LABOR MARKET OUTCOMES OF RESTATEMENTS FOR CORPORATE ACCOUNTANTS

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ABSTRACT

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This study examines the impact of restatements on the labor market outcomes for corporate accountants. I use *LinkedIn* to identify a comprehensive sample of corporate accountants who work for firms that restated their financial statements between 2004 and 2014. Using a difference-in-differences research design, I find that corporate accountants experience a higher turnover and a worse promotion prospect after restatements are announced, compared to a control sample of human resources professionals within the same firm. The increase in turnover is more pronounced for senior internal auditors, and in firms with more severe restatements. I also find that senior internal auditors experience a higher turnover but not a worse promotion prospect before restatements are announced, compared to senior corporate accountants. Overall, my findings suggest that corporate accountant experience adverse labor market outcomes after restatements are announced. Internal auditors could minimize the adverse labor market outcomes of restatements by proactively departing.

This dissertation is dedicated to my parents and my wife.
Thank you for your support.

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1. INTRODUCTION

This study examines the impact of restatements on the labor market outcomes for corporate accountants[1]. Prior studies find that CEOs, CFOs, and boards of directors in firms with financial misreporting suffer severe outcomes (Srinivasan 2005; Desai et al. 2006; Dou 2017). For example, Desai et al. (2006) find that managers in restatement firms experience a higher likelihood of turnover and a poorer future employment prospect. Karpoff et al. (2008) find that managers in firms with financial misconduct (fraud firms) bear substantial financial losses in stock values, regulatory fines, restrictions on future employments, and criminal charges. The labor market for directors also holds the board of directors accountable for financial misreporting, disciplining them in various forms including loss of directorship, negative recommendations, and litigation (Srinivasan 2005; Brochet and Srinivasan 2014; Dou 2017).

Besides top executives and boards of directors, corporate accountants are also involved in financial misreporting (Beasley et al. 2010). During the WorldCom scandal, two former middle-level accounting managers and a former director of the general accounting department were charged with securities fraud (Pulliam 2003). Although they cooperated with prosecutors during the investigation, one of the two accounting managers was sentenced to five months in prison and another was sentenced to probation for three years. Other than anecdotal evidence from high-profile financial frauds, there is no direct empirical evidence on the labor market outcomes of financial misreporting for corporate accountants.

[1] I focus on the impact of financial restatements on the labor market consequence for corporate accountants rather than the impact of financial frauds. Prior studies use various financial misreporting measures (e.g., restatements, AAER, class action lawsuits) to examine the consequences for top managers and boards of directors (Karpoff et al. 2017). Compared to other financial misreporting measures, financial restatements are less severe and provide a larger sample size. However, financial restatement firms in my sample have violated U.S. GAAP so that restatements may still lead to adverse labor market consequences for corporate accountants.

It is important to examine whether corporate accountants suffer adverse labor market outcomes after financial misreporting because such evidence has important public policy implications for how to discipline financial misreporting. *Ex ante*, it is not clear whether corporate accountants, either involved or not-involved in financial misreporting, experience labor market penalties similar to those for top managers and board members. On the one hand, regulators often prosecute corporate accountants who directly participate in a financial fraud (Beasley et al. 2010). Even corporate accountants who are not directly involved may also bear a negative reputation spillover effect from the misreporting (e.g., reputation damages, or job turnovers due to management team restructuring). Weston Smith, the former CFO at HealthSouth, commented the association with HealthSouth damaged the reputation of innocent employees at HealthSouth (Malespin 2014). On the other hand, most non-executives do not mastermind but are likely pressured by top managers to conduct wrongdoings. In addition, some corporate accountants may not be involved or aware of the ongoing financial frauds, and hence should not be culpable for financial misreporting. Therefore, whether corporate accountants in restatement firms will experience adverse outcomes in the labor market remains an open empirical question.

The lack of empirical evidence on corporate accountants' labor market outcomes after financial misreporting is mostly due to the difficulty of obtaining information on such employees. I overcome this challenge by collecting from *LinkedIn* a comprehensive sample of corporate accountants and a comparison sample of human resource professionals (hereafter, HRs) in firms that issued a restatement between 2004 and 2014[2]. The positions of individual employees in my sample range from staff levels (e.g., staff accountant, bookkeeper) to executive levels (e.g.,

[2] I choose HR professionals in the same firm as a control group for corporate accountants because the employees in both groups perform administrative functions. The financial restatements will not impact HRs directly so that using HRs as a control group helps mitigate the concern of omitted firm-level factors affecting the overall turnover and promotion prospect of employees in administrative functions.

controller, chief accounting officer, vice president of finance). Using individuals' employment history disclosed on *LinkedIn*, I investigate two labor market outcomes: employee turnover around restatements and subsequent promotion prospects.

I compare the turnover rates and promotion prospects of corporate accountants in a post-restatement period (i.e., a period after a restatement is announced) and a pre-restatement period (i.e., a period before a restatement begins). To control for firm-specific factors affecting an employee's labor market outcomes, I use HRs as a control group. Adopting a difference-in-differences specification, I find that corporate accountants, relative to HRs, experience a 4.5% greater increase in the turnover rates between the pre-restatement and the post-restatement periods. Based on the seniority of employees, I find that the greater increase in turnover is driven by senior corporate accountants. I further partition corporate accountants into internal auditors and other accountants because internal auditors could be held more accountable for financial misreporting than other accountants[3]. As a result, the labor market outcomes for internal auditors could be worse than those for other accountants. I find that compared to other senior accountants, senior internal auditors experience a greater increase in turnover and only in more severe restatements. Regarding the subsequent career prospects, I also find that corporate accountants, compared to HRs, experience a decrease in the likelihood of a future promotion by 8.2% between the pre-restatement periods and the post-restatement periods. Overall, these results suggest that corporate accountants, relative to HRs, experience both a higher turnover rate and a worse promotion prospect after restatements.

Next, I examine whether corporate accountants proactively leave their employers *before* restatements are announced (i.e., a period when the misreporting is ongoing). Inside knowledge of

[3] Internal auditors conduct various internal audit processes to help audit committees deter management misconduct (AICPA 2005).

the restatements and career concerns could motivate voluntary proactive departure of corporate accountants. Corporate accountants are involved in the processing of financial information and regularly interact with external auditors. They may possess first-hand information about financial misreporting. For example, an investigation after the WorldCom scandal suggests that dozens of employees knew about the WorldCom fraud before the fraud was revealed (Pulliam 2003). *The 2016 Report to the Nations on Occupational Fraud and Abuse* by the Association of Certified Fraud Examiners (hereafter, 2016 ACFE report) shows that 51.5% of tips that lead to the discovery of frauds come from employees. Call et al. (2016) also provide indirect evidence that managers grant rank-and-file employees more stock options during fraud periods to discourage them from whistle-blowing and to withhold information from the public[4].

Career concerns and work ethic also motivate corporate accountants to protect their reputations. Recent studies on boards of directors suggest that directors in distressed firms preemptively leave their firms and successfully minimize reputation damages (Dou 2017; Fahlenbrach et al. 2017; Gao et al. 2017). Former Enron accountant Sherron Watkins claimed that the best way to avoid reputational loss is to change jobs as soon as possible (Beenen and Erisman 2007). In addition to career concerns, work ethic also motivates corporate accountants to proactively leave (Jones 1995; Chakravarthy et al. 2014).

To examine the likelihood of proactive turnover in corporate accountants before the restatement is revealed publicly, I apply a similar difference-in-differences design to compare changes in the turnover rate of corporate accountants and that of HRs between the restatement period (i.e. a period between the beginning date and the announcement date of a restatement) and the pre-restatement period (i.e. a period before a restatement begins). I find no significant

[4] Call et al. (2016) use the difference between the total stock options granted and the stock options granted to the top five executives to proxy for the stock options to rank-and-file employees.

differences in the changes in the turnover rates of corporate accountants and HRs. When I partition corporate accountants into internal auditors and other accountants, I find that senior internal auditors, relative to other senior accountants, experience a greater increase in turnover from the pre-restatement periods to the restatement periods. In terms of subsequent career prospects, I find departing corporate accountants, relative to departing HRs, do not experience a worse promotion prospect from the pre-restatement period to the restatement period. Within corporate accountants, I also fail to find a diminished promotion prospect for internal auditors, compared to other accountants. Overall, these results suggest that senior internal auditors, relative to other senior accountants, experience a higher turnover rate but not necessarily a worse promotion prospect from the pre-restatement periods to the restatement periods.

This study makes two contributions to the literature. First, the existing literature has focused on the consequences of financial misreporting for top executives and boards of directors (Srinivasan 2005; Desai et al. 2006; Karpoff et al. 2008; Brochet and Srinivasan 2014; Dou 2017;). This study provides the first large-scale empirical evidence on the labor market outcomes of restatements for rank-and-file corporate accountants. My findings suggest that corporate accountants in restatement firms experience a higher turnover rate and a worse promotion prospect after the restatements, compared to HRs from the same firm. From a career perspective, corporate accountants need to consider the adverse labor market consequences when they encounter financial misreporting in their employers. This evidence also has important policy implications for regulators. Besides financial rewards for whistle-blowers, regulators could emphasize the labor market consequences to corporate accountants and encourage them to blow the whistle on financial misconduct. Second, the literature on predicting financial misreporting relies on various firm-level financial and nonfinancial characteristics (Brazel et al. 2009; Dechow et al. 2011; Hobson et al.

2012). A higher turnover rate of internal auditors before restatements are announced could signal the labor market about potential financial misreporting. Although this study does not directly test the predictive power of internal auditor turnover rate on financial misreporting, future research can explore the implications of internal auditor turnover in the context of financial misreporting.

2. DO CORPORATE ACCOUNTANTS SUFFER LABOR MARKET PENALTIES AFTER RESTATEMENTS?

In traditional agency problems, compensation designs and labor markets (e.g., both internal and external markets) are two primary mechanisms to motivate and discipline managers to maximize shareholders' wealth. Fama (1980) argues that internal and external labor markets fulfill the disciplining role and provide opportunities for employees. The labor market can regularly re-evaluate an employee's human capital by the difference between the individual's marginal output and the contracted marginal output. As a result, the incentive to maximize human capital in labor markets will discipline employees to fulfill their contracts with their employers. If an employee fails to fulfill his contract, his future career prospects will diminish because of the decrease of human capital accessed by the labor market. In the extreme cases (e.g., financial fraud), the labor market could efficiently penalize managers' misbehaviors.

In this paper, I focus on the labor market outcomes for individuals involved in financial misreporting. Prior studies have been focused on the labor market consequences for top executives and board of directors. Desai et al. (2006) examine the labor market penalties for top managers in restatement firms. They find that managers in restatement firms experience a higher likelihood of turnover and a poorer future employment prospect. Consistent with Karpoff and Lott (1993), they argue that the labor market penalties of restatements for managers are severe and could partially substitute for public enforcements from regulators. Using a sample of financial frauds pursued by the Securities and Exchange Commission (SEC) and the Department of Justice (DOJ) between 1978 and 2006, Karpoff et al. (2008) identify 2,206 culpable individuals from the enforcement

actions and find that over 90% of them are fired during the violation or enforcement periods[5]. In addition to losing jobs, the culpable parties bear substantial financial losses in stock values, regulatory fines, restrictions on future employment, and criminal charges.

The adverse labor market outcomes apply not only to managers in charge but also to other parties in firms with financial misreporting. Outside directors on the board have the responsibility to monitor managers' misbehaviors and oversee the firm's financial reporting. Prior studies find that the labor market penalizes those directors who fail to perform the monitoring functions by imposing losses in directorship and reputation damages. For example, Srinivasan (2005) finds that outside directors in firms with restatements experience a higher turnover and losses of directorship in other firms. Such labor market penalties are more severe for audit committee members. Similarly, Fich and Shivdasani (2007) also find reputational penalties for outside directors in firms that faced class-action lawsuits due to financial frauds. Beyond adverse labor market consequences, Brochet and Srinivasan (2014) find that outside directors, especially audit committee members, and stock sellers, are more likely to be named in class-action lawsuits. The named directors receive more negative recommendations from proxy advisory firms and more negatives votes from shareholders afterward. Overall, this line of research suggests that outside directors also are held accountable for financial reporting failures (e.g., financial restatement, financial fraud).

Besides top executives and boards of directors, corporate accountants are also involved in financial misreporting (Beasley et al. 2010). Other than the charges to accounting managers in high-profile financial scandals, there is little research examining whether corporate accountants in firms with financial misreporting bear any adverse labor market outcomes. *Ex ante*, it is not clear

[5] Karpoff et al. (2008) identify 773 non-executive employees out of 2,206 individual employees in their sample. However, they are unable to collect the employment histories due the lack of such information for non-executive employees in regulatory filings. Additionally, they can not identify the specific titles or positions of these non-executive employees.

whether corporate accountants working in restatement firms will bear any labor market penalty. On the one hand, regulators often prosecute corporate accountants who participate in a financial misreporting (Beasley et al. 2010). Even corporate accountants who do not directly participate in a financial misreporting may bear negative reputation spillover effects from a financial misreporting. Weston Smith, the former CFO at HealthSouth, commented the association with HealthSouth later damaged the reputation of innocent employees at HealthSouth (Malespin 2014). Condie et al. (2016) find that CFOs at the time the misreporting is occurring (i.e., CFOs are not charged with participating in the financial fraud) experience higher turnover and worse future career prospects. Corporate accountants could also experience job turnovers due to management team restructuring after restatements (Fee and Hadlock 2004)[6]. Recent studies show that the non-executive labor market efficiently imposes adverse outcomes on individual employees. For example, Gao et al. (2016) find that loan officers are more likely to separate from their banks, move to a lower-ranked bank, and face a demotion in their future positions when their portfolios experience a negative credit shock (e.g., defaults, corporate bankruptcies, and rating downgrades).

On the other hand, most corporate accountants are not intentionally involved in financial misreporting and are very likely pressured by top managers to conduct the wrongdoings. For example, Feng et al. (2011) suggest that even CFOs involved in financial frauds are under pressure from CEOs, rather than intentionally maximizing their own financial benefits from equity incentives by manipulating earnings. Due to the information asymmetry regarding the direct responsibility of financial misreporting, the labor market may not penalize corporate accountants. Additionally, corporate accountants who are not involved or unaware of the financial misreporting

[6] Fee and Hadlock (2004) focus on the turnover of non-CEOs and find that the turnover of non-CEOs is positively associated with the CEO dismissals. Likewise, I expect that rank-and-file employees could experience higher turnover if there is management team restructuring.

are unlikely culpable for financial misreporting. Employers may prefer employees who went through financial misreporting but do not directly patriciate in the misreporting. Prior studies examine how the past negative experience helps managers perform better in the future. For example, Bernile et al. (2017) find that CEOs who witness the downside of disasters act more conservatively in firm policies, such as lower leverage, higher cash holding, and fewer acquisition activities. As a result, I may not observe any adverse labor market outcomes for corporate accountants in financial restatement firms.

3. DO CORPORATE ACCOUNTANTS LEAVE BEFORE RESTATEMENTS ANNOUNCEMENTS?

Prior studies on non-executive employees suggest they have superior and valuable insider information about their employers' future performances. For example, Babenko and Sen (2015) find that the aggregate purchases of firm stocks by non-executive employees can successfully predict future stock returns. Such predictive power of non-executive stock purchases is more pronounced for firms with stronger information asymmetry. Hales et al. (2017) also suggest that employees' assessments of outlooks for their employers published in *Glassdoor.com* are informative about their firms' earnings surprises, management forecasts, and goodwill impairments.

In the context of financial misreporting, corporate accountants possess more first-hand information about financial misreporting than external parties. Corporate accountants are involved in preparation of financial information and they regularly interact with their external auditors. According to the 2016 ACFE report, a financial statement fraud is more likely to be committed by a group of insiders than by a single individual. Since top managers are more likely to mastermind financial misreporting, the perpetration of financial misreporting at least needs some corporate accountants involved to falsify financial reporting systems. For example, an investigation by the board of directors after the WorldCom scandal suggests that dozens of employees knew about the WorldCom fraud before the fraud was revealed (Pulliam 2003). Even corporate accountants who are not directly involved in the wrongdoing may observe various signs of misreporting. For instance, Michael Vines, a former bookkeeper at HealthSouth, noticed the fraudulent accounting transactions of fixed assets before the fraud was revealed. As corporate accountants in restatement firms might be aware of the ongoing financial misreporting, managers in fraud firms have

incentives to persuade employees to withhold information from the public. Call et al. (2016) provide indirect evidence that financial fraud firms grant rank-and-file employees more stock options during fraud periods to discourage them from whistle-blowing to regulators.

If an accountant is aware of any financial misreporting, she/he needs to make a cost-benefit analysis of whether to stay or jump the sinking ship. Corporate accountants could have three possible options: (1) Stay with the firm. The financial incentive of additional stock options may help managers to keep corporate accountants silent about the ongoing misreporting (Call et al. 2016). (2) Blow the whistle to regulators. Dyck et al. (2010) show that firm employees report about 17% of whistle-blowing cases in their whistle-blowing sample. However, in 82% of whistle-blowing cases by employees, the individuals allege that they experience adverse outcomes (e.g., fired, altered responsibilities) as a result of bringing the fraud to light. (3) Leave the firm. There could be several reasons motivating the proactive departure of corporate accountants.

First, financial instability could motivate corporate accountants to leave their employers. As restatement firms often experience financial distress in restatement periods, corporate accountants may choose to leave for more financially stable employers. Job seekers, as outsiders, refrain from 'boarding a sinking boat' by avoiding working for financially distressed firms (Brown and Matsa 2016).

Second, career concerns may also encourage corporate accountants to leave to avoid any stigma on their reputations. Fahlenbrach et al. (2017) find that an anticipation of adverse outcomes motivates independent directors to depart from their board to protect their reputations. Gao et al. (2017) also document abnormal turnover of directors before frauds are discovered and before lawsuits are filed. Prior studies on the proactive turnover of executives and directors suggest that executives and directors successfully minimize labor markets penalties by jumping a sinking ship.

For example, Semadeni et al. (2008) show that executives who 'jump ship' by changing employers before bank failures suffer less severe labor market outcomes than those executives who stay with the failed banks. Dou (2017) suggests that directors who leave before negative events (e.g., lawsuits and restatements) experience lesser loss of directorships than directors who leave after the events. Following the same logic, I argue that corporate accountants could proactively leave their employers to protect their reputation. For example, former Enron accountant Sherron Watkins claimed that the best way to avoid reputational loss is to change jobs as soon as possible (Beenen and Erisman 2007).

Last, problematic work ethic in restatement firms could motivate corporate accountants to leave their employers. Employees are willing to work for firms that share the same work ethics and values through the self-selection process in labor markets (Jones 1995; Chakravarthy et al. 2014). During the restatement period, a corporate accountant could observe the damaged work ethic or culture within the firm and voluntarily leave for employers consistent with her/his work ethic. However, if corporate accountants perceive that financial incentives outweigh any potential penalty (e.g. reputation damage) after financial misreporting is revealed to the public, it is possible to observe no abnormal turnover of corporate accountants before financial misreporting is revealed.

Among corporate accountants, internal auditors conduct various internal audit procedures in areas with the highest risk and thus could be more likely to detect financial misreporting internally than other corporate accountants. For example, Cynthia Cooper, the former vice president of internal audit at WorldCom, and her team identified some suspicious accounting entries before the eruption of the WorldCom scandal. Ege (2015) suggests that the quality of internal audit function is negatively associated with the likelihood of management misreporting.

Because of the information advantage and direct responsibility for detecting financial misreporting, internal auditors are more likely to proactively leave than other accountants in restatement periods.

4. DATA

4.1 Restatement Firm Sample

I do not focus on firms subject to the SEC *Accounting and Auditing Enforcement Releases* (AAER firms) due to the severity of financial frauds. Corporate accountants might omit employment histories with AAER firms in public profiles. Instead, I focus on the severe financial restatement cases[7]. Since restatements are less severe than AAER cases, any labor market outcome from restatements should be near the lower bound of labor market penalties for corporate accountants involved in financial frauds[8]. Additionally, financial restatements are more common than financial frauds, such as AAER. So, the inferences from financial restatement sample could be generalized to common financial misreporting cases (i.e., more likely encountered by corporate accountants in their daily work) and have more important implications for corporate accountants.

Following Desai et al. (2006), I start with all restatements by firms currently traded on NYSE or NASDAQ from the Audit Analytics non-reliance restatement feed. To collect complete information on job transitions, I require restatement firms remain public. To construct the treatment and control periods used in the later difference-in-differences tests, I also require that each restatement begins after 2004 and ends before 2014. Figure 1 plots the three restatement periods (e.g., pre-restatement, restatement, and post-restatement) constructed from the beginning date and the 8-K filing date of a restatement. The time span of each period is the same as the time span between the beginning date and the 8-K filing date of a restatement.

[7] Prior studies document negative consequences of restatements for firms and various parties (e.g., top managers, directors, external auditors). For example, restatement firms on average experience -3% market return in a 3-day window around the restatement announcement after the Sarbanes Oxley Act (Burks 2011). Internal parties experience higher turnover and worse job prospects after restatements (e.g., Srinivasan 2005; Desai et al. 2006; Karpoff et al. 2008). External auditors are also more likely to dismissed by the board of directors after clients' restatements (Hennes et al. 2014).

[8] In later tests, I show that the main results are mainly driven by the more severe financial restatement cases. So, the results from financial restatements might be generalized to the most severe cases like financial frauds.

In addition, I exclude restatements by non-U.S. firms or firms in financial/utility industries. Since larger firms could have more employees available on *LinkedIn*, I exclude firms with a stock price less than $5 in the most current period or firms as non-accelerated filers. To remove unintentional restatements, I exclude those restatements made because of clerical application errors, as these restatements are mostly technical errors (Bens et al. 2012)[9]. I also exclude those restatements due to SAB No.108, the SEC's 2005 letter regarding leases, pro forma restatements for mergers, or newly discontinued operations (Hennes et al. 2014). To focus on severe restatements, I keep only restatements with negative effects on net incomes or equities (Dao et al. 2012; Hobson et al. 2012). After removing 11 firms with no employees on *LinkedIn*, my final restatement firm sample consists of 205 unique restatement firms. The detailed sample selection of restatement firms is described in Table 1.

Table 2 Panel A reports the descriptive statistics of firm characteristics. On average, the restatement firms in my sample have $1,801 million in reported total assets. Their return on assets is close to zero at the beginning of each restatement period. About 26% (35%) of CEOs (CFOs) leave their firms during the three restatement periods. The average time span between the beginning date and the 8-K filing date of a restatement is 2.6 years. This restatement duration allows me to observe notable turnovers of individual employees. On average, a restatement firm's net income over total assets is restated 1% down. The average three-day commutative abnormal return around the 8-K filing date of a restatement is -2%. Table 2 Panel B reports the distribution of restatement ending years. The restatements in my final sample are distributed evenly across

[9] These restatements due to technical errors are less likely involved with intentional manipulation by managers. Therefore, I do not expect any significantly adverse consequences for corporate accountants from these restatements. I could use these restatements due to technical errors to do a falsification test. However, to reduce the significant cost of data collection, I choose to do cross-sectional tests based on the severity of restatements in my final sample.

years. Table 2 Panel C presents the industry distribution of restatement firms based on the Fama-Fench 12 industry classifications.

4.2 Individual Employee Sample

LinkedIn serves as a comprehensive and public available data source to gather corporate accountants' employment information. According to the 2014 Social CPAs survey, *LinkedIn* ranks No.1 in the social media used by corporate accountants.[10] Recent studies also use *LinkedIn* to identify corporate accountants in S&P 1500 firms for an examination of how corporate accountants affect audit quality and auditor choices (Bird, Ho, Li, et al. 2015; Bird, Ho, and Ruchti 2015; Chen et al. 2015)[11].

After constructing the restatement firm sample, I search for individual employees who work in accounting, finance, or HR functions on *LinkedIn* in June 2016. I require an employee who currently or previously worked for the restatement firms. My initial search on *LinkedIn* relies on the function classification by *LinkedIn* and results in 74,740 individual employees. Using the years when an employee joins and departs from her or his employer, I require that an employee's employment period with restatement firms has an overlap with the three restatement periods (e.g., pre-restatement, restatement, and post-restatement). I refine the classification of individual employees based on the last titles each employee has with the restatement firms according to the classification by *Accounting Jobs Today*. Specifically, I classify an employee as working in the accounting function if he or she holds a job title with a set of keywords related to corporate accountants.[12] Similarly, I classify an employee in the HR function if he or she holds a job title

[10] http://accountingdisruptors.com/wp-content/uploads/2015/11/2014SocialCPAsSurveyFindings.pdf
[11] Several other accounting and finance papers also use *LinkedIn* as a new data source to examine the human capital investment of internal employees, how the skill sets (e.g., social skill, industry experience) of individuals affect their performance and the revolving door practices in credit ratings (Chen et al. 2015; Li et al. 2016; Jiang et al. 2018).
[12] The keywords used to identify accountants are as follows: accounting, accountant, reporting, controller, receivable, payable, collection, billing, asset, inventory, revenue, consolidation, compliance, tax, audit, internal control, SOX,

with a set of keywords related to the human resources function.[13] In later tests, I define an employee as working in the internal audit function if he or she holds a job title with the following keywords: audit, internal control, SOX, Sarbanes–Oxley. The corporate accountants who are not in the internal audit function are classified as other corporate accountants. Finally, I exclude individuals who work in temporary positions or an internship, or hold a position as CEO, CFO, or board member. This selection procedure results in a sample of 24,673 corporate accountants and HRs in the 205 restatement firms. The detailed selection process of the individual employee sample is described in Table 3.

To validate my keywords used to refine the classification, I plot the top 50 keywords in individual employees' skill sets of corporate accountants and HRs in Figure 2. The top three keywords in corporate accountants' skills sets are accounting, financial analysis, and financial reporting. The top three keywords in HRs' skills sets are human resources, employment relations, and onboarding. These keywords are consistent with the main tasks of each function.

Table 4 reports the demographic characteristics of individuals with available information from their public professional profiles on *LinkedIn*. Employees without educational information are excluded from this table. I classify the seniority of each employee based on the last job title with her or his former employer.[14] For other corporate accountants (i.e., corporate accountants, excluding internal auditors), the average age of a junior (senior) employee is 32.10 (37.67).[15] About 60% of junior employees are female while only 49% of senior employees are female for

Sarbanes–Oxley, finance, financial analyst, financial planning, treasurer, acquisition, risk manager, financial planning, portfolio. These keywords are based on the common titles classified by *Accounting Jobs Today*.

[13] The keywords used to identify HR employees are as follows: human resources, recruiter, benefits, employees, staffing, workforce, compensation, talent acquisition, payroll, employee relations, labor.

[14] An employee is classified as a senior employee with the following keywords: senior, sr, supervisor, head, manager, mgr, director, controller, treasurer, executive, vice president, vp.

[15] Age measures an individual's age in the most recent year with her/his employer. The age is inferred from the year when an individual gets her/his Bachelor degree, graduates from high schools or gets her/his first job (Chevalier and Ellison 1999).

other accountants.[16] Typically, a junior corporate accountant has a Bachelor degree while a senior corporate accountant has a degree higher than Bachelor degree.[17] Only about 2% (3%) of junior (senior) other accountants have an MBA degree. However, about 5% (10%) of junior (senior) other accountants have a CPA license. Internal auditors have a smaller population than other accountants. Like other accountants, about 3% (3%) of junior(senior) internal auditors have an MBA degree. However, internal auditors are more likely to have a CPA license than other accountants. The HR function has significantly more female employees (77% at the junior level and 68% at the senior level) than the accounting function. Consistent with the main tasks of HRs, the HR sample has a lower percentage of MBA degree and CPA license.[18]

Table 5 reports the descriptive statistics of employee turnover of internal auditors, other accountants, and HRs across the three restatement periods (e.g., pre-restatement, restatement, and post-restatement) at the firm level. The total number of corporate accountants is similar to that in Bird et al. (2015), which also collects information about corporate accountants who work for S&P 1500 firms from *LinkedIn*. On average, a restatement firm has about 31 accountants at the beginning of a pre-restatement period. However, the total number of other accountants gradually increases over time. The internal auditors and HRs have a similar trend in population across the three restatement periods. To adjust for the size effect of each group, I define the turnover rate as the number of employee turnovers in each period over the total employee number at the beginning of each period.

[16] Female indicates an individual's gender based on his/her first name.
[17] Highest Degree is measured in the following scales: 1=High School; 2=Bachelor; 3=Master or Above.
[18] The HR function has its own professional certification. For example, PHR (Professional in Human Resources) or SPHR (Senior Professional in Human Resources) are common certifications by Human Resources Certification Institute. Because this study mainly focuses on the labor market outcomes of accountants. I do not provide detailed summary statistics of the professional certification of HR sample.

In Figure 3, I compare the overall turnover rates and senior turnover rates of accounting and HR functions across three restatement periods. Panel A suggests that compared to HRs, corporate accountants experience a greater increase in turnover rate from pre-restatement periods (20%) to post-restatement periods (41%). However, corporate accountants, relative to HRs, do not experience a greater increase in turnover from pre-restatement periods to restatement periods. In Panel B, I partition all employees into subgroups based on the seniority of a job position. I find that compared to senior HRs, senior corporate accountants experience a greater increase in turnover rates from pre-restatement periods (13%) to post-restatement periods (25%), but not from pre-restatement periods to restatement periods.

I partition corporate accountants into internal auditors and other accountants in Figure 4. Panel A suggests that compared to HRs, both internal auditors and other accountants experience a greater increase in overall turnover rate from pre-restatement periods to post-restatement periods. However, other accountants do not experience a greater increase in overall turnover from pre-restatement periods to restatement periods than HRs do. In contrast, internal auditors do experience a greater increase in overall turnover from pre-restatement periods (19%) to restatement periods (36%). This univariate evidence suggests that internal auditors may proactively depart from their employers when the financial misreporting is undergoing. The comparison of senior turnover rates across three functions is similar to the comparison of overall turnover rates. Overall, Figures 3 and 4 provide initial evidence that corporate accountants, relative to HRs, experiences a greater increase in turnover rates after restatements. In addition, the turnover rates of internal auditors are higher than those for other accountants and HRs in restatement periods. Multivariate regression tests in the next section will formally test the statistical difference between the turnover rates across different functions after controlling for other firm factors affecting employee turnover.

5. RESEARCH DESIGN

5.1 Firm-Level Turnover Rates

In my first test, I adopt a difference-in-differences research design to examine the abnormal turnover rate of corporate accountants at the firm level. I use HRs as a control group for corporate accountants to control for firm-specific factors that affect employee turnover trends within the same firm. I choose the HR function for two reasons: (1) The HR function is not directly related to restatements. So, HRs should be less affected by the negative reputation penalty from financial restatements. The turnover trend of the HR function captures the normal employee turnover in restatement firms[19]. (2) The HR function provides administrative services (e.g., staffing, training) to firms and generally exists for all firms, and the HR turnover trend provides a generalizable benchmark for all restatement firms. Based on the beginning date and the 8-K filing date of a restatement, I construct three periods for each restatement: pre-restatement (i.e., a period of the same duration as the restatement duration before the beginning date of a restatement), restatement (i.e., a period between the beginning date and the 8-K filings date of a restatement) and post-restatement (i.e., a period of the same duration as the restatement duration after the 8-K filing date of a restatement).[20] The pre-restatement period serves as a benchmark period to measure the turnover rate of each function.

The dependent variable is measured as the number of turnover employees during each period over the total employee number at the beginning of each period. The first-difference within the same firm removes common time-invariant firm-specific factors that affect the turnovers of

[19] I assume that the change in turnover of HR function captures serves as a benchmark for the change in turnover rate of employee who perform administrative functions within the same firm. Although turnover rates of HR are not identical to those of corporate accountants, the difference-in-difference research designs only requires a parallel trend in turnover rates of HRs and corporate accountants. The falsification tests in Section 6.6 confirm the parallel trends.
[20] I measure the restatement duration as the time span between the beginning date and the 8-K filing date of each restatement.

both corporate accountants and HRs. The second-difference removes time-invariant function-specific factors that affect employee turnovers. The difference-in-differences measure of turnover rates captures the abnormal turnover of the accounting function relative to the turnover of the HR function from a pre-restatement period to a post-restatement period. My estimation model can be written as follows:

$$Turnover_{i,t} = \beta_1 Post + \beta_2 Accounting + \beta_3 Post * Accounting + \gamma Controls + Year + Industry + State \quad (1)$$

Post indicates that a firm-period observation is for a post-restatement period. *Accounting* indicates that a firm-period observation is measured for the accounting function. The main variable of interest is the interaction term *Accounting*Post*. The coefficient β_3 captures the abnormal turnover rate of corporate accountants from a pre-restatement period to a post-restatement period, related to that of HRs. In the estimation model, I control for firm size, measured as the log of total assets at the beginning of each restatement period. *ROA* controls for the profitability of a firm at the beginning of each restatement period. *Sales Growth*, measured as the increase in sales over sales in the prior year at the beginning of each period, controls for the expanding speed of operating activities (Brazel et al. 2009). I also include CEO and CFO turnovers in the same period to control for the management team change (Fee and Hadlock 2004). I winsorize all continuous variables in my sample at the 1st and 99th percentile, respectively. Year fixed effects control for macroeconomic factors affecting the labor market in a given year. State fixed effects control for local labor market factors. Industry fixed effects control for industry-specific factors affecting the labor market in a given year. The standard errors are clustered by restatement firms. See Appendix A for detailed variable definitions.

To examine the abnormal turnover in the restatement period, I use an estimation regression similar to the one for the post-restatement period, as follows:

$$Turnover_{i,t} = \beta_1 During + \beta_2 Accounting + \beta_3 During * Accounting$$
$$+\gamma Controls + Year + Industry + State \quad (2)$$

The same set of control variables, year, state and industry fixed effects are included.

5.2 Individual-Level Promotion Outcome

The second labor market outcome I examine is the subsequent career prospect, which is measured as the relative rank of the next position to the former position when individual employees leave their former employers (Fee and Hadlock 2004; Desai et al. 2006). Since compensation information is not available for an individual employee from public sources, I am not able to examine the effect of restatements on corporate accountants' wealth. As a higher position is likely associated with a higher compensation level, I rely on the ranks of old and new positions to indirectly assess the labor market outcome. I use the position titles to classify the employees into a three-rank hierarchy (Barrios 2017). The classification is based on *Parker and Lynch's 2015 Salary Guide for Accounting and Finance Professionals*.[21] Based on this three-rank hierarchy, an employee has a promotion if she or he moves from a lower rank position to a higher rank position.

To examine the impact of restatements on the promotion prospect, I compare the promotion outcomes of corporate accountants and HRs who leave restatement firms using a difference-in-differences specification. As the Rank 3 employees already have the highest rank in my hierarchy,

[21] The Rank 1 group represents the starting or junior level at the firm (including clerk, bookkeeper, accountant, human resources assistant). The Rank 2 group represents the middle level at the firm (including manager, senior accountant, human resources supervisor). The Rank 3 group represents the most senior level employees at the firm (including director, executive, controller, vice president)

my promotion tests only include the Rank 1 and Rank 2 employees (Griffin et al. 2018). My estimation model for the post-restatement period can be written as follows:

$$Promotion_{i,t} = \beta_1 Post + \beta_2 Accounting + \beta_3 Post * Accounting + \gamma Controls + Year + Industry + State \quad (3)$$

The dependent variable is *Promotion*, which reflects whether an employee moves to a higher rank position in the new employer when she/he leaves her/his former employer. *Post* indicates that an employee leaves during a post-restatement period. *Accounting* indicates that an employee is in the accounting function. I control for *Tenure* at the former employer, measured as the number of years that the employee stays with her/his former employer. I also control the gender of an individual employee to correct any potential gender bias in the labor market (Barber et al. 2017; Fang and Huang 2017). *Highest Degree* controls for the highest education degree obtained by an employee. Lastly, I control for whether an employee has an MBA degree or a CPA license. I winsorize all continuous variables in my sample at the 1st and 99th percentile, respectively. Year, state and industry fixed effects are included to control for macroeconomic factors, local labor market factors and industry-specific factors affecting both corporate accountants and HRs' promotion prospects. See Appendix A for detailed variable definitions.

The regression model is estimated using an OLS regression for ease of the interpretation of the marginal effect. Untabulated regression results from a probit regression model have similar inferences. I cluster the standard errors by restatement firms. The promotion tests for the restatement periods use the same set of control variables, as follows:

$$Promotion_{i,t} = \beta_1 During + \beta_2 Accounting + \beta_3 During * Accounting + \gamma Controls + Year + Industry + State \quad (4)$$

6. EMPIRICAL RESULTS

6.1 Turnover Rates in Post-Restatement Periods

I compare the turnover rates of accounting and HR functions from pre-restatement periods to post-restatement periods at the firm level in Table 6. Column (1) suggests that the average turnover rate of HRs increases approximately 16.8% from pre-restatement periods to post-restatement periods. In pre-restatement periods, the overall turnover rate of corporate accountants is 3.1% lower than that of HRs. The coefficient on *Post*Accounting* is about 4.5%, which is significant at the 10% significance level. This evidence suggests that corporate accountants, relative to HRs, experience a greater increase in the overall turnover rate. To investigate the cross-sectional difference of turnover rates for junior and senior employees, I partition the overall turnover rate based on the seniority of employees. I do not find that junior corporate accountants experience a higher increase in turnover than that of junior HRs in Column (2). Column (3) suggests that senior corporate accountants experience a higher increase (4.1%) in turnover than senior HRs. This evidence is consistent with the notion that senior employees, compared to junior employees, may be more informed about the financial misreporting and held more accountable, or they experience more negative spillover. The employee turnover rates are positively associated with CEO/CFO turnover in the same period across all three specifications. This result suggests that restatement firms do change the whole employee structure as a team (Fee and Hadlock 2004).

To further investigate differential outcomes for internal auditors and other accountants, I partition the corporate accountants in Table 7. Panel A presents the OLS regression results of comparing the turnover rates of internal auditors and other accountants from pre-restatement periods to post-restatement periods. Column (1) suggests that the increase in the overall turnover rate is not statistically different between internal auditors and other accountants. When I focus on

the senior level in Column (2), I find that senior internal auditors, relative to other senior accountants, experience an abnormal increase (5.3%) in turnover rates between pre-restatement periods and post-restatement periods. This evidence is consistent with the idea that senior internal auditors seem to fail to fulfill their responsibilities and experience a more severe outcome in terms of a higher job turnover.

In addition, I use the median values of three severity measures of restatements (i.e., *CAR [-1,1], Restatement Duration, Income Restated Percentage*) to classify the restatements into more severe restatements and less severe restatements within my sample (Hennes et al. 2008; Srinivasan 2005).[22] The cross-sectional results in Table 7 Panel B indicate that only in firms with a more severe restatement do senior internal auditors, relative to other senior accountants, experience an abnormal increase in turnover rates. Table 7 Panel C presents the cross-sectional OLS regression results of comparing senior turnover rates at the firm level in the post-restatement periods by CEO changes. I find that the abnormal turnover of internal auditors in post-restatement periods are mainly driven by the restatement cases with a CEO change.

6.2 Promotion Outcomes in Post-Restatement Periods

In addition to job turnover, I compare the promotion outcomes of corporate accountants and HRs who leave in pre-restatement and post-restatement periods in Table 8. Column (1) uses the full sample including both senior and junior employees. The coefficient on *Post* suggests that HRs are more likely to be promoted to a higher rank position in post-restatement periods. This evidence is consistent with the notion that HRs' promotion prospects are not affected by the restatements. The coefficient on *Post*Accounting* is -8.2% and statistically significant at the 1%

[22] *CAR [-1,1]* measures the 3-day cumulative abnormal return around the restatement announcement date adjusting for value-weighted market return. *Restatement Duration* measures the years between the begin date and the announcement date of a restatement. *Income Restated Percentage* measures the restated income deflated by total asset.

level, suggesting that corporate accountants, relative to HRs, experience an abnormal decrease of 8.2% in their promotion likelihood. Like executive managers and board of directors, corporate accountants suffer a worse career prospect after restatements. By partitioning the full sample based on the seniority of a position, I find an abnormal decrease in promotion likelihood for both senior and junior corporate accountants. Although junior employees are less likely to be directly involved in the perpetration of financial misreporting, this evidence suggests that they do experience a negative reputation spillover in the subsequent career prospect.

I further partition corporate accountants into internal auditor and other accountants to examine any additional penalty for internal auditors in Table 8 Panel B. Columns (1), (2), and (3) suggest that internal auditors, relative to other accountants, do not experience a greater decrease in their promotion likelihood between pre-restatement periods and post-restatement periods.[23]

6.3 Turnover Rates in Restatement Periods

In Table 9, I compare the turnover rates of corporate accountants and HRs from pre-restatement periods to restatement periods at the firm level. Column (1) suggests that the average turnover rate of the HR group increases approximately 8.3% from the pre-restatement period to the restatement period. In pre-restatement periods, the corporate accountants' turnover rate is 3.0% lower than the HR group's turnover rate. However, the coefficient on *During*Accounting* is about -1.3% but not statistically significant at the 10% significance level. This evidence suggests that corporate accountants, relative to HRs, do not experience a higher turnover in restatement periods. Focusing on senior turnover rates in Column (3), I also fail to find that senior corporate accountants

[23] In untabulated results, internal auditors, relative to HRs, still experience an abnormal decrease in their promotion likelihood between pre-restatement periods and post-restatement periods.

experience a higher increase (-1.2%) in turnover than senior HRs do from pre-restatement periods to restatement periods.

Motivated by the designated role of internal auditors to be more likely to detect financial misreporting, I further partition corporate accountants into internal auditors and other accountants in Table 10. Panel A presents the OLS regression results of comparing the turnover rates of internal auditors and other accountants between restatement periods and pre-restatement periods at the firm level. Column (1) suggests that the increase (9.4%) in the overall turnover rate is statistically higher for internal auditors. Column (2) compares the turnover rates of senior internal auditors to that of other senior accountants. I also find that senior internal auditors experience a greater increase in turnover (8.1%) than that of other senior accountants. This evidence suggests that internal auditors may proactively leave because of their direct responsibility for overseeing internal control activities or an information advantage to detect restatements. Table 10 Panel B presents the cross-sectional tests on the OLS results from Table 10 Panel A. I find the greater increase in turnover of internal auditors, relative to other accountants at the senior level in restatement periods, is only found in firms with a more severe restatement. Table 10 Panel C presents the cross-sectional OLS regression results of comparing senior turnover rates at the firm level in restatement periods by CEO changes. I find that the abnormal turnover of internal auditors in restatement periods are mainly driven by the restatement cases with a CEO change.

6.4 Promotion Outcomes in Restatement Periods

In Table 11 Panel A, I compare the promotion outcomes of corporate accountants and HRs who leave in pre-restatement periods and restatement periods. Column (1) uses the full sample including both senior and junior employees. I do not find that corporate accountants, relative to HRs, experience a diminished promotion prospect if corporate accountants leave in restatement

periods. I further partition the full sample into senior and junior subsamples. Column (2) and (3) also suggest no worse promotion prospect for either senior or junior corporate accountants.

Results from Table 10 suggest that internal auditors proactively leave their employers in restatement periods. To examine whether the labor market can see through the proactive departure of internal auditors, I compare the promotion outcomes of internal auditors to those of other accountants in Table 11 Panel B. Columns (1) – (3) suggest that internal auditors, relative to other accountants, do not experience any abnormal decrease in the promotion likelihood.[24] Overall, these results suggest that corporate accountants, relative to HRs do not experience a worse promotion prospect if they leave before restatement announcements. In contrast to Dou (2017), the labor market for corporate accountants does not see through the proactive departure of corporate accountants and hence does not impose any labor market penalty in terms of a worse promotion prospect. This evidence partially confirms the claim of former Enron accountant Sherron Watkins that a proactive departure could avoid reputation damage.

6.5 Demotion Outcomes in Post-Restatement and Restatement Periods

Similar to my promotion tests, I use whether an employee finds a demoted position after she or he moves to a new employer to examine the effect of restatements on employees' demotion likelihood. In Table 12, I do not find a significant increase in the demotion likelihood for corporate accountant relative to HRs in both post-restatement and restatement periods. The empirical results do not support the notion that the labor market penalizes the employees by increasing their demotion likelihood. One potential explanation is that demotions in position tiers are too severe

[24] In untabulated results, internal auditors, relative to HRs, do not experience an abnormal decrease in their promotion likelihood between pre-restatement periods and restatement periods.

for rank-and-file employees. The diminished promotion prospect could better capture the human capital loss in the upside prospect for rank-and-file employees.

6.6 Falsification Tests of Parallel Assumptions

My difference-in-differences tests rely on the parallel assumption that corporate accountants and HRs have a similar trend in job turnover and promotion prospects in pre-restatement periods. I use a falsification test to validate the parallel assumption (Roberts and Whited 2013). Specifically, I examine whether there is a statistical difference in the trend of job turnover and promotion prospects of corporate accountants and HRs from a pseudo period (a period before the pre-restatement period) to a pre-restatement period. In Table 13 Panel A, I do not find a statistical difference in the senior turnover rates of internal auditors, other accountants, and HRs from a pseudo period to a pre-restatement period. Similarly, I fail to find a statistical difference in the promotion likelihood of internal auditors, other accountants, and HRs from a pseudo period to a pre-restatement period in Table 13 Panel B. These two falsification tests validate the parallel assumptions used in my difference-in-differences tests.

7. CONCLUSION

This study examines the impact of restatements on the labor market outcomes for corporate accountants. Using employment histories disclosed in corporate accountants' public profiles on *LinkedIn*, I examine corporate accountants' turnover around restatements and their promotion prospect in a new job. Using a difference-in-differences research design, I find that corporate accountants, relative to HRs, experience a higher turnover and a worse promotion prospect after restatements are announced. The increase in turnover is more pronounced for senior internal auditors and in more severe restatement cases. Second, I find that only senior internal auditors, relative to other senior accountants and senior HRs, experience a higher turnover but not a worse promotion prospect before restatements are announced.

I acknowledge several limitations in this study. First, my sample may not capture an exhaustive sample of corporate accountants in restatement firms and the information collected from *LinkedIn* profiles is voluntarily disclosed by individual employees. However, if individual employees selectively omit unfavorable working experiences in their public *LinkedIn* profiles, the omission of such "stained" working experience will bias against my findings. Second, I can not differentiate a forced turnover and a voluntary turnover based on employment histories from *LinkedIn*. Therefore, my empirical tests on turnover rates capture the overall job turnover[25]. Last, I cannot observe whether an individual employee directly participates in financial misreporting. So, it is difficult to infer the cross-sectional difference in labor market outcomes for corporate accountants with different involvement in restatements. However, the evidence from the

[25] Regardless of voluntary and forced turnover, I argue that individual employees still bear significant costs when they change jobs (e.g., relocation cost).

subsamples of senior and junior employees suggests employees with more responsibilities in financial reporting suffer more adverse labor market outcomes.

This study makes two contributions to the literature. First, I provide the first large-sample evidence that corporate accountants in restatement firms experience negative labor market outcomes in the forms of a higher turnover rate and a worse promotion prospect. This empirical evidence has important policy implications for regulators to encourage corporate accountants to be whistle-blowers and reveal ongoing financial misreporting. Second, the literature on prediction of financial misreporting relies on various financial metrics (Brazel et al. 2009; Dechow et al. 2011; Hobson et al. 2012). The abnormal turnover of internal auditors before the revelation of restatements could provide a labor market signal to predict financial misreporting.

APPENDIX

Appendix A: Variable Definitions

Variable	Definition	Data Source
Turnover Rate	The number of turnover employees during each period over the total employee number at the beginning of each period.	*LinkedIn*
Senior Turnover Rate	The number of senior turnover employees during each period over the total employee number at the beginning of each period.	*LinkedIn*
Junior Turnover Rate	The number of junior turnover employees during each period over the total employee number at the beginning of each period.	*LinkedIn*
Total Assets	The log of total assets at the beginning of each period.	Compustat
ROA	Net income deflated by total assets at the beginning of each period.	Compustat
Sales Growth	The increase in sales over sales in the prior year at the beginning of each period.	Compustat
CEO Change	1 indicates whether there is a CEO change during each period.	Audit Analytics
CFO Change	1 indicates whether there is a CFO change during each period.	Audit Analytics
CAR [-1, 1]	3-day cumulative abnormal return around the restatement announcement date adjusting for value-weighted market return.	CRSP
Restatement Duration	The number of years between the begin date and the 8-K filing date of a restatement.	Audit Analytics
Income Restated	The restated income number deflated by total assets.	Audit Analytics
Promotion	1 indicates that an individual employee moves to a higher rank position in the new employer when she/he leaves her/his former employer	*LinkedIn*
Demotion	1 indicates that an individual employee moves to a lower rank position in the new employer when she/he leaves her/his former employer	*LinkedIn*
Age	An individual's age in the most recent year with her/his employer and is inferred from the year when an individual gets her/his Bachelor, graduates from high school or gets her/his first job.	*LinkedIn*
Tenure	An individual's tenure with the former employer.	*LinkedIn*
Female	1 indicates an individual is female. The gender is inferred from her/his first name.	*LinkedIn*
Highest Degree	*Highest Degree* is measured in the following scales: 1=High School; 2=Bachelor; 3=Master or Above.	*LinkedIn*
CPA	1 indicates that an individual has a CPA license.	*LinkedIn*
MBA	1 indicates that an individual has an MBA degree.	*LinkedIn*
Pre	1 indicates that the firm period observation is a pre-restatement period.	Audit Analytics
During	1 indicates that the firm period observation is a restatement period.	Audit Analytics
Post	1 indicates that the firm period observation is a post-restatement period.	Audit Analytics

Appendix B: Figures

Figure 1: Restatement Period Construction

This figure plots the restatement periods constructed from the beginning date and the 8-K filing date of a restatement. The time span of each period is the same as the time span between the beginning date and the 8-K filing date.

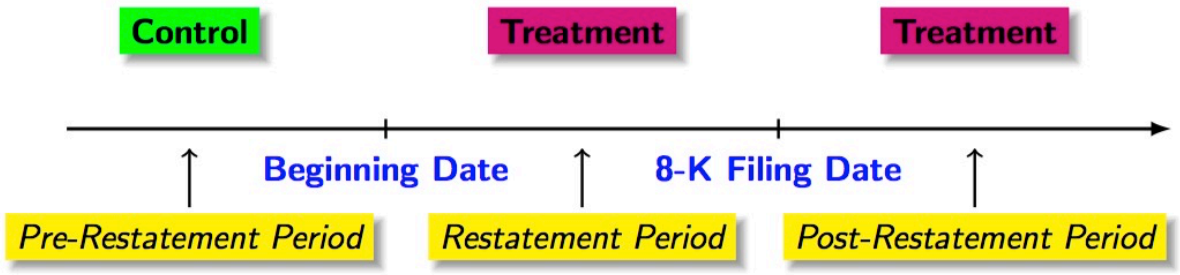
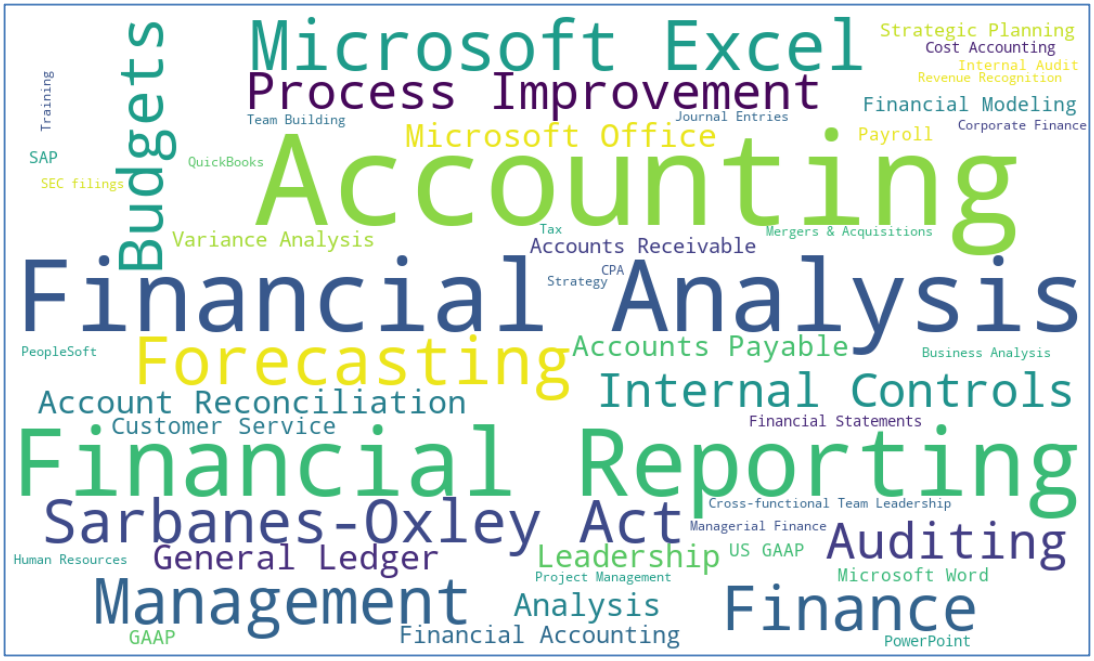


Figure 2: Top 50 Keywords in Employees' Skill Sets

This Figure shows the top 50 keywords included in the individual employees' skill sets. A larger font size represents a higher frequency. Panel A shows the top 50 keywords in accountants' skill sets. Panel B shows the top 50 keywords in HRs' skill sets.

Panel A: Top 50 Keywords in Corporate Accountants' Skill Sets

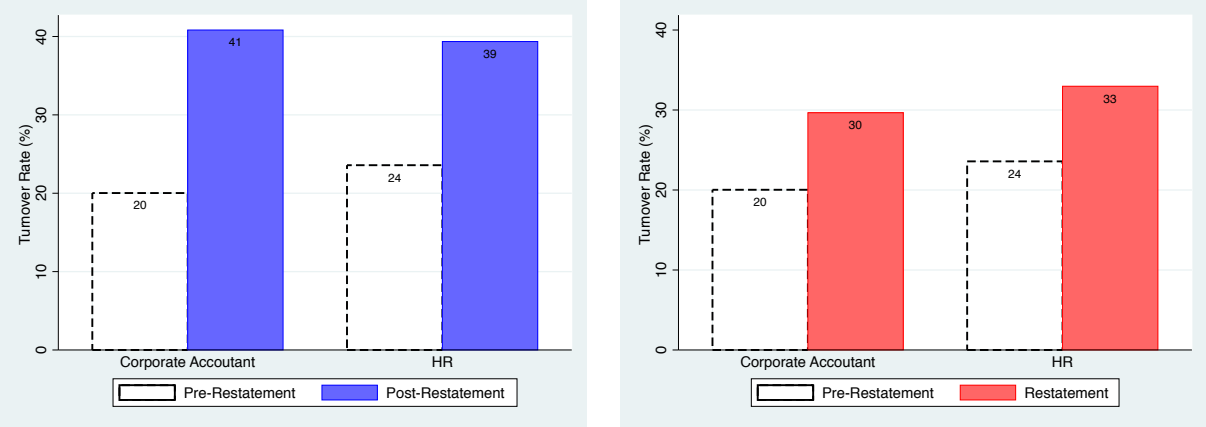


Panel B: Top 50 Keywords in HRs' Skill Sets

Figure 3: Turnover Rates of Corporate Accountants and HRs

This figure compares the turnover rates of corporate accountants and HRs across pre-restatement, restatement, and post-restatement periods.

Panel A: Overall Turnover Rate Comparison



Panel B: Senior Turnover Rate Comparison

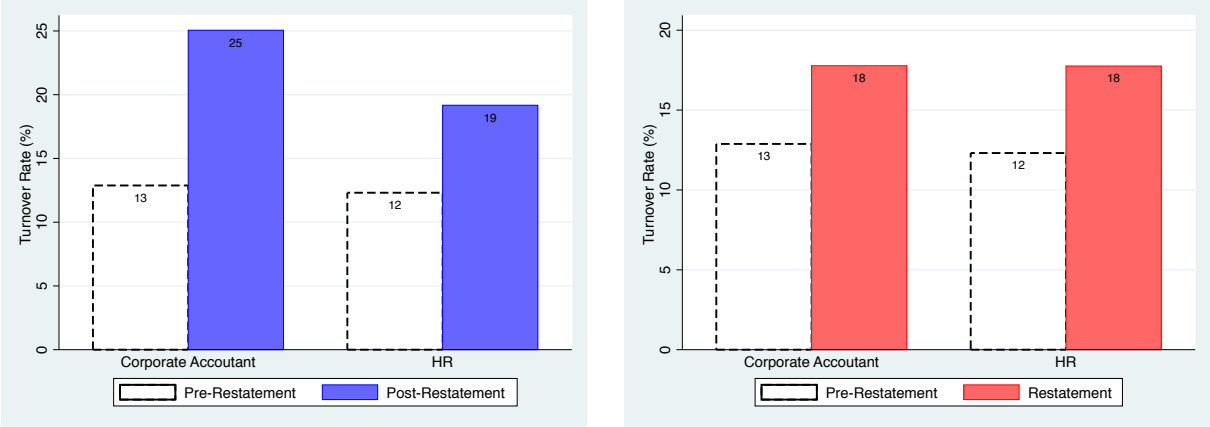
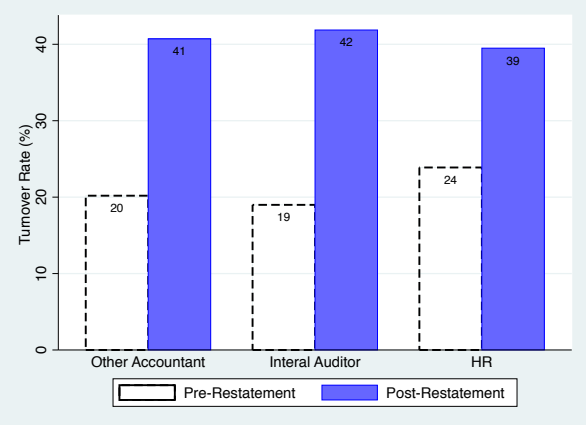
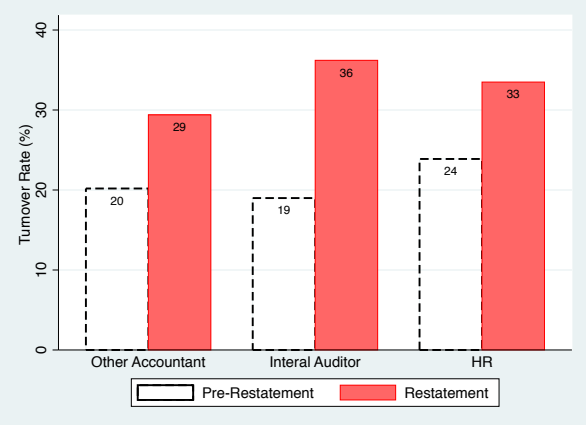


Figure 4: Turnover Rates of Internal Auditors, Other Accountants, and HRs

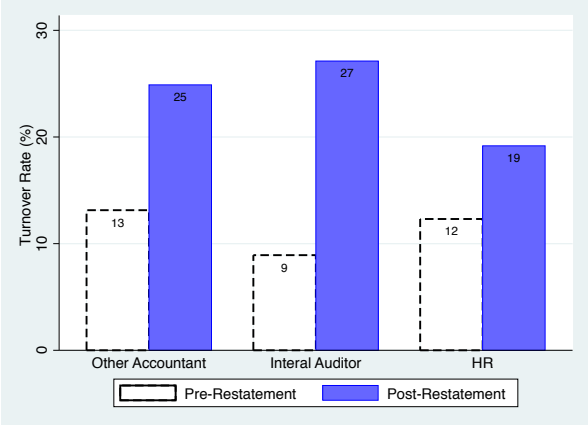
This figure compares the turnover rates of internal auditors, other accountants and HRs across pre-restatement, restatement, and post-restatement periods.

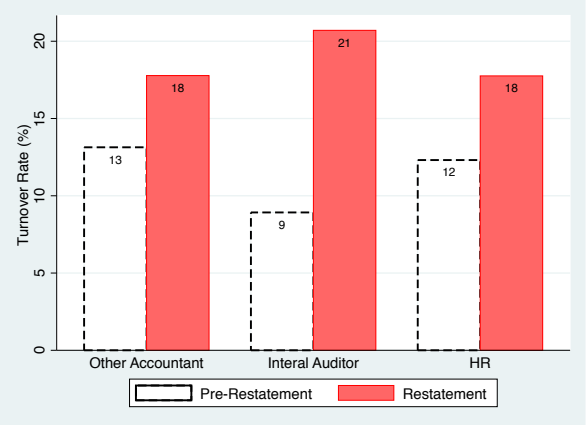
Panel A: Overall Turnover Rate Comparison





Panel B: Senior Turnover Rate Comparison





Appendix C: Tables

Table 1: Firm Sample Selection

This table describes the sample selection process of restatement firms. I start with all unique restatement announcements by firms currently traded on NYSE or NASDAQ from the Audit Analytics non-reliance restatement feed. To construct the pre-restatement period and post-restatement period, I require that each restatement begins after 2004 and ends before 2014. In addition, I exclude those restatements by non-U.S. firms or firms in financial/utility industries. Since larger firms could have more employees available on *LinkedIn*, I exclude firms with a stock price less than $5 in the most current period or firms as non-accelerated filers. To remove unintentional restatements, I exclude those restatements because of clerical application errors as these restatements are technical errors. I also exclude those restatements due to SAB No.108, the SEC's 2005 letter regarding leases, pro forma restatements for mergers or newly discontinued operations. To keep more severe restatements, I only keep restatements with negative effects on income or equity. Last I remove 11 firms with no individual employee found on *LinkedIn*.

	Obs.
Unique restatements beginning after 2004 and ending before 2014 by firms currently traded on NYSE or NASDAQ	2559
Less restatements:	
By non-US firms	-305
By firms in financial/utility industry	-553
By firms with a stock price < $5 in most current periods or as not-accelerated filers	-610
With a time span between the 8-K filing date and the beginning date less than 1 year	-159
With insufficient pre-restatement periods as control periods	-66
Due to clerical application errors, SAB No.108, the SEC's 2005 letter regarding leases, pro forma restatements for mergers or newly discontinued operations	-122
With no adverse effect on income or equity	-503
Subtotal restatements	241
Unique firms	216
Unavailable employee information on *LinkedIn*	-11
Final firm sample	205

Table 2: Firm Level Descriptive Statistics

Panel A reports the descriptive statistics for variables at the firm level. Total Assets is measured at the beginning of each period. Size is the log of total assets at the beginning of each period. ROA is net income deflated by total asset at the beginning of each period. *Sales Growth* measures the increase in sales over sales in the prior year at the beginning of each period. *CEO Change* indicates whether there is a CEO change during each period. *CFO Change* indicates whether there is a CFO change during each period. *Restatement Duration* is the years between the begin date and the 8-K filing date of a restatement. *Income Restated* is the restated income number deflated by total assets. *CAR [-1, 1]* is the 3-day cumulative abnormal return around the 8-K filing date of a restatement adjusting for value-weighted market return. Panel B presents the distribution of restatement ending years by firms in the final sample. Panel C presents the industry distribution of firms in my sample based on the Fama-French 12 industry classification.

Panel A: Descriptive Statistics of Firm Level Variables

	Mean	SD	25%	Median	75%
Total Assets (Millions)	1,801	3,441	190	590	1,667
Total Assets (Log)	6.64	1.48	5.51	6.60	7.64
ROA	0.01	0.14	-0.02	0.03	0.07
Sales Growth	0.25	1.59	-0.01	0.08	0.21
CEO Change	0.26	0.44	0.00	0.00	1.00
CFO Change	0.35	0.48	0.00	0.00	1.00
Restatement Duration	2.57	1.35	1.36	2.18	3.20
Income Restated	-0.01	0.05	-0.01	-0.01	-0.00
CAR [-1,1]	-0.02	0.08	-0.05	-0.00	0.02

Panel B: Distribution of Restatement Ending Years

Year	N	Percentage
2004	8	3.90
2005	13	6.34
2006	20	9.76
2007	25	12.20
2008	18	8.78
2009	16	7.80
2010	27	13.17
2011	27	13.17
2012	28	13.66
2013	24	11.22
Total	205	100.00

Panel C: Industry Distribution of Restatement Firms

Industry	N	Percentage
Consumer Non-Durables	14	6.83
Consumer Durables	6	2.93
Manufacturing	28	13.66
Oil, Gas, and Coal Extraction and Products	5	2.44
Chemicals and Allied Products	6	2.93
Business Equipment	49	23.90
Telephone and Television Transmission	12	5.85
Wholesale, Retail, and Some Services	29	14.15
Healthcare, Medical Equipment, and Drugs	16	7.80
Others	40	19.51
Total	205	100

Table 3: Individual Sample Selection

This table describes the sample selection process of individual employees. I collect 74,740 individual profiles after an initial search for individuals in accounting, finance, or human resources functions who currently or previously worked for the 205 restatement firms. Based on a broad classification by *Accounting Jobs Today*, I classify an employee as a corporate accountant if she/he holds a job title with the following keywords: accounting, accountant, reporting, controller, receivable, payable, collection, billing, asset, inventory, revenue, consolidation, compliance, tax, audit, internal control, SOX, Sarbanes–Oxley, finance, financial analyst, financial planning, treasurer, acquisition, risk manager, financial planning, portfolio. I classify an employee as an HR professional if she/he holds a job title with the following keywords: human resources, recruiter, benefits, employees, staffing, workforce, compensation, talent acquisition, payroll, employee relations, labor. In later tests, I define an employee as an internal auditor if she/he holds a job title with the following keywords: audit, internal control, SOX, Sarbanes–Oxley.

		Observations.
Individuals whose current or past employer is in the restatement firms sample		74,740
Less individuals with the following criteria:		
CEO, CFO, or board of directors		(507)
No overlap employment period with the three restatement periods		(29,753)
Non-Accounting or Non-HR functions		(18,320)
Temporary or intern position		(1,487)
Final Individual Sample		24,673
Corporate Accountant		16,803
Other Accountant	15,262	
Internal Auditor	1,541	
Human Resources Professionals		7,870

Table 4: Demographic Characteristics of Individual Employees

This table reports the demographic characteristics of individuals with available information. Employees without educational information are excluded from this table. An employee is classified as a senior employee with the following keywords: senior, sr, supervisor, head, manager, mgr, director, controller, treasurer, executive, vice president, vp, etc. *Age* measures an individual's age in the most recent year with her/his employer and is inferred from the year when an individual gets her/his Bachelor, graduates from high school or gets her/his first job. *Female* indicates an individual's gender based on her/his first name. *Highest Degree* is measured in the following scales: 1=High School; 2=Bachelor; 3=Master or Above. *MBA* indicates whether an individual has an MBA degree. *CPA* indicates whether an individual has a CPA license.

	Corporate Accountant				Human Resources	
	Other Accountant		Internal Auditor			
	Junior	Senior	Junior	Senior	Junior	Senior
Age	32.1	37.67	29.73	36.6	32.85	38.19
Female	0.60	0.49	0.48	0.42	0.77	0.68
Highest Degree	2.00	2.21	2.14	2.23	1.96	2.09
MBA	0.02	0.03	0.03	0.03	0.01	0.02
CPA	0.05	0.10	0.09	0.15	0.00	0.00
Observations	4,425	6,739	484	630	2,776	3,151

Table 5: Firm Level Distribution of Employee Turnovers

This table reports the descriptive statistics of employee turnover of other accountants, internal auditors, and HRs across three restatement periods (pre-restatement, restatement, and post-restatement) at the firm level.

	Other Accountant			Internal Auditor			Human Resources		
	Pre.	Dur.	Post.	Pre.	Dur.	Post.	Pre.	Dur.	Post.
No. Turnover	7.04	13.38	16.52	0.90	2.36	2.61	4.40	7.77	9.09
No. Senior Turnover	4.17	8.34	9.97	0.45	1.18	1.53	2.22	3.97	4.41
Total Employees	30.76	36.94	41.88	4.22	5.37	5.76	17.88	20.54	22.55
Overall Turnover Rate (%)	20.19	29.39	40.71	18.99	36.21	41.87	23.88	33.49	39.49
Senior Turnover Rate (%)	13.14	17.78	24.89	8.92	20.71	27.12	12.31	17.76	19.17

Table 6: Turnover Rates of Corporate Accountants and HRs in Post-Restatement Periods

This table presents the OLS regression results of comparing the turnover rates of accounting and HR functions at the firm level in the post-restatement periods using a difference-in-differences specification. *Overall Turnover Rate* is measured as the number of turnover employees during each period over the total number of employees at the beginning of each period. *Junior Turnover Rate* is measured as the number of junior turnover employees during each period over the total number of employees at the beginning of each period. *Senior Turnover Rate* is measured as the number of senior turnover employees during each period over the total number of employees at the beginning of each period. *Post* indicates that the firm period observation is a post-restatement period. *Accounting* indicates that the turnover rate is measured for accounting function. *Total Assets* is the log of total assets at the beginning of each period. *ROA* is net income deflated by total assets at the beginning of each period. *Sales Growth* measures the increase in sales over sales in the prior year at the beginning of each period. *CEO Change* indicates whether there is a CEO change during each period. *CFO Change* indicates whether there is a CFO change during each period. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)
	Overall Turnover Rate	Junior Turnover Rate	Senior Turnover Rate
Post	0.168***	0.080***	0.085***
	(5.18)	(3.88)	(3.38)
Accounting	-0.031*	-0.036***	0.006
	(-1.68)	(-2.98)	(0.44)
Post × Accounting	0.045*	-0.004	0.049**
	(1.68)	(-0.20)	(2.23)
Total Assets	0.011	0.006	0.004
	(1.43)	(1.31)	(0.74)
ROA	-0.069	0.006	-0.073
	(-0.77)	(0.13)	(-1.24)
Sales Growth	-0.009	-0.007	-0.003
	(-0.43)	(-0.61)	(-0.15)
CEO Change	0.110***	0.052***	0.055***
	(4.13)	(2.80)	(3.60)
CFO Change	0.070***	0.021	0.052***
	(3.18)	(1.42)	(3.74)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
Observations	745	745	745
Adjusted R-squared	0.272	0.169	0.194

Table 7: Turnover Rates of Internal Auditors and Other Accountants in Post-Restatement Periods

Panel A presents the OLS regression results of comparing the turnover rates of internal auditors and other accountants at the firm level in the post-restatement periods using a difference-in-differences specification. Panel B presents the cross-sectional OLS regression results of comparing senior turnover rates at the firm level in the post-restatement periods using a difference-in-differences specification. Panel C presents the cross-sectional OLS regression results of comparing senior turnover rates at the firm level in the post-restatement periods by CEO change. *Overall Turnover Rate* is measured as the number of turnover employees during each period over the total number of employees at the beginning of each period. *Senior Turnover Rate* is measured as the number of senior turnover employees during each period over the total number of employees at the beginning of each period. *Post* indicates that the firm period observation is within post-restatement periods. *Audit* indicates that the turnover rate is measured for the internal audit function. *Total Assets* is the log of total assets at the beginning of each period. *ROA* is net income deflated by total assets at the beginning of each period. *Sales Growth* measures the increase in sales over sales in the prior year at the beginning of each period. *CEO Change* indicates whether there is a CEO change during each period. *CFO Change* indicates whether there is a CFO change during each period. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Internal Auditor VS. Other Accountant

	(1)	(2)
	Overall Turnover Rate	Senior Turnover Rate
Post	0.213***	0.129***
	(5.97)	(4.63)
Audit	-0.015	-0.039*
	(-0.48)	(-1.84)
Post × Audit	0.006	0.053*
	(0.13)	(1.69)
Total Assets	0.019**	0.007
	(2.18)	(0.95)
ROA	-0.129	-0.107
	(-1.16)	(-1.40)
Sales Growth	-0.022**	-0.022**
	(-2.36)	(-2.12)
CEO Change	0.084**	0.055**
	(2.45)	(2.13)
CFO Change	0.055*	0.051**
	(1.85)	(2.25)
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
Observations	652	652
Adjusted R-squared	0.171	0.138

Panel B: Cross-Sectional Results by Severity of Restatements

	CAR[-1,1]		Restatement Duration		Income Restate %	
	(1)	(2)	(3)	(4)	(5)	(6)
	More Severe	Less Severe	More Severe	Less Severe	More Severe	Less Severe
Post	0.070*	0.170***	0.170**	0.060*	0.120***	0.142***
	(1.73)	(4.32)	(2.41)	(1.97)	(3.08)	(3.30)
Audit	-0.093***	0.002	-0.057	-0.022	-0.050*	-0.030
	(-4.22)	(0.07)	(-1.52)	(-1.13)	(-1.90)	(-0.89)
Post × Audit	0.101**	0.017	0.098*	0.015	0.071	0.033
	(2.36)	(0.38)	(1.94)	(0.42)	(1.56)	(0.75)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/Industry/State FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	303	349	332	320	318	334
Adjusted R-squared	0.214	0.081	0.154	0.171	0.177	0.090

Table 7 (cont'd)

Panel C: Cross-Sectional Results by Severity of Restatements

	CEO Change	
	(1)	(2)
	Yes	No
Post	0.117	0.107***
	(1.27)	(3.19)
Audit	-0.115*	-0.024
	(-1.94)	(-0.93)
Post × Audit	0.156**	0.028
	(2.14)	(0.67)
Controls	Yes	Yes
Year/Industry/State FE	Yes	Yes
Observations	191	454
Adjusted R-squared	0.239	0.141

Table 8: Promotion Outcomes in Post-Restatement Periods

Panel A presents the OLS regression results of comparing the promotion outcomes of corporate accountants and HRs in the post-restatement periods using a difference-in-differences specification. Panel B presents the OLS regression results of comparing the promotion outcomes of other accountants and internal auditors. The dependent variable is *Promotion*, which is measured as whether an individual employee moves to a higher rank position in the new employer when she/he leaves her/his former employer. *Post* indicates that an employee leaves during the post-restatement period. *Accounting* indicates that an employee is a corporate accountant. *Audit* indicates that an employee is an internal auditor. *Tenure* is the number of years that an employee stays with her/his former employer. *Female* indicates the gender of an employee. *Highest Degree* indicates the highest degree obtained by an employee and is measured in the following scales: 1=High School; 2=Bachelor; 3=Master or Above. *MBA* indicates whether an individual has an MBA degree. *CPA* indicates whether an individual has a CPA license. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Corporate Accountant VS. HR

	(1)	(2)	(3)
	Full Sample	Senior Employees	Junior Employees
Post	0.067**	0.033	0.090**
	(2.46)	(0.88)	(2.12)
Accounting	0.036	0.044	0.048
	(1.63)	(1.37)	(1.42)
Post × Accounting	-0.082***	-0.091**	-0.073*
	(-2.85)	(-2.17)	(-1.77)
Tenure	0.000	0.001	0.006**
	(0.14)	(0.70)	(2.44)
Female	-0.004	-0.000	-0.009*
	(-1.07)	(-0.06)	(-1.68)
Highest Degree	0.031***	0.038***	0.040***
	(3.69)	(3.42)	(3.41)
CPA	0.053*	0.067**	0.091
	(1.67)	(1.98)	(1.62)
MBA	-0.021	-0.017	-0.024
	(-0.58)	(-0.40)	(-0.42)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
Observations	4836	2195	2641
Adjusted R-squared	0.009	0.013	0.019

Panel B: Internal Auditor VS. Other Accountant

	(1)	(2)	(3)
	Full Sample	Senior Employees	Junior Employees
Post	0.005	-0.031	0.029
	(0.18)	(-0.65)	(0.67)
Audit	-0.015	-0.093	0.025
	(-0.33)	(-1.57)	(0.38)
Post × Audit	-0.021	0.042	-0.039
	(-0.39)	(0.61)	(-0.49)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
Observations	3168	1510	1658
Adjusted R-squared	0.017	0.020	0.041

Table 9: Turnover Rates of Corporate Accountants and HRs in Restatement Periods

This table presents the OLS regression results of comparing the turnover rates of accounting and HR functions at the firm level in the restatement periods using a difference-in-differences specification. *Turnover Rate* is measured as the number of turnover employees during each period over the total number of employees at the beginning of each period. *Senior Turnover Rate* is measured as the number of senior turnover employees during each period over the total number of employees at the beginning of each period. *During* indicates that the firm period observation is a restatement period. *Accounting* indicates that the turnover rate is measured for the accounting function. *Audit* indicates that the turnover rate is measured for the internal audit function. *Total Assets* is the log of total assets at the beginning of each period. *ROA* is net income deflated by total assets at the beginning of each period. *Sales Growth* measures the increase in sales over sales in the prior year at the beginning of each period. *CEO Change* indicates whether there is a CEO change during each period. *CFO Change* indicates whether there is a CFO change during each period. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)
	Overall Turnover Rate	Junior Turnover Rate	Senior Turnover Rate
During	0.083***	0.034**	0.047**
	(3.29)	(2.54)	(2.49)
Accounting	-0.030*	-0.034***	0.006
	(-1.68)	(-3.05)	(0.46)
During × Accounting	-0.013	0.001	-0.012
	(-0.51)	(0.08)	(-0.64)
Total Assets	0.027***	0.012**	0.013**
	(2.96)	(2.53)	(2.07)
ROA	-0.006	0.020	-0.032
	(-0.08)	(0.58)	(-0.62)
Sales Growth	0.014**	0.019***	-0.007***
	(2.06)	(3.74)	(-2.74)
CEO Change	0.107***	0.057***	0.048**
	(3.60)	(3.62)	(2.28)
CFO Change	0.093***	0.051***	0.045***
	(3.78)	(3.79)	(2.73)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
Observations	735	735	735
Adjusted R-squared	0.138	0.130	0.069

Table 10: Turnover Rates of Internal Auditors and Other Accountants in Restatement Periods

Panel A presents the OLS regression results of comparing the turnover rates of internal auditors and other accountants at the firm level in the restatement periods using a difference-in-differences specification. Panel B presents the cross-sectional OLS regression results of comparing senior turnover rates at the firm level in the restatement periods by the severity of restatements. Panel C presents the cross-sectional OLS regression results of comparing senior turnover rates at the firm level in the restatement periods by CEO change. *Overall Turnover Rate* is measured as the number of turnover employees during each period over the total number of employees at the beginning of each period. *Senior Turnover Rate* is measured as the number of senior turnover employees during each period over the total number of employees at the beginning of each period. *During* indicates that the firm period observation is a restatement period. *Audit* indicates that the turnover rate is measured for the internal audit function. *Total Assets* is the log of total assets at the beginning of each period. *ROA* is net income deflated by total assets at the beginning of each period. *Sales Growth* measures the increase in sales over sales in the prior year at the beginning of each period. *CEO Change* indicates whether there is a CEO change during each period. *CFO Change* indicates whether there is a CFO change during each period. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Internal Auditor VS. Other Accountant

	(1)	(2)
	Overall Turnover Rate	Senior Turnover Rate
During	0.084***	0.045***
	(3.58)	(2.68)
Audit	-0.030	-0.047**
	(-0.94)	(-2.20)
During × Audit	0.094**	0.081**
	(2.17)	(2.37)
Total Assets	0.048***	0.022***
	(5.63)	(3.06)
ROA	-0.028	-0.048
	(-0.36)	(-0.82)
Sales Growth	0.015**	-0.007***
	(2.29)	(-2.63)
CEO Change	0.063*	0.043
	(1.94)	(1.64)
CFO Change	0.071**	0.061***
	(2.42)	(2.89)
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
Observations	628	628
Adjusted R-squared	0.121	0.088

Panel B: Cross-Sectional Results by Severity of Restatements

	CAR[-1,1]		Restatement Duration		Income Restate %	
	(1)	(2)	(3)	(4)	(5)	(6)
	More Severe	Less Severe	More Severe	Less Severe	More Severe	Less Severe
During	0.043*	0.049**	0.095***	0.003	0.034	0.045*
	(1.72)	(2.02)	(2.66)	(0.16)	(1.35)	(1.87)
Audit	-0.096***	-0.010	-0.067*	-0.024	-0.056**	-0.035
	(-4.11)	(-0.30)	(-1.77)	(-1.21)	(-2.08)	(-1.11)
During × Audit	0.122**	0.052	0.113**	0.029	0.112**	0.048
	(2.34)	(1.13)	(2.04)	(0.80)	(2.19)	(1.09)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year/Industry/State FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	298	330	321	307	301	327
Adjusted R-squared	0.106	0.058	0.084	0.091	0.116	0.088

Table 10 (cont'd)

Panel C: Cross-Sectional Results by Severity of Restatements

	CEO Change	
	(1)	(2)
	Yes	No
During	0.032	0.070***
	(0.56)	(2.98)
Audit	-0.152**	-0.038
	(-2.63)	(-1.45)
During × Audit	0.231***	0.023
	(3.00)	(0.52)
Controls	Yes	Yes
Year/Industry/State FE	Yes	Yes
Observations	169	453
Adjusted R-squared	0.094	0.113

Table 11: Promotion Outcomes in Restatement Periods

Panel A presents the OLS regression results of comparing the promotion outcomes of corporate accountants and HRs in restatement periods using a difference-in-differences specification. Panel B presents the OLS regression results of comparing the promotion outcomes of accountants and internal auditors in the restatement periods. The dependent variable is *Promotion*, which is measured as whether an individual employee moves to a higher rank position in the new employer when she/he leaves her/his former employer. *During* indicates that the employee leaves during the restatement period. *Accounting* indicates that an employee is a corporate accountant. *Audit* indicates that an employee is an internal auditor. *Tenure* is the number of years that an employee stays with her/his former employer. *Female* indicates the gender of an employee. *Highest Degree* indicates the highest degree obtained by an employee and is measured in the following scales: 1=High School; 2=Bachelor; 3=Master or Above. *MBA* indicates whether an individual has an MBA degree. *CPA* indicates whether an individual has a CPA license. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Corporate Accountant VS. HR

	(1)	(2)	(3)
	Full Sample	Senior Employees	Junior Employees
During	0.028	0.013	0.045
	(1.03)	(0.38)	(1.18)
Accounting	0.048*	0.058	0.065*
	(1.82)	(1.62)	(1.68)
During × Accounting	-0.052	-0.049	-0.040
	(-1.61)	(-1.16)	(-0.84)
Tenure	-0.000***	-0.004*	-0.000***
	(-2.58)	(-1.86)	(-3.25)
Female	-0.021***	-0.019***	-0.025***
	(-5.03)	(-3.38)	(-4.27)
Highest Degree	0.015	0.016	0.026*
	(1.53)	(1.20)	(1.66)
CPA	0.029	0.058	0.012
	(0.86)	(1.24)	(0.24)
MBA	-0.035	-0.056	-0.019
	(-0.90)	(-1.19)	(-0.35)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
Observations	5005	2317	2688
Adjusted R-squared	0.026	0.041	0.025

Panel B: Internal Auditor VS. Other Accountant

	(1)	(2)	(3)
	Full Sample	Senior Employees	Junior Employees
During	-0.027	-0.045	-0.012
	(-1.38)	(-1.38)	(-0.38)
Audit	-0.017	-0.102*	0.032
	(-0.37)	(-1.86)	(0.49)
During × Audit	0.064	0.103	0.029
	(1.03)	(1.48)	(0.33)
Controls	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
State FE	Yes	Yes	Yes
Observations	2892	1390	1502
Adjusted R-squared	0.017	0.019	0.022

Table 12: Demotion Outcomes in Post-Restatement and Restatement Periods

This table presents the OLS regression results of comparing the demotion outcomes of corporate accountants and HRs a difference-in-differences specification. The dependent variable is *Demotion*, which is measured as whether an individual employee moves to a lower rank position in the new employer when she/he leaves her/his former employer. *Post* indicates that an employee leaves during the post-restatement period. *During* indicates that the employee leaves during the restatement period. *Accounting* indicates that an employee is a corporate accountant. *Audit* indicates that an employee is an internal auditor. *Tenure* is the number of years that an employee stays with her/his former employer. *Female* indicates the gender of an employee. *Highest Degree* indicates the highest degree obtained by an employee and is measured in the following scales: 1=High School; 2=Bachelor; 3=Master or Above. *MBA* indicates whether an individual has an MBA degree. *CPA* indicates whether an individual has a CPA license. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Corporate Accountant VS. HR	
	(1)	(2)
	Post-Restatement VS. Pre-Restatement	Restatement VS. Pre-Restatement
Post	0.010	
	(0.28)	
Accounting	-0.069**	
	(-2.33)	
Post × Accounting	-0.012	
	(-0.34)	
During		-0.049
		(-1.51)
Accounting		-0.075**
		(-2.45)
During × Accounting		0.042
		(1.13)
Tenure	0.001	0.001
	(0.75)	(0.89)
Female	0.001	0.006
	(0.31)	(1.15)
Highest Degree	-0.037***	-0.007
	(-3.15)	(-0.72)
CPA	-0.063**	-0.035
	(-2.48)	(-1.02)
MBA	0.049	0.037
	(1.11)	(0.70)
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
Observations	3319	3163
Adjusted R-squared	0.020	0.011

Table 13: Parallel Assumptions in Pre-Restatement Periods

Panel A presents the OLS regression results of comparing senior turnover rates of internal auditors, other accountants, and HRs at the firm level between the pre-restatement periods and the pseudo periods (i.e., a period before the pre-restatement period). Panel B presents the OLS regression results of comparing promotion outcomes of internal auditors, other accountants, and HRs between the pre-restatement periods and the pseudo periods. *Senior Turnover Rate* is measured as the number of senior turnover employees during each period over the total number of employees at the beginning of each period. *Promotion* is measured as whether an individual employee moves to a higher rank position in the new employer when she/he leaves her/his former employer. *Pre* indicates that the firm period observation is within the pre-restatement period. *Accounting* indicates that the turnover rate is measured for other accountants. *Audit* indicates that the turnover rate is measured for the internal audit function. The standard errors are clustered by firms and t-statistics are reported in parentheses. *, ** and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Panel A: Senior Turnover Rates of Internal Auditors, Other Accountants, and HRs in Pre-Restatement Periods

	(1)	(2)
	Other Accountant VS. HR	Internal Auditor VS. Other Accountant
Pre	-0.000	-0.028
	(-0.01)	(-1.26)
Accounting	0.023	
	(1.06)	
Pre × Accounting	-0.017	
	(-0.69)	
Audit		-0.041
		(-1.57)
Pre × Audit		0.025
		(0.76)
Controls	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
Observations	703	589
Adjusted R-squared	0.067	0.058

Panel B: Promotion Outcomes of Internal Auditors, Other Accountants, and HRs in Pre-Restatement Periods

	(1)	(2)
	Other Accountant VS. HR	Internal Auditor VS. Other Accountant
Pre	0.019	0.024
	(0.59)	(0.95)
Accounting	0.030	
	(0.91)	
Pre × Accounting	-0.011	
	(-0.26)	
Audit		-0.104*
		(-1.88)
Pre × Audit		0.063
		(0.79)
Controls	Yes	Yes
Year FE	Yes	Yes
Industry FE	Yes	Yes
State FE	Yes	Yes
Observations	2549	1741
Adjusted R-squared	0.012	0.017

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