaction
Multivariate Analysis

<u>Variable</u>	Dependent Variables					
	<i>SATIS</i> (1-10)		<i>EXCITE(now)</i> (1-7)		<i>INCR_EXCITE</i> (0,1)	
	<u>Coeff</u> (<u>std</u>)					
<i>AVGHOURS</i>	-0.02*** (0.006)	-0.01 (0.007)	-0.01** (0.006)	-0.00 (0.007)	-0.02** (0.008)	-0.00 (0.009)
<i>AVG_SUFFERS</i>	--	-0.59*** (0.165)	--	-0.53*** (0.167)	--	-0.79*** (0.208)
<i>EFF</i>	0.16*** (0.051)	0.16*** (0.054)	0.11** (0.052)	0.13** (0.055)	0.20*** (0.065)	0.21*** (0.068)
<i>STANCE</i>	0.26*** (0.047)	0.25*** (0.051)	0.19*** (0.049)	0.16*** (0.053)	0.14** (0.059)	0.09 (0.064)
<i>AUDRANK</i>	-0.65*** (0.082)	-0.64*** (0.087)	-0.50*** (0.080)	-0.51*** (0.085)	-0.37*** (0.102)	-0.37*** (0.109)
<i>FIRM</i>	0.30*** (0.121)	0.22* (0.132)	0.26** (0.126)	0.23* (0.136)	0.24 (0.153)	0.21 (0.166)
<i>FORMER</i>	-0.27** (0.135)	-0.27* (0.142)	-1.38*** (0.145)	-1.31*** (0.152)	-1.55*** (0.172)	-1.49*** (0.182)
Pseudo R-square	0.06	0.06	0.08	0.08	0.17	0.16
Model Chi-Square	179.82***	180.15***	206.04***	189.92***	168.79***	149.05***
N	738	665	742	669	741	669

Standard errors are in parentheses; *, **, and *** denote significance at 10%, 5%, and 1%, respectively (two-tailed)

Variables are defined in Appendix A.